2026

User Manual for EHD SCA, SCM, SCC, ICM, CTR, ITR, MaxCam Machine Vision Cameras



EHD imaging GmbH

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1 Product List

1.1 Product Description

- Sony / Gpixel / ONSEMI and other high-quality imaging chips;
- Supports multiple interfaces such as USB3 / GigE / CameraLink / CXP;
- Built-in hardware image processing engine to ensure image restoration and camera speed;
- Supports external triggering, software and capture modes;
- Supports ROI, flip, bit-depth switching and other features;
- Suitable for wide temperature range, low power consumption, stable performance;
- Supports firmware worksite upgrading;
- Provides advanced video and image processing application software EHDView, compatible with Windows/Linux/OSX multi-platform SDK, support native C/C++, C#/VB.Net, DirectShow, Twain API;
- Compliant with CE, FCC requirements.

Camera series	Main feature
MaxCam	Equipped with Sony Exmor CMOS or GSENSE series high-performance large pixel or full-frame image sensor. Data interfaces support USB3, CXP, and 10 Gigabit Ethernet. Resolution covering 4.2M~251M, chip size across 1.2”~4.2”. The response spectrum supports visible light, NIR, UV. Cooling: 40 degrees lower than the ambient temperature.
SC-ITR	Resolution covering 0.5M~45M, chip size across 1”~1.8”. The response spectrum supports visible light and UV. Cooling: 40 degrees lower than the ambient temperature.
SC-CTR	Resolution covering 0.39M~20M, chip size across 1/2.9”~4/3”. Cooling: 10 degrees lower than the ambient temperature.
ICM	Compact structure. Resolution covering 0.5M~20.4M, chip size across 1/2.9 "~1.1". The response spectrum supports visible light and UV.
SCM/SCA	High performance cost ratio. Resolution covering 0.39M~45M, chip size across 1/2.9”~4/3”. The response spectrum supports visible light, NIR, UV.
XXX	Select G-Pixel chip, chip size across 1/1.1”~1.7”, has stopped production, products for the corresponding sensor can be found in the SCM/SCA series;
SCC	Resolution covering 1.7M~60M, chip size across 1.1”~2.7” Data interfaces support USB3, CameraLink, 10 Gigabit Ethernet.
SCD	Choose ONSEMI chip, resolution of 16M/25M two options.

SCE	The large array flat panel detector is suitable for protein detection and chemiluminescence applications.
EHD-AVCAM	Analog camera, output interface is CVBS(PAL-N).

1.2 MaxCam Series Camera Specifications(18)

1.2.1 MaxCam Series USB3 Camera(12)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal Dynamic range /SNR	FPS/Resolution Bit depth	Binning	Exposure Time
MaxCam-811M-TE	251M/IMX811ALR(M,RS) 4.1”	2.81x2.81	TBD	1.5@19200x12800	1x1	15us ~3600s
MaxCam-811C-TE	251M/IMX811AQR(C,RS) 4.1”	2.81x2.81	TBD	1.5@19200x12800	1x1	15us ~3600s
MaxCam-411M-TE	151M/IMX411ALR(M,RS) 4.2”(53.30x40.01)	3.76x3.76	871mV with 1/30s 0.04mV with 1/30s	2.4@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-411C-TE	151M/IMX411AQR(C,RS) 4.2”(53.30x40.01)	3.76x3.76	485mV with 1/30s 0.04mV with 1/30s	2.4@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-461M-TE	102M/IMX461ALR(M,RS) 3.4”(43.80x32.87)	3.76x3.76	871mV with 1/30s 0.04mV with 1/30s	3.5@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-461C-TE	102M/IMX461AQR(C,RS) 3.4”(43.80x32.87)	3.76x3.76	485mV with 1/30s 0.04mV with 1/30s	3.5@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-455M-TE MM1062A	61M/IMX455(M, RS) 2.7"(35.98x23.99) Full Frame	3.76x3.76	871mv with 1/30s 0.039mv with 1/30s 88.3dB/47.1dB	6.1@9568x6380(16bit) 19.1@4784x3190 55.6@3184x2124 191@1040x706 8 Bit / 16 Bit	1x1 2x2 3x3 9x9	0.1ms~1000s
MaxCam-455C-TE MP1062AC	61M/IMX455(C, RS) 2.7"(35.98x23.99) Full Frame	3.76x3.76	485mv with 1/30s 0.04mv with 1/30s 85.8dB/47.0dB	6.1@9568x6380(16bit) 19.1@4784x3190 55.6@3184x2124 191@1040x706 8 Bit / 16 Bit	1x1 2x2 3x3 9x9	0.1ms~1000s
MaxCam-410C-TE MP1024A	24M/IMX410(C, RS) 2.7"(36.02x24.00) Full Frame	5.94x5.94	573mv with 1/30s 0.04mv with 1/30s 87.3dB/50.2dB	15.3@6064x4040(14bit) 41@3024x2012 114@2016x1342 8 Bit / 14 Bit	1x1 2x2 3x3	0.1ms~1000s
MaxCam-2020Me MM1004A	4.2M/GSENSE2020e(M,NIR ,RS) 1.2”(13.31x13.31)	6.5x6.5	8.1x107 (e- /((W/m2).s)) Peak QE 64.2% @595nm 0.12(e-/s/pix) @- 10C° 81.6dB/46.5dB	45@2048x2048 45@1024 x 1024 8 Bit / HDR 16 Bit	1x1 2x2	0.1ms~1000s
MaxCam-2020UV- TE	4.2M/GSENSE2020BSI(M, UV,RS) 1.2”(13.31x13.31)	6.5x6.5	1.1x108 (e- /((W/m2).s)) Peak QE 93.7% @550nm 0.15(e-/s/pix) @- 15C° 79.1dB/47dB	45@2048 x2048 45@1024 x1024 8 Bit / HDR 16 Bit	1x1 2x2	0.1ms~1000s
MaxCam-400UV- TE	4.2M/GSENSE400BSI(M,U V,RS) 2.0“(22.53x22.53)	11x11	3.25x108 (e- /((W/m2).s)) Peak QE 95.3% @560nm 1.5(e-/s/pix) @- 10C° 93.9dB/48.8dB	44@2048 x2048 44@1024 x1024 8 Bit / HDR 16 Bit	1x1 2x2	0.1ms~1000s

***C: Color; M: Mono; UV: Ultraviolet; NIR: Near Infrared Ray; RS: Rolling shutter; GS: Global shutter; U3: USB3 port.**

1.2.2 MaxCam Series GigECamera(6)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal Dynamic range /SNR	FPS/Resolution Bit depth	Binning	Exposure Time
MaxCam-811M-TE-10G	251M/IMX811ALR(M,RS) 4.1”	2.81x2.81	TBD	1.5@19200x12800	1x1	15us ~3600s
MaxCam-811C-TE-10G	251M/IMX811AQR(M,RS) 4.1”	2.81x2.81	TBD	1.5@19200x12800	1x1	15us ~3600s
MaxCam-411M-TE-10G	151M/IMX411ALR(M,RS) 4.2”(53.30x40.01)	3.76x3.76	871mV with 1/30s 0.04mV with 1/30s	6.1@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-411C-TE-10G	151M/IMX411AQR(C,RS) 4.2”(53.30x40.01)	3.76x3.76	485mV with 1/30s 0.04mV with 1/30s	6.1@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-461M-TE-10G	102M/IMX461ALR(M,RS) 3.4”(43.80x32.87)	3.76x3.76	871mV with 1/30s 0.04mV with 1/30s	8.7@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970	1x1 2x2 3x3 9x9	15us ~3600s
MaxCam-451C-TE-10G	102M/IMX461AQR(C,RS) 3.4”(43.80x32.87)	3.76x3.76	485mV with 1/30s 0.04mV with 1/30s	8.7@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970	1x1 2x2 3x3 9x9	15us ~3600s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; 10G: 10 Gigabit Ethernet port.**

1.3 SC-ITR Series Camera Specifications(23)

1.3.1 SC-ITR Series USB3 Camera (17)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution Bit depth	Binning	Exposure Time
SC492M-ITR ITRM145000A	45M/IMX492(M,RS) 1.4"(18.93x13.00)	2.315x2.315	175mV with 1/30s 0.03mV with 1/30s	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720 8 Bit / 12 Bit	1x1(3:2) 2x2(3:2) 1x1(4:3) 2x2(4:3) 1x1(17:9) 2x2(17:9) 3x3(17:9) 4x4(17:9)	100us~1h
SC571C-ITR ITRP126000A	26M/IMX571(C, RS) 1.8"(23.48x15.67) APS-C	3.76x3.76	485mv with 1/30s 0.07mv with 1/30s	14@6224x4168 37@3104x2084 110@2064x1386 8 Bit / 16 Bit	1x1 2x2 3x3	100us~1h
SC571M-ITR ITRM126000A	26M/IMX571(M, RS) 1.8 "(23.48x15.67) APS-C	3.76x3.76	871mv with 1/30s 0.07mv with 1/30s	14@6224x4168 37@3104x2084 110@2064x1386 8 Bit / 16 Bit	1x1 2x2 3x3	100us~1h
SC269C-ITR ITRP121000A	21M/IMX269(C) 4/3"(17.4x13.1)	3.3x3.3	400mv with 1/30s 0.1mv with 1/30s	17@5280x3954 17@3952x3952 56@2640x1976 67@1760x1316 192@584x438 8 Bit / 12 Bit	1x1 1x1 2x2 3x3 9x9	100us~1h
SC183C-ITR ITRP120000A	20M/IMX183(C,RS) 1 "(13.056x8.755)	2.4x2.4	462mv with 1/30s 0.21mv with 1/30s	19.0@5440x3648 48.8@2736x1824 59.4@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	100us~1h
SC183M-ITR ITRM120000A	20M/IMX183(M,RS) 1 "(13.056x8.755)	2.4x2.4	777mv with 1/30s 0.21mv with 1/30s (F8.0)	19.0@5440x3648 48.8@2736x1824 59.4@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	100us~1h
SC294C-ITR ITRP110300A	10.3M/IMX294(C,RS) 4/3 "(9.56x6.5)	2.315x2.315	419mv with 1/30s 0.12mv with 1/30s	30.0@4128x2808 38.5 @4096x2160 59.8@2048x1080 87.2@1360x720 8 Bit / 14 Bit	1x1 1x1 2x2 3x3	150us~1h
SC492M-ITR ITRM110300A	10.3M/IMX492(M,RS) 1.4 "(9.56x6.5)	2.315x2.315	175mv with 1/30s 0.12mv with 1/30s	30.0@4128*2808 38.5@ 4096*2160 59.8@2048*1080 87.2@1360*720 8 Bit / 14 Bit	1x1 1x1 2x2 3x3	150us~1h
SC533C-ITR ITRP109000A	9M/IMX533(C,RS) 1"(11.28x11.28)	3.76x3.76	534mv with 1/30s 0.04mv with 1/30s	40@2992x3000 62@1488x1500 186@992x998 8 Bit / 14 Bit	1x1 2x2 3x3	100us~1h
SC533M-ITR ITRM109000A	9M/IMX533(M,RS) 1"(11.28x11.28)	3.76x3.76	877mv with 1/30s 0.04mv with 1/30s	40@2992x3000 62@1488x1500 186@992x998 8 Bit / 14 Bit	1x1 2x2 3x3	100us~1h
SC585C-ITR ITRP108300A	8.3M/IMX585(C,RS) 1/1.2"(11.14x6.26)	2.9x2.9	5970mv with 1/30s 0.13mv with 1/30s	45@3840x2160 70@1920x1080 8 Bit / 12 Bit	1x1 2x2	100us~1h
SC428C-ITR ITRP107100A	7.0M/IMX428(C,GS) 1.1 "(14.4x9.9)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	51.3@3200x2200 133.8@1584x1100 8 Bit / 12 Bit	1x1 1x1	100us~1h
SC428M-ITR ITRM107100A	7.0M/IMX428(M,GS) 1.1 "(14.4x9.9)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	51.3@3200x2200 133.8@1584x1100 8 Bit / 12 Bit	1x1 1x1	100us~1h
SC432C-ITR ITRP101700A	1.7M/IMX432(C,GS) 1.1 "(14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	98.6@1600x1100 8 Bit / 12 Bit	1x1	100us~1h
SC432M-ITR ITRM101700A	1.7M/IMX432(M,GS) 1.1 "(14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	98.6@1600x1100 8 Bit / 12 Bit	1x1	100us~1h
SC9701UV-ITR ITRM101300A	1.3M/GLUX9701BSI (M,UV,RS) 1 "(12.493x9.994)	9.76x9.76	$2.57x10^8$(e- /((W/m2).s)) QE89%@610nm 0.08(e-/s/pix) @-	30fps@1280×1024 30fps@640×512 8 Bit / HDR 16 Bit	1x1 2x2	100us~1h

			28C			
SC1605UV-ITR ITRM100500A	0.5M/GLUX1605BSI (M,UV,RS) 1 “(12.8x9.6)	16.0x16.0	6.4x108e- /((W/m2).s)) QE95%@560nm 50(e-/s/pix)	60.0@800x600 60.0@400x300 8 Bit / HDR 16 Bit	1x1 2x2	100us~1h

***C: Color; M: Mono; UV: Ultraviolet; RS: Rolling shutter; GS: Global shutter.**

1.3.2 SC-ITR Series GigE Camera (6)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution Bit depth	Binning	Exposure Time
SC183M-ITR-G	20M/IMX183(M,RS) 1 “(13.056x8.755)	2.4x2.4	777mv with 1/30s 0.21mv with 1/30s	4.5@5440x3648 18.5@2736x1824 41.7@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	100us~1h
SC183C-ITR-G	20M/IMX183(C,RS) 1 “(13.056x8.755)	2.4x2.4	462mv with 1/30s 0.21mv with 1/30s	4.5@5440x3648 18.5@2736x1824 41.7@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	100s~1h
SC428M-ITR-G	7.0M/IMX428(M,GS) 1.1 “(14.4x9.9)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	16.4fps@3200×2200 66fps@1600×1100 8 Bit / 12 Bit	1x1 1x1	100us~1h
SC428C-ITR-G	7.0M/IMX428(C,GS) 1.1 “(14.4x9.9)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	16.4fps@3200×2200 66fps@1600×1100 8 Bit / 12 Bit	1x1 1x1	100us~1h
SC432M-ITR-G	1.7M/IMX432(M,GS) 1.1 “(14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	66fps@1600×1100 8 Bit / 12 Bit	1x1	100us~1h
ISC432C-ITR-G	1.7M/IMX432(C,GS) 1.1 “(14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	66fps@1600×1100 8 Bit / 12 Bit	1x1	100us~1h

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; G: 1 Gigabit Ethernet port.**

1.4 SC-CTR Series Camera Specifications(15)

1.4.1 SC-CTR Series USB3 Camera (9)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution Bit depth	Binning	Exposure Time
SC287M-CTR CTRM100390A	0.39M/IMX287(M,GS) 1/2.9"(4.97x3.73)	6.9x6.9	7320mV with 1/30s 0.76mV with 1/30s	20fps@720x540 8 Bit / 12 Bit	1x1	6us~300s
SC426M-CTR CTRM100503A	0.5M/IMX426(M,GS) 1/1.7"(7.2x5.58)	9.0x9.0	8100mV with 1/30s 0.3mV with 1/30s	20fps@800x620 8 Bit / 12 Bit	1x1	6us~300s
SC432C-ITR CTRP101700A	1.7M/IMX432(C,GS) 1.1 "(14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	98.6fps@1600×1100 8 Bit / 12 Bit	1x1	6us~300s
SC432M-CTR CTRM101700A	1.7M/IMX432(M,GS) 1.1 "(14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	98.6fps@1600×1100 8 Bit / 12 Bit	1x1	6us~300s
SC428C-ITR CTRP107100A	7.0M/IMX428(C,GS) 1.1 "(14.4x9.9)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	51.3fps@3200×2200 133.8fps@1584×1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SC428M-CTR CTRM107100A	7.0M/IMX428(M,GS) 1.1 "(14.4x9.9)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	51.3fps@3200×2200 133.8fps@1584×1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SC183C-ITR CTRP120000A	20M/IMX183(C,RS) 1 "(13.056x8.755)	2.4x2.4	462mv with 1/30s 0.21mv with 1/30s	19.0@5440x3648 48.8@2736x1824 59.4@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s
SC183M-CTR CTRM120000A	20M/IMX183(M,RS) 1 "(13.056x8.755)	2.4x2.4	776mv with 1/30s 0.21mv with 1/30s	19.0@5440x3648 48.8@2736x1824 59.4@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s
SC492M-CTR CTRM145000A	45M/IMX492(M,RS) 1.4"(18.93x13.00)	2.315x2.315	175mV with 1/30s 0.03mV with 1/30s	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720 8 Bit / 12 Bit	1x1(3:2) 2x2(3:2) 1x1(4:3) 2x2(4:3) 1x1(17:9) 2x2(17:9) 3x3(17:9) 4x4(17:9)	0.1ms~300s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter.**

1.4.2 SC-CTR Series GigE Camera (6)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution Bit depth	Binning	Exposure Time
SC432C-CTR-G	1.7M/IMX432(C,GS) 1.1 "(14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	66fps@1600×1100 8 Bit / 12 Bit	1x1	6us~300s
SC432M-CTR-G	1.7M/IMX432(M,GS) 1.1 "(14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	66fps@1600×1100 8 Bit / 12 Bit	1x1	6us~300s
SC428C-CTR-G	7.0M/IMX428(C,GS) 1.1 "(14.4x9.9)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	16.4fps@3200×2200 66fps@1600×1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SC428M-CTR-G	7.0M/IMX428(M,GS) 1.1 "(14.4x9.9)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	16.4fps@3200×2200 66fps@1600×1100 8 Bit / 12 Bit	1x1 1x1	6us~300s
SC183C-CTR-G	20M/IMX183(C,RS) 1 "(13.056x8.755)	2.4x2.4	462mv with 1/30s 0.21mv with 1/30s	4.5@5440x3648 18.5@2736x1824 41.7@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s
SC183M-CTR-G	20M/IMX183(M,RS) 1 "(13.056x8.755)	2.4x2.4	776mv with 1/30s 0.21mv with 1/30s	4.5@5440x3648 18.5@2736x1824 41.7@1824x1216 8 Bit / 12 Bit	1x1 2x2 3x3	53us~300s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; G: 1 Gigabit Ethernet port.**

1.5 ICM Series Camera Specifications(GS or RS, 54)

1.5.1 ICM Series USB3 Camera (51)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure Time
ICM with 33mm x 33mm x 33mm housing						
ICM433C-TR IP800500A	0.5M/IMX433LQJ(C,GS) 1/1.7“ (7.31x5.58)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	166.5fps@812×620	1x1	6us~15s
ICM433M-TR IM700500A	0.5M/IMX433LLJ(M,GS) 1/1.7“ (7.31x5.58)	9.0x9.0	8100mv with 1/30s 0.30mv with 1/30s	166.5fps@812×620	1x1	6us~15s
ICM273C-TR IP801500A	1.5M/IMX273LQR(C,GS) 1/2.9“ (4.97x3.73)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	227.2fps@1440×1080 382.7fps@720×540	1x1 1x1	15us~15s
ICM273M-TR IM701500A	1.5M/IMX273LLR(M,GS) 1/2.9“ (4.97x3.73)	3.45×3.45	1830mv with 1/30s 0.19mv with 1/30s	226.5fps@1440×1080 506fps@720×540	1x1 2x2	15us~15s
ICM174C-TR IP802300A	2.3M/IMX174LQJ(C,GS) 1/1.2“ (11.25x7.03)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	164.5fps@1920×1200	1x1	15us~15s
ICM174M-TR IM702300A	2.3M/IMX174LLJ(M,GS) 1/1.2“ (11.25x7.03)	5.86x5.86	1650mv with 1/30s 0.15mv with 1/30s	164.5fps@1920×1200	1x1	15us~15s
ICM249C-TR IP802300B	2.3M/IMX249LQJ(C,GS) 1/1.2 “ (11.25x7.03)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	30fps@1920×1200	1x1	42us~15s
ICM249M-TR IM702300B	2.3M/IMX249LLJ(M,GS) 1/1.2“ (11.25x7.03)	5.86x5.86	1650mv with 1/30s 0.15mv with 1/30s	30fps@1920×1200	1x1	42us~15s
ICM4002C-TR IP802400A	2.4M/GMAX4002(C,GS) 1/1.7 “ (8.19x4.80)	4.0x4.0	$3.26x10^7$e- /((W/m2)·s) 8.3e-/s	155fps@2048×1200 620fps@1024×600	1x1 2x2	55us~15s
ICM4002M-TR IM702400A	2.4M/GMAX4002(M,GS) 1/1.7 “ (8.19x4.80)	4.0x4.0	$3.26x10^7$e- /((W/m2)·s) 8.3e-/s	155fps@2048×1200 620fps@1024×600	1x1 2x2	55us~15s
ICM252C-TR IP803100A	3.1M/IMX252LQR(C,GS) 1/1.8“ (7.07x5.30)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	115fps@2048×1536 230.3fps@1024×768	1x1 1x1	15us~15s
ICM252M-TR IM703100A	3.1M/IMX252LLR(M,GS) 1/1.8“ (7.07x5.30)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	110.6fps@2048×1536 233.8fps@1024×768	1x1 1x1	15us~15s
ICM265C-TR IP803100B	3.1M/IMX265LQR(C,GS) 1/1.8“ (7.07x5.30)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	55.4fps@2048×1536 115.1fps@1024×768	1x1 1x1	15us~15s
ICM265M-TR IM703100B	3.1M/IMX265LLR(M,GS) 1/1.8“ (7.07x5.30)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	55.4fps@2048×1536 115.1fps@1024×768	1x1 1x1	15us~15s
ICM900C-TR IP803200A	3.2M/IMX900AQR(C,GS) 1/3.1“ (4.61x3.46)	2.25x2.25	1162mv/lx/s 0.15mv with 1/30s	53.4fps@2048×1536 126.8fps@1024×768	1x1 1x1	11us~15s
ICM900M-TR IM703200A	3.2M/IMX900AMR(M,GS) 1/3.1“ (4.61x3.46)	2.25x2.25	1807mv/lx/s 0.15mv with 1/30s	53.4fps@2048×1536 126.8fps@1024×768	1x1 1x1	11us~15s
ICM664C-TR IP804100A	4.2M/IMX664AAQR(C,RS) 1/1.8“(7.80x4.41)	2.9×2.9	5970mv with 1/30s 0.13mv with 1/30s	88.1fps@2688×1520 116.1fps@1344×760	1x1 2x2	15us~15s
ICM664M-TR IM704100A	4.2M/IMX664AAMR(M,RS) 1/1.8“(7.80x4.41)	2.9×2.9	TBD	88.1fps@2688×1520 116.1fps@1344×760	1x1	15us~15s
ICM250C-TR IP805000A	5.0M/IMX250LQR(C,GS) 2/3“ (8.45x7.07)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	71.2fps@2448×2048 175.2fps@1224×1024	1x1 1x1	15us~15s
ICM250M-TR IM705000A	5.0M/IMX250LLR(M,GS) 2/3“ (8.45x7.07)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	70.9fps@2448×2048 175.2fps@1224×1024	1x1 1x1	15us~15s
ICM264C-TR IP805000B	5.0M/IMX264LQR(C,GS) 2/3“ (8.45x7.07)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	35.6fps@2448×1536 87.6fps@1224×1024	1x1 1x1	15us~15s
ICM264M-TR IM705000B	5.0M/IMX264LLR(M,GS) 2/3“ (8.45x7.07)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	35.6fps@2448×2048 87.6fps@1224×768	1x1 1x1	15us~15s
ICM250M-Polar	5.0M/IMX250MZR(M,GS) 2/3“ (8.45x7.07) Polarsens	3.45×3.45	684mv with 1/30s 0.15mv with 1/30s	35.6fps@2448×2048 87.6fps@1224×768	1x1 1x1	15us~15s
ICM3405C-TR IP805100A	5.1M/GMAX3405(C,GS) 2/3“ (8.32x6.96)	3.4x3.4	$2.36x10^7$e- /((W/m2)·s) 4.4e-/s	71fps@2448×2048 100fps@1224×1024	1x1 2x2	10us~15s
ICM3405M-TR IM705100A	5.1M/GMAX3405(M,GS) 2/3“ (8.32x6.96)	3.4x3.4	$2.36x10^7$e- /((W/m2)·s) 4.4e-/s	71fps@2448×2048 100fps@1224×1024	1x1 2x2	10us~15s
ICM178C-TR IP806300A	6.3M/IMX178LQJ(C, RS) 1/1.8“ (7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	58.7fps@3072×2048 59.5fps@1536×1024	1x1 2x2	17us~15s
ICM178M-TR IM706300A	6.3M/IMX178LLJ(M, RS) 1/1.8“ (7.37x4.92)	2.4x2.4	760mv with 1/30s 0.15mv with 1/30s	58.7fps@3072×2048 59.5fps@1536×1024	1x1 2x2	17us~15s
ICM546C-TR IP808000A	8.0M/IMX546-AAQJ(C,GS) 2/3“ (7.78x7.78)	2.74x2.74	1574mv/lx/s 0.15mv with 1/30s	41fps@2840x2840 118fps@1420x1420	1x1 1x1	30us~15s
ICM546M-TR IM708000A	8.0M/IMX546-AAMJ(M,GS) 2/3“ (7.78x7.78)	2.74x2.74	2649mv/lx/s 0.25mv with 1/30s	41fps@2840x2840 118fps@1420x1420	1x1 1x1	30us~15s
ICM678C-TR	8.3M/IMX678-AAQR1-C(C,	2.0x2.0	3541mv/lx/s	45fps@3840x2160	1x1	30us~15s

IP808300A	RS) 1/1.8“ (7.68x4.32)		0.15mv with 1/30s	70fps@1920x1080	2x2	
ICM585C-TR IP808300B	8.3M/IMX585-AAQJ1-C(C,RS) 1/1.2“ (11.14x6.26)	2.9x2.9	5970mv with 1/30s 0.13mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
ICM256C-TR IP812000A	12M/IMX226CQJ(C, RS) 1/1.7“(7.52x5.64)	1.85x1.85	3637mv with 1/30s 0.15mv with 1/30s	29.9fps@4064×3046 59.9fps@2048×1080	1x1 2x2	400us~15s
ICM676C-TR IP812000B	12M/IMX676-AACR(C, RS) 1/1.6“(7.07x7.07)	2.0x2.0	280mv with 1/30s 0.1mv with 1/30s	27.7fps@3536×3536 65.8fps@1760×1760	1x1 2x2	13us~15s
ICM with 38mm x 38mm x 33mm housing						
ICM9701UV-TR IM701300A	1.3M/GLUX9701BSI(M,UV, RS) 1“(12.49x9.99)	9.76x9.76	$2.57x10^8$(e-/((W/m2).s)) QE89%@610nm 40(e-/s/pix)	30fps@1280×1024 30fps@640×512	1x1 2x2	63us~60s
ICM432C-TR IP801700A	1.7M/IMX432LQJ(C,GS) 1.1“ (14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	98.6fps@1600×1100	1x1	6us~15s
ICM432M-TR IM701700A	1.7M/IMX432LLJ(M,GS) 1.1“ (14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	98.6fps@1600×1100	1x1	6us~15s
ICM425C-TR IP801700B	1.7M/IMX425LQJ(C,GS) 1.1“ (14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	210fps@1600×1100	1x1	6us~15s
ICM425M-TR IM701700B	1.7M/IMX425LLJ(M,GS) 1.1“ (14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	210fps@1600×1100	1x1	6us~15s
ICM430C-TR IP802000A	2.0M/IMX430LQJ(C, GS) 1/1.7“(7.31x5.58)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	132fps@1624×1240	1x1	6us~15s
ICM430M-TR IM702000A	2.0M/IMX430LLJ(M, GS) 1/1.7“(7.31x5.58)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	132fps@1624×1240	1x1	6us~15s
ICM421C-TR IP802800A	2.8M/IMX421LQJ(C,GS) 2/3“ (8.71x6.59)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	121fps@1936×1464 425fps@968×732	1x1 1x1	6us~15s
ICM421M-TR IM702800A	2.8M/IMX421LLJ(M,GS) 2/3“ (8.71x6.59)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	121fps@1936×1464 425fps@968×732	1x1 1x1	6us~15s
ICM428C-TR IP807100A	7.1M/IMX428LQJ(C,GS) 1.1“ (14.4x9.9)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	51.4fps@3200×2200 133.8fps@1584×1100	1x1 1x1	6us~15s
ICM428M-TR IM707100A	7.1M/IMX428LLJ(M,GS) 1.1“ (14.4x9.9)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	51.3fps@3200×2200 133.8fps@1584×1100	1x1 1x1	6us~15s
ICM585C-TR IM708300B	8.3M/IMX585-AAMJ1-C(M,RS) 1/1.2“ (11.14x6.26)	2.9x2.9	19120mv with 1/30s 0.13mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
ICM304C-TR IP812300A	12.3M/IMX304LQR-C(C,GS) 1.1“(14.13x10.35)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	23.4fps@4096x3000 46.3fps@2048x1500 46.3fps@1024x750	1x1 2x2 4x4	30us~15s
ICM304M-TR IM712300A	12.3M/IMX304LLR-C(M,GS) 1.1“(14.13x10.35)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	23.4fps@4096x3000 46.3fps@2048x1500 46.3fps@1024x750	1x1 2x2 4x4	30us~15s
ICM3412C-TR IP812500A	12.5M/GMAX3412(C,GS) 1.1“ (13.93x10.44)	3.4×3.4	$2.36x10^7$e-/((W/m2)·s) 81.6e-/s	30fps@4096x3072 60fps@2048x1536	1x1 2x2	15us~15s
ICM3412M-TR IM712500A	12.5M/GMAX3412(M,GS) 1.1“ (13.93x10.44)	3.4×3.4	$2.36x10^7$e-/((W/m2)·s) 81.6e-/s	30fps@4096x3072 60fps@2048x1536	1x1 2x2	15us~15s
ICM541C-TR IP820400A	20.4M/IMX541-AAQJ-C(C,GS) 1.1“ (12.32x12.32)	2.74x2.74	1574mv with 1/30s 0.15mv with 1/30s	17.5fps@4496×4496 64.4fps@2240×2240 64.4fps@1120×1120	1x1 2x2 4x4	30us~15s
IMX541M-TR IM720400A	20.4M/IMX541-AAMJ-C(M,GS) 1.1“ (12.32x12.32)	2.74x2.74	2649mv with 1/30s 0.15mv with 1/30s	17.5fps@4496×4496 64.4fps@2240×2240 64.4fps@1120×1120	1x1 2x2 4x4	30us~15s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter.**

1.5.2 ICM Series GigE Camera(3)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure Time
ICM with 33mm x 33mm x 42mm housing						
ICM265M-TR-G	3.1M/IMX265LLR(M,GS) 1/1.8“ (7.07x5.30)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	36.9fps@2048x1536 115.1fps@1024x768	1x1 1x1	50us~5s
ICM900M-TR-G	3.2M/IMX900AMR(M,GS) 1/3.1“ (4.61x3.46)	2.25x2.25	1807mv/lx/s 0.15mv with 1/30s	16.9fps@2048x1536 66fps@1024x768	1x1 1x1	50us~5s
ICM264C-TR-G	5.0M/IMX264LQR(C,GS) 2/3“ (8.45x7.07)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	24.3fps@2448x2048 87.7fps@1216x1024	1x1 1x1	50us~5s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; G: 1 Gigabit Ethernet port.**

1.6 SCM/SCA Series Camera Specifications (53)

1.6.1 SCM/SCA Series USB3 Camera (53)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure Time
SCM287-M-TR	0.39IMX287LLR(M,GS) 1/2.9“ (4.97x3.73)	6.9x6.9	7320mv with 1/30s 0.76mv with 1/30s	101.5fps@720×540	1x1	6us~15s
SCM426-M-TR	0.5M/IMX426LLJ(M,GS) 1/1.7“ (7.2x5.58)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	79.8fps@800×620	1x1	6us~15s
SCM433-M-TR	0.5M/IMX433LLJ(M,GS) 1/1.7“ (7.2x5.58)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	79.8fps@800×620	1x1	6us~15s
SCM273-C-TR	1.5M/IMX273LLR(C,GS) 1/2.9“ (4.97x3.73)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	235.5fps@1440×1080 523fps@720×540	1x1 1x1	15us~15s
SCM273-C-TR	1.5M/IMX273LQR(C,GS) 1/2.9“ (4.97x3.73)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	235.5fps@1440×1080 523fps@720×540	1x1 1x1	15us~15s
SCM432-M-TR	1.7M/IMX432LLJ(M,GS) 1.1“ (14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	98.6fps@1600×1100	1x1	6us~15s
SCM432-C-TR	1.7M/IMX432LQJ(C,GS) 1.1“ (14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	98.6fps@1600×1100	1x1	6us~15s
SCM425-M-TR	1.7M/IMX425LLJ(M,GS) 1.1“ (14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	210fps@1600×1100	1x1	6us~15s
SCM425-C-TR	1.7M/IMX425LQJ(C,GS) 1.1“ (14.4x9.9)	9.0x9.0	4910mv with 1/30s 0.3mv with 1/30s	210fps@1600×1100	1x1	6us~15s
SCM174-M-TR	2.3M/IMX174LLJ(M,GS) 1/1.2“ (11.25x7.03)	5.86x5.86	1650mv with 1/30s 0.15mv with 1/30s	164.5fps@1920×1200	1x1	15us~15s
SCM174-C-TR	2.3M/IMX174LQJ(C,GS) 1/1.2“ (11.25x7.03)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	164.5fps@1920×1200	1x1	15us~15s
SCM249-M-TR	2.3M/IMX249LLJ(M,GS) 1/1.2 “ (11.25x7.03)	5.86x5.86	1650mv with 1/30s 0.15mv with 1/30s	30fps@1920×1200	1x1	42us~15s
SCM249-C-TR	2.3M/IMX249LQJ(C,GS) 1/1.2 “ (11.25x7.03)	5.86x5.86	1016mv with 1/30s 0.15mv with 1/30s	30fps@1920×1200	1x1	42us~15s
SCM421-M-TR	2.8M/IMX421LLJ(M,GS) 2/3“ (8.71x6.59)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	121fps@1936×1464 425fps@968×732	1x1 1x1	6us~15s
SCM421-C-TR	2.8M/IMX421LQJ(C,GS) 2/3“ (8.71x6.59)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	121fps@1936×1464 425fps@968×732	1x1 1x1	6us~15s
SCM264-M-TR	5.0M/IMX264LLR(M,GS) 2/3“ (8.45x7.07)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	35.6fps@2448×2048 87.6fps@1224×1024	1x1 1x1	15us~15s
SCM264-C-TR	5.0M/IMX264LQR(C,GS) 2/3“ (8.45x7.07)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	35.6fps@2448×2048 87.6fps@1224×1024	1x1 1x1	15us~15s
SCM547-M-TR	5.1M/ IMX547-AAMJ-C(M,GS) 1/1.8“(6.71x5.61)	2.74x2.74	2252mv with 1/30s 0.15mv with 1/30s	63fps@2448×2048 208.4fps@1224×1024	1x1 2x2	30us~15s
SCM547-C-TR	5.1M/ IMX547-AAQJ-C(C,GS) 1/1.8“(6.71x5.61)	2.74x2.74	1337mv with 1/30s 0.15mv with 1/30s	63fps@2448×2048 159fps@1224×1024	1x1 2x2	30us~15s
SCM178-M-TR	6.3M/IMX178LLJ(M,RS) 1/1.8“ (7.37x4.92)	2.4x2.4	760mv with 1/30s 0.15mv with 1/30s	59.9fps@3072×2048 59.9fps@1536×1024	1x1 2x2	17us~15s
SCM178-C-TR	6.3M/IMX178LQJ(C,RS) 1/1.8“ (7.37x4.92)	2.4x2.4	425mv with 1/30s 0.15mv with 1/30s	59.8fps@3072×2048 59.5fps@1536×1024	1x1 2x2	17us~15s
SCM428-M-TR	7.1M/IMX428LLJ(M,GS) 1.1“ (14.4x9.9)	4.5x4.5	3354mv with 1/30s 0.15mv with 1/30s	51.3fps@3200×2200 133.8fps@1584×1100	1x1 1x1	6us~15s
SCM428-C-TR	7.1M/IMX428LQJ(C,GS) 1.1“ (14.4x9.9)	4.5x4.5	2058mv with 1/30s 0.15mv with 1/30s	51.4fps@3200×2200 133.8fps@1584×1100	1x1 1x1	6us~15s
SCM485-C-TR	8.3M/IMX485LQJ-C(C,RS) 1/1.2“ (11.14x6.26)	2.9x2.9	2188mv with 1/30s 0.15mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
SCM585-M-TR	8.3M/IMX585-AAMJ1-C(M,RS) 1/1.2“ (11.14x6.26)	2.9x2.9	19120mv with 1/30s 0.13mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
SCM585-C-TR	8.3M/IMX585-AAQJ1-C(C,RS) 1/1.2“ (11.14x6.26)	2.9x2.9	5970mv with 1/30s 0.13mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
SCM678-M-TR	8.3M/IMX678-AAMR1-C(M, RS) 1/1.8“ (7.68x4.32)	2.0x2.0	11288mv with 1/30s 0.15mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
SCM678-C-TR	8.3M/IMX678-AAQR1-C(C, RS) 1/1.8“ (7.68x4.32)	2.0x2.0	3541mv with 1/30s 0.15mv with 1/30s	45fps@3840x2160 70fps@1920x1080	1x1 1x1	30us~15s
SCM294-C-TR	10.3M/IMX294(C,RS) 4/3 “(9.56x6.5)	2.315x2.315	419mv with 1/30s 0.12mv with 1/30s	30.0@4128x2808 38.5 @4096x2160 59.8@2048x1080 87.2@1360x720 8 Bit / 14 Bit	1x1 1x1 2x2 3x3	150us~15s

SCM676-C-TR	12M/IMX676-AACR1-C(C,RS) 1/1.6“ (7.07x7.07)	2.0x2.0	3637mv 0.15mv with 1/30s	27@3536x3536 60@1768x1768	1x1 2x2	30us~15s
SCM545-M-TR	12.3M/IMX545-AAMJ-C(M,GS) 1/1.1“(11.22x8.22)	2.74x2.74	2252mv with 1/30s 0.15mv with 1/30s	28.2fps@4096x3000 100.9fps@2048x1500 100.9fps@1024x750	1x1 2x2 4x4	30us~15s
SCM545-C-TR	12.3M/IMX545-AAQJ-C(C, GS) 1/1.1“(11.22x8.22)	2.74x2.74	1337mv with 1/30s 0.15mv with 1/30s	28.2fps@4096x3000 100.9fps@2048x1500 100.9fps@1024x750	1x1 2x2 4x4	30us~15s
SCM304-M-TR	12.3M/IMX304LLR-C(M,GS) 1.1“(14.13x10.35)	3.45×3.45	1830mv with 1/30s 0.15mv with 1/30s	23.4fps@4096x3000 46.3fps@2048x1500 46.3fps@1024x750	1x1 2x2 4x4	30us~15s
SCM304-C-TR	12.3M/IMX304LQR-C(C, GS) 1.1“(14.13x10.35)	3.45×3.45	1146mv with 1/30s 0.15mv with 1/30s	23.4fps@4096x3000 46.3fps@2048x1500 46.3fps@1024x750	1x1 2x2 4x4	30us~15s
SCM183-M-TR	20.0M/IMX183CLK(M,RS) 1“ (13.06x8.84)	2.4x2.4	777mv with 1/30s 0.2mv with 1/30s	19.0fps@5440×3684 49.9fps@2736×1824 59.5fps@1824×1216	1x1 2x2 3x3	53us~15s
SCM183-C-TR	20.0M/IMX183CQK(C,RS) 1“ (13.06x8.84)	2.4x2.4	462mv with 1/30s 0.2mv with 1/30s	19.0fps@5440×3684 48.8fps@2736×1824 59.4fps@1824×1216	1x1 2x2 3x3	53us~15s
SCM541-M-TR	20.4M/IMX541-AAMJ-C(M,GS) 1.1“ (12.32x12.32)	2.74x2.74	2649mv with 1/30s 0.15mv with 1/30s	17.5fps@4496×4496 64.4fps@2240×2240 64.4fps@1120×1120	1x1 2x2 4x4	30us~15s
SCM541-C-TR	20.4M/IMX541-AAQJ-C(C,GS) 1.1“ (12.32x12.32)	2.74x2.74	1574mv with 1/30s 0.15mv with 1/30s	17.5fps@4496×4496 64.4fps@2240×2240 64.4fps@1120×1120	1x1 2x2 4x4	30us~15s
SCM540-M-TR	24.5M/IMX540-AAMJ-C(M,GS) 1.2“(14.58x12.60)	2.74x2.74	2649mv with 1/30s 0.15mv with 1/30s	14.7fps@5320×4600 54.3fps@2660×2300	1x1 2x2 4x4	30us~15s
SCM540-C-TR	24.5M/IMX540-AAQJ-C(C,GS) 1.2“(14.58x12.60)	2.74x2.74	1574mv with 1/30s 0.15mv with 1/30s	14.7fps@5320×4600 54.4fps@2660×2300	1x1 2x2 4x4	30us~15s
SCM0505-M-TR	25M/GMAX0505(M, GS) 1.1“ (12.8x12.8)	2.5x2.5	QE@500nm: 65.8% 2.4e-/pixel/s	13fps@5120×5120 27fps@2560×2560 54fps@1280×1280	1x1 2x2 4x4	15us~15s
SCM0505-C-TR	25M/GMAX0505(C, GS) 1.1“ (12.8x12.8)	2.5x2.5	QE@520nm: 58.0% 2.4e-/pixel/s	13fps@5120×5120 27fps@2560×2560 54fps@1280×1280	1x1 2x2 4x4	15us~15s
SCM492-M-TR	45M/IMX492LLJ-C(M,RS) 1.4“ (19.11x13.00)	2.315x2.315	176mv with 1/30s 0.03mv with 1/30s	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720	1x1 2x2 1x1 2x2 1x1 2x2 3x3 4x4	100us~15s
SCM492-C-TR	45M/IMX492LQJ-C(C,RS) 1.4“ (19.11x13.00)	2.315x2.315	176mv with 1/30s 0.03mv with 1/30s	8.1@8176x5616 8.1@7408x5556 10.4@8176x4320	1x1 2x2 1x1 2x2 1x1 2x2 3x3 4x4	100us~15s
SCM/SCA-Serie（UV， NIR）						
SCM462-NIR-TR (NIR)	2.1M/IMX462LQR(C,RS,NIR) 1/2.8“ (5.57x3.13)	2.9x2.9	2376mv with 1/30s 0.15mv with 1/30s	120.3fps@1920x1080	1x1	11us~15s
SCM464-NIR-TR (NIR)	4.1M/IMX464LQR(C,RS,NIR) 1/1.8“ (7.8x4.41)	2.9x2.9	2376mv with 1/30s 0.15mv with 1/30s	90fps@2688x1520	1x1	11us~15s
SCA1905-UV-TR (GPixel UV)	0.5M/GLUX1605BSI(M,UV,RS) 1“(12.8x9.6)	16x16	6.4x108(e-/((W/m2).s)) QE91%@550nm 50(e-/s/pix)	60fps@800×600 60fps@400×300	1x1 2x2	27us~60s
SCA9701-UV-TR (GPixel UV)	1.3M/GLUX9701BSI(M,UV,RS) 1“(12.49x9.99)	9.76x9.76	2.57x108(e-/((W/m2).s)) QE89%@610nm 40(e-/s/pix)	30fps@1280×1024 30fps@640×512	1x1 2x2	63us~60s
SCA2020-Me-TR (GPixel NIR)	4.2M/GSENSE2020e(M,NIR,RS) 1.2“(13.31x13.31)	6.5x6.5	8.1x107(e-/((W/m2).s)) QE73%@595nm 13(e-/s/pix)	45fps@2048×2048 45fps@1024×1024	1x1 2x2	21us~60s
SCA2020-Ms-TR (GPixel NIR)	4.2M/GSENSE2020s(C,NIR,RS) 1.2“(13.31x13.31)	6.5x6.5	8.1x107(e-/((W/m2).s)) QE64%@595nm	45fps@2032×2046 45fps@1008×1022	1x1 2x2	50us~3600s

			13(e-/s/pix)			
SCA2020-UV-TR (GPixel UV)	4.2M/GSENSE2020BSI(M,UV,RS) 1.2“(13.31x13.31)	6.5x6.5	1.1x108(e-/((W/m2).s)) QE93.7%@550nm 80(e-/s/pix)	32fps@2048×2048 32fps@1024×1024	1x1 2x2	12us~60s
SCA400-UV-TR (GPixel UV)	4.2M/GSENSE400BSI(M,UV,RS) 2.0“(22.53x22.53)	11.0x11.0	3.25x108(e-/((W/m2).s)) QE95.3%@560nm 345(e-/s/pix)	37fps@2048×2048 37fps@1024×1024	1x1 2x2	21us~60s
SCM487-UV-TR (GS-UV)	8.0M/IMX487-AAMJ(M,UV,GS) 2/3“ (7.78x7.78)	2.74x2.74	145mv with 1/30s 0.15mv with 1/30s	45fps@2840×2840 198fps@1420×1420	1x1 2x2	30us~15s

***C: Color; M: Mono; UV: Ultraviolet; RS: Rolling shutter; GS: Global shutter; NIR: Near Infrared.**

***UV cameras can be removed from the glass, of which IUA8000KMA RG version please see 6.1.53.**

1.7 IUB Series Camera Specifications (End of life, not recommended 3)

1.7.1 IUB Series USB3 Camera(3)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity/Dark Signal	FPS/Resolution	Binning	Exposure Time
~~IUB4200KMA EOL~~	4.2M/GSENSE2020e(M,RS) 1.2“ (13.31x13.3)	6.5x6.5	8.11x10^7e-/((W/m2)·s) 7e-/s/pix	45fps@2048×2046 45fps@1024×1022	1x1 2x2	TBD
~~IUB4200KMB NRND~~	4.2M/GSENSE2020BSI(M, UV,RS) 1.2“ (13.31x13.3)	6.5x6.5	1.1x10^8e-/((W/m2)·s) 80e-/s/pix	43.6fps@2048×2046 43.6fps@1024×1022	1x1 2x2	150us-60s
~~IUB43000KMA EOL~~	43.0M/GMAX0806 (M,GS) 1.7“ (22.13x15.21, APS-C)	2.8x2.8	1.19x10^7e-/((W/m2)·s) 1e-/s/pix	8.5fps@7904×5432	1x1	15us-15s

***C: Color; M: Mono; UV: Ultraviolet; RS: Rolling shutter; GS: Global shutter.**

*** EOL: End of life. NRND: Not recommended for new designs. The corresponding products can be found in the SCM/ SCA series.**

1.8 SCC Series Camera Specifications (APS or full frame, 20)

1.8.1 SCC Series USB3 Camera (11)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure Time
SCC410-C-TR	24.0M/IMX410CQK-C(C, RS) 2.7“ (36.02x24.00, Full Frame)	5.94x5.94	572.8mv with 1/30s 0.037mv with 1/30s	15.3@6064x4040(14bit) 41@3024x2012 114@2016x1342	1x1 2x2 3x3	150us~15s
SCC571-M-TR	26.0M/IMX571BLR(M, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	870.9mv with 1/30s 0.07mv with 1/30s	14fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC571-C-TR	26.0M/IMX571BQR(C, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	14fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC571-M-AFU	26.0M/IMX571BLR(M, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	870.9mv with 1/30s 0.07mv with 1/30s	14fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC571-C-AFU	26.0M/IMX571BQR(C, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	14fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC342-M-TR	31.0M/IMX342LLA(M, GS) 1.8“ (22.3x16.74, APS-C)	3.45x3.45	1830mv with 1/30s 0.15mv with 1/30s	12.0fps@6464×4852 45.9fps@3216×2426	1x1 2x2	31us~15s
SCC342-C-TR	31.0M/IMX342LQA(C, GS) 1.8“ (22.3x16.74, APS-C)	3.45x3.45	1146mv with 1/30s 0.15mv with 1/30s	12.0fps@6464×4852 45.9fps@3216×2426	1x1 1x1	31us~15s
SCC455-M-TR	60.0M/IMX455ALK (M, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	870.9mv with 1/30s 0.04mv with 1/30s	6.1fps@9568×6380(16bit) 24.6fps@4784×3190 55.8fps@3184×2124 191.0fps@1040×706	1x1 2x2 3x3 9x9	150us~15s
SCC455-C-TR	60.0M/IMX455AQK (C, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	6.1fps@9568×6380(16bit) 24.6fps@4784×3190 55.8fps@3184×2124 191.0fps@1040×706	1x1 2x2 3x3 9x9	150us~15s
SCC455-M-AFU	60.0M/IMX455ALK (M, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	870.9mv with 1/30s 0.04mv with 1/30s	6.1fps@9568×6380(16bit) 24.6fps@4784×3190 55.8fps@3184×2124 191.0fps@1040×706	1x1 2x2 3x3 9x9	150us~15s
SCC455-C-AFU	60.0M/IMX455AQK (C, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	6.1fps@9568×6380(16bit) 24.6fps@4784×3190 55.8fps@3184×2124 191.0fps@1040×706	1x1 2x2 3x3 9x9	150us~15s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; AFU: Automatic Focusing+USB3 port.**

1.8.2 SCC Series GigE Camera (8)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure Time
SCC571-M-TR-10G	26.0M/IMX571BLR(M, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	870.9mv with 1/30s 0.07mv with 1/30s	45fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC571-C-TR-10G	26.0M/IMX571BQR(C, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	45fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC571-M-TR-AF10G	26.0M/IMX571BLR(M, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	870.9mv with 1/30s 0.07mv with 1/30s	45fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC571-C-TR-AF10G	26.0M/IMX571BQR(C, RS) 1.8“ (23.48x15.67, APS-C)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	45fps@6224×4168(16bit) 37fps@3104×2084 110fps@2064×1388	1x1 2x2 3x3	150us~15s
SCC455-M-TR-10G	60.0M/IMX455ALK (M, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	870.9mv with 1/30s 0.04mv with 1/30s	20fps@9568×6380(16bit) 40fps@4784×3190 57.52fps@3184×2124 199.37fps@1040×706	1x1 2x2 3x3 9x9	150us~15s
SCC455-C-TR-10G	60.0M/IMX455AQK (C, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	20fps@9568×6380(16bit) 40fps@4784×3190 57.52fps@3184×2124 199.37fps@1040×706	1x1 2x2 3x3 9x9	150us~15s
SCC455-M-TR-AF10G	60.0M/IMX455ALK (M, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	870.9mv with 1/30s 0.04mv with 1/30s	20fps@9568×6380(16bit) 40fps@4784×3190 57.52fps@3184×2124 199.37fps@1040×706	1x1 2x2 3x3 9x9	150us~15s

SCC455-C-TR-AF10G	60.0M/IMX455AQK (C, RS) 2.7“ (35.96x23.99, Full Frame)	3.76x3.76	484.5mv with 1/30s 0.07mv with 1/30s	20fps@9568×6380(16bit) 40fps@4784×3190 57.52fps@3184×2124 199.37fps@1040×706	1x1 2x2 3x3 9x9	150us~15s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; 10G: 10 Gigabit Ethernet port; AFU: Automatic Focusing+USB3 port.**

1.8.3 SCC Series CameraLink Camera (1)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure Time
SCC425-M-TR-CL480	1.7M/IMX425LLJ(M,GS) 1.1“ (14.4x9.9)	9.0x9.0	8100mv with 1/30s 0.3mv with 1/30s	302@1600×1100	1x1	6us~15s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; CL: CamerLink port.**

1.9 SCD Series Camera Specifications (2)

1.9.1 SCD Series USB3 Camera (2)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity/Dark Signal	FPS/Resolution	Binning	Exposure Time
SCD16000KMA (NIR)	16.0M/PYTHON 16K (M, GS) (18.43x18.43)	4.5x4.5	TBD	22.5@4096x4096	1x1	1us~60s
SCD25000KMA (NIR)	25.0M/PYTHON 25K (M, GS) 2.04“ (23.04x23.04)	4.5x4.5	<1/5000 3.9 e^-/s@ 20°C	14.8@5120x5120 14.8@2560x2560 14.8@1664x1664	1x1 2x2 3x3	1us~60s

***C: Color; M: Mono; RS: Rolling shutter; GS: Global shutter; NIR: Near Infrared Ray.**

1.10 SCE Series Camera Specifications (1)

1.10.1 IUE Series USB3 Camera (1)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity/Dark Signal	FPS/Resolution	Binning	Exposure Time
SCE1800KMA	1.8M/CMOS Sensor(M,RS) (115.2x147.5)	96.0x96.0	TBD 2200e/s/pixel@25℃	120fps@1200x1536	1x1	10us-15s

***M: Mono; RS: Rolling shutter.**

1.11 EHD-AVCAM Series Camera Specifications(1)

Model Number	Image Sensor	Pixel Size(μm)	G Sensitivity/Dark Signal	FPS/Resolution	Binning	Exposure Time
AVCAM290A	0.4M/IMX307 (M, RS) 1/2.8“(2.08x1.67)	2.9x2.9	CVBS(PAL-N)	25fps@720 × 576	2x2	105μs-20ms

***M: Mono; RS: Rolling shutter.**

2 MaxCam Series Camera

Specification(18) 2.1 MaxCam-811M-TE

Table 2-1 MaxCam-811M-TE camera specifications

Model / Parameter	MAX251AM-U3	MAX251AM-10G
	251M pixels 4.1" CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX811ALR	
Pixel size	2.81 μm x 2.81 μm	
Sensor size	4.1"	
Frame rate	1.5fps@19200 x 12800	
Conversion Gain	TBD	
Readout Noise	TBD	
Full Well	TBD	
Dynamic range	TBD	
SNRmax	TBD	
Sensitivity	TBD	
Dark current	TBD	
Gain range	1x-50x	
Exposure time	15μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 19V Power adapter	19V Power adapter
Power consumption	TBD	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	110mm×110mm×123.8mm	110mm x 110mm x 129.8mm
Weight	1.44kg	
Lens mount	M72-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

2.2 MaxCam-811C-TE

Table 2-2 MaxCam-811C-TR camera specifications

Model / Parameter	MAX251AC-U3	MAX251AC-10G
	251M pixels 4.1" CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX811AQR	
Pixel size	2.81 μm x 2.81 μm	
Sensor size	4.1"	
Frame rate	1.5fps@19200 x 12800	
Conversion Gain	TBD	
Readout Noise	TBD	
Full Well	TBD	
Dynamic range	TBD	
SNRmax	TBD	
Sensitivity	TBD	
Dark current	TBD	
Gain range	1x-50x	
Exposure time	15μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 19V Power adapter	19V Power adapter
Power consumption	TBD	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	110mm x 110mm x 123.8mm	110mm x 110mm x 129.8mm
Weight	1.44kg	
Lens mount	M72-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

2.3 MaxCam-411M-TE

Table 2-3 MaxCam-411M-TE camera specifications

Model / Parameter	MAX151AM-U3	MAX151AM-10G
	151M pixels 4.2" CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX411ALR	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	4.2"	
Frame rate	2.4@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178	6.1@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178
Conversion Gain	0.78e/ADU	
Readout Noise	2.8e	
Full Well	50873.9e	
Dynamic range	84.9dB	
SNRmax	47dB	
Sensitivity	871mV with 1/30s	
Dark current	0.04mV with 1/30s	
Gain range	1x-50x	
Exposure time	15μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 19V Power adapter	19V Power adapter
Power consumption	TBD	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	110mm x 110mm x 123.8mm	110mm x 110mm x 129.8mm
Weight	1.44kg	
Lens mount	M72 mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

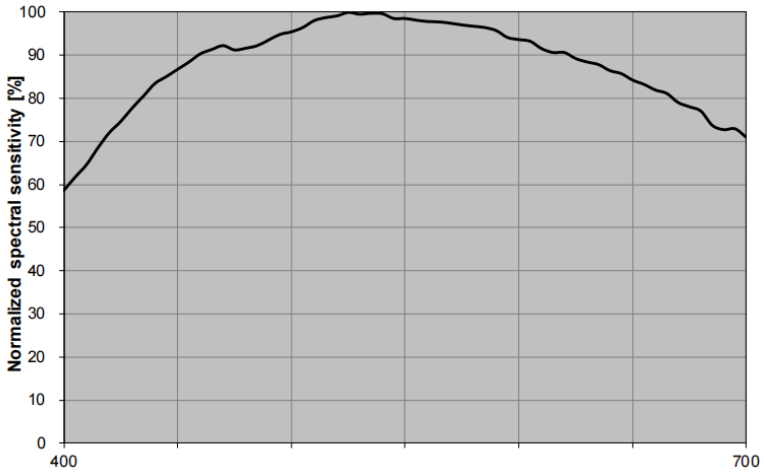


Figure 2-1 MaxCam-411M-TE spectral response curve

2.4 MaxCam-411C-TE

Table 2-4 MaxCam-411C-TE camera specifications

Model / Parameter	MAX151AC-U3	MAX151AC-10G
	151M pixels 4.2" CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX411AQR	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	4.2"	
Frame rate	2.4@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178	6.1@14176x10640 6.9@7072x5320 20.8@4704x3546 61.9@1568x1178
Conversion Gain	0.78e/ADU	
Readout Noise	2.8e	
Full Well	50873.9e	
Dynamic range	84.9dB	
SNRmax	47dB	
Sensitivity	485mV with 1/30s	
Dark current	0.04mV with 1/30s	
Gain range	1x-50x	
Exposure time	15μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 19V Power adapter	19V Power adapter
Power consumption	TBD	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	110mm x 110mm x 123.8mm	110mm x 110mm x 129.8mm
Weight	1.44kg	
Lens mount	M72 mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

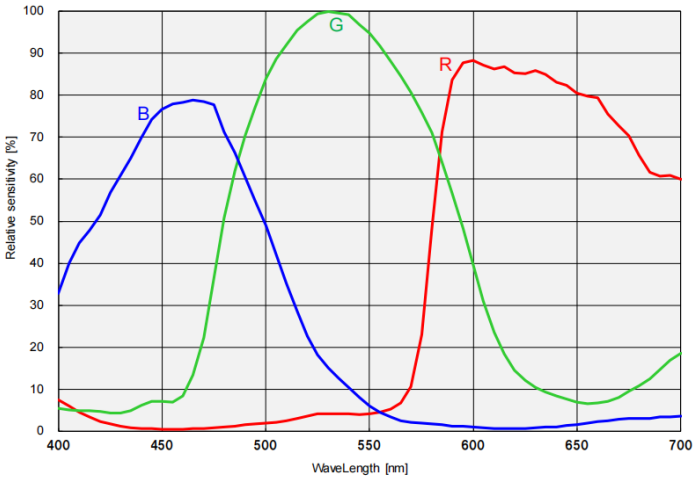


Figure 2-2 MaxCam-411C-TE spectral response curve

2.5 MaxCam-461M-TE

Table 2-5 MaxCam-461M-TE camera specifications

Model / Parameter	MAX102AM-U3	MAX102AM-10G
	102M pixels 3.4" CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX461ALR	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	3.4"	
Frame rate	3.5@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970	8.7@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970
Conversion Gain	0.75e/ADU	
Readout Noise	3.57e	
Full Well	49.09ke	
Dynamic range	82.8dB	
SNRmax	46.9dB	
Sensitivity	871mV with 1/30s	
Dark current	0.04mV with 1/30s	
Gain range	1x-50x	
Exposure time	15μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 19V Power adapter	19V Power adapter
Power consumption	Cooled 58.86W / Uncooled 14.95W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	110mm x 110mm x 123.8mm	110mm x 110mm x 129.8mm
Weight	1.44kg	
Lens mount	M72 mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

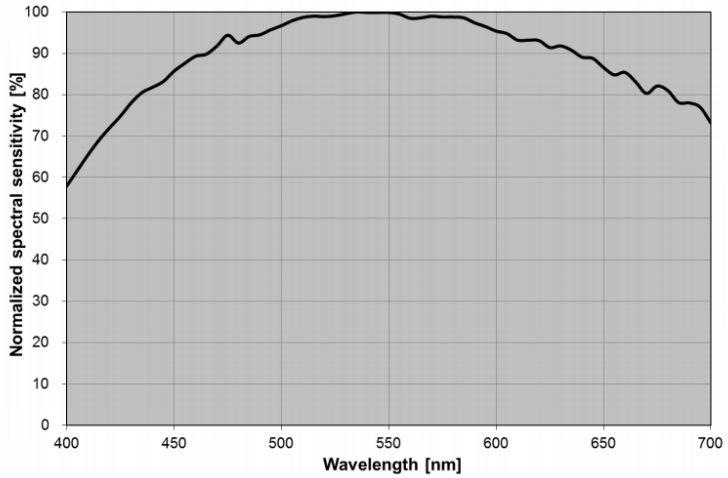


Figure 2-3 MaxCam-461M-TE spectral response curve

2.6 MaxCam-461C-TE

Table 2-6 MaxCam-461C-TE camera specifications

Model / Parameter	MAX102AC-U3	MAX102AC-10G
	102M pixels 3.4" CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX461AQR	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	3.4"	
Frame rate	3.5@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970	8.7@11648x8742 8.7@5824x4370 27.8@3872x2912 82.5@1280x970
Conversion Gain	0.75e/ADU	
Readout Noise	3.57e	
Full Well	49.09ke	
Dynamic range	82.8dB	
SNRmax	46.9dB	
Sensitivity	485mV with 1/30s	
Dark current	0.04mV with 1/30s	
Gain range	1x-50x	
Exposure time	15μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 19V Power adapter	19V Power adapter
Power consumption	Cooled 58.86W / Uncooled 14.95W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	110mm x 110mm x 123.8mm	110mm x 110mm x 129.8mm
Weight	1.44kg	
Lens mount	M72 mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

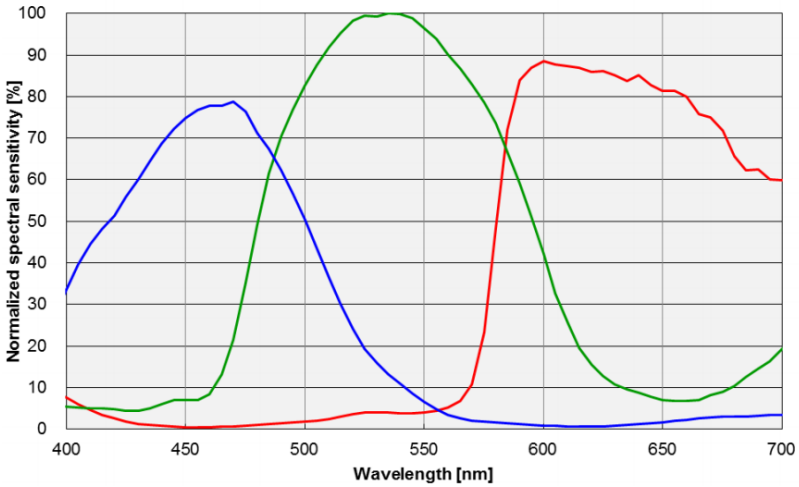


Figure 2-4 MaxCam-461C-TE spectral response curve

2.7 MaxCam-455M-TE

Table 2-7 MaxCam-455M-TE camera specifications

Model / Parameter	MAX62AM 61M pixels 2.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX455ALK
Pixel size	3.76 μm x 3.76 μm
Sensor size	2.7"
Frame rate	6.1@9568x6380(16bit) 19.1@4784x3190 55.6@3184x2124 191@1040x706
Conversion Gain	0.79e-(HCG) 1.62e-(LCG)
Readout Noise	3.51e-(HCG) 5.39e-(LCG)
Full Well	51550.45e-(HCG) 87353.34e-(LCG)
Dynamic range	83.34dB (HCG) 84.18dB (LCG)
SNRmax	47.12dB(HCG) 49.41dB(LCG)
Sensitivity	871mV with 1/30s
Dark current	0.04mV with 1/30s
Gain range	1x-50x
Exposure time	100μs-1000sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 19V Power adapter
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	110mm×110mm×121.5mm
Weight	1.7kg
Lens mount	M52 mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

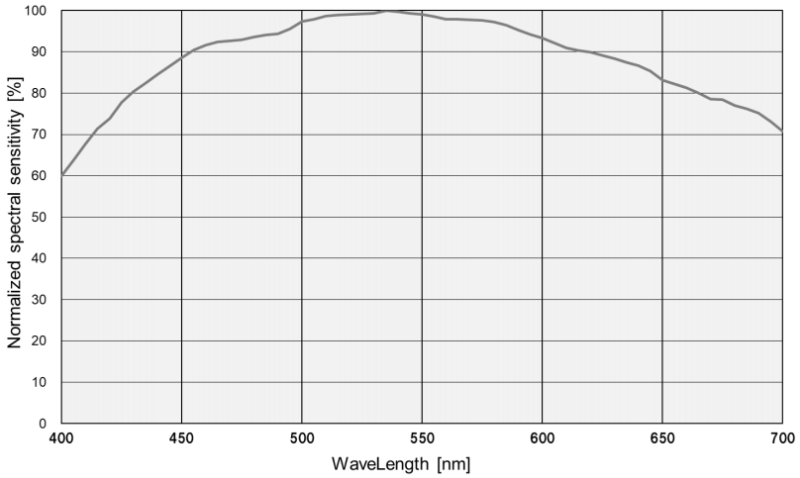


Figure 2-5 MaxCam-455M-TE spectral response curve

2.8 MaxCam-455C-TE

Table 2-8 MaxCam-455C-TE camera specifications

Model / Parameter	MAX62AC 61M pixels 2.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX455AQK
Pixel size	3.76 μm x 3.76 μm
Sensor size	2.7"
Frame rate	6.1@9568x6380(16bit) 19.1@4784x3190 55.6@3184x2124 191@1040x706
Conversion Gain	0.79e-(HCG) 1.62e-(LCG)
Readout Noise	3.51e-(HCG) 5.39e-(LCG)
Full Well	51550.45e-(HCG) 87353.34e-(LCG)
Dynamic range	83.34dB (HCG) 84.18dB (LCG)
SNRmax	47.12dB(HCG) 49.41dB(LCG)
Sensitivity	485mV with 1/30s
Dark current	0.04mV with 1/30s
Gain range	1x-50x
Exposure time	100μs-1000sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 19V Power adapter
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	110mm×110mm×121.5mm
Weight	1.7kg
Lens mount	M52 mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

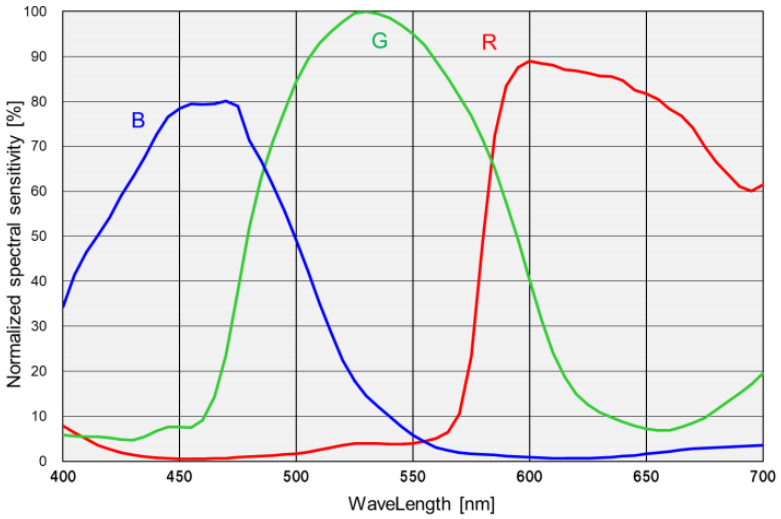


Figure 2-6 MaxCam-455C-TE spectral response curve

2.9 MaxCam-410C-TE

Table 2-9 MaxCam-410C-TE camera specifications

Parameter \ Model	MAX24AC
	24M pixels 2.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX410CQK
Pixel size	5.94 μm x 5.94 μm
Sensor size	2.7"
Frame rate	15.3@6064x4040(14bit) 41@3024x2012 114@2016x1342
Conversion Gain	1.2e-(HCG) 6.19e-(LCG)
Readout Noise	0.58e-(HCG) 4.56e-(LCG)
Full Well	19653.77e-(HCG) 101464.01e-(LCG)
Dynamic range	84dB (HCG) 84dB (LCG)
SNRmax	42.93dB(HCG) 50.06dB(LCG)
Sensitivity	573mV with 1/30s
Dark current	0.04mV with 1/30s
Gain range	1x-50x
Exposure time	100μs-1000sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General specification	
Power supply	Power with USB3.0 or 19V Power adapter
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	110mm×110mm×121.5mm
Weight	1.7kg
Lens mount	M52 mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

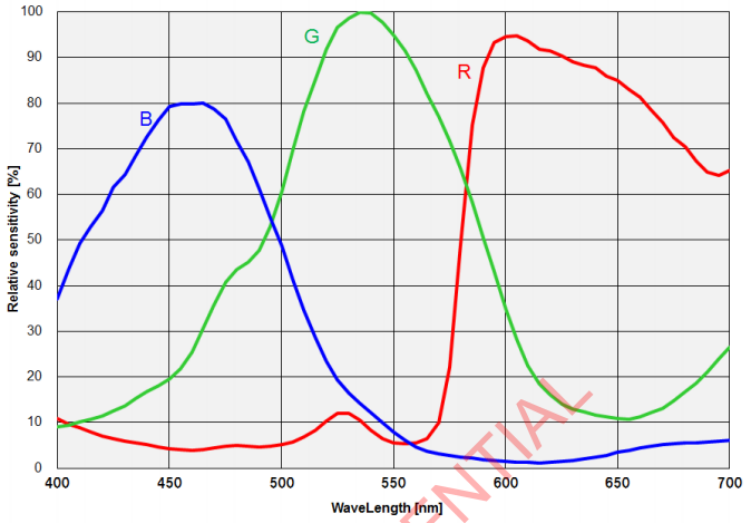


Figure 2-7 MaxCam-410C-TE spectral response curve

2.10 MaxCam-2020Me-TE

Table 2-10 MaxCam-2020Me-TE camera specifications

Parameter \ Model	MAX04AM
	4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE2020e
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	45@2048x2048 45@1024 x 1024
Conversion Gain	1.17(HCG) 3.62(LCG)0.69(HDR)
Readout Noise	2.06e-(HCG) 10.39e-(LCG)3.62e-(HDR)
Full Well	19.17ke-(HCG)59.30ke-(LCG)45.02ke-(HDR)
Dynamic range	66.72dB(HCG) 66.36dB(LCG)81.6dB(HDR)
SNRmax	42.83dB(HCG)47.73dB(LCG)46.53dB(HDR)
Sensitivity	8.1x107 (e-/((W/m2).s))
Peak QE	64.2% @595nm
Dark current	0.12(e-/s/pix) @-10C°
Gain range	1x-50x
Exposure time	100μs-1000sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 19V Power adapter
Power consumption	Cooled 44.8W / Uncooled 6.65W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	110mm×110mm×121.5mm
Weight	1.7kg
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

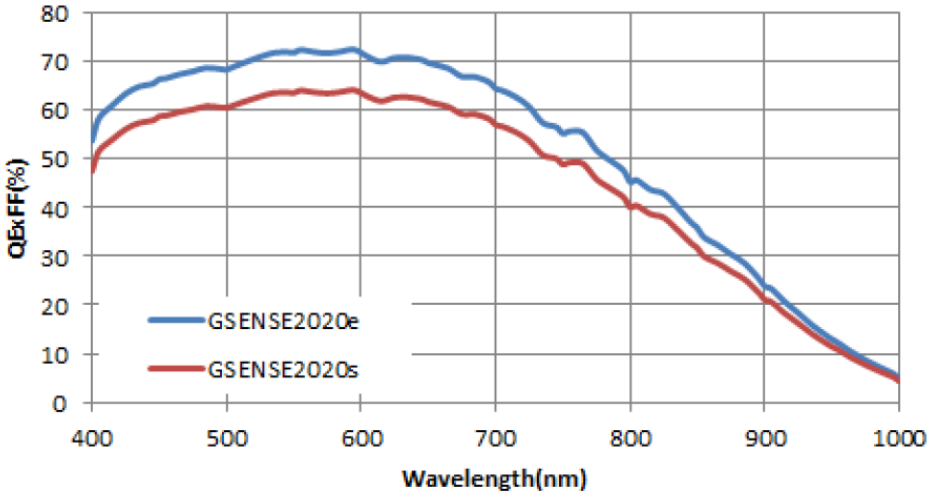


Figure 2-8 MaxCam-2020Me-TE spectral response curve

2.11 MaxCam-2020UV-TE

Table 2-11 MaxCam-2020UV-TE camera specifications

Model / Parameter	MAX04BM 4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE2020BSI
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	45@2048x2048 45@1024 x 1024
Conversion Gain	3.23e-(HCG) 12.42e-(LCG) 0.76e-(HDR)
Readout Noise	6.78e-(HCG) 29.07e-(LCG) 5.33e-(HDR)
Full Well	13210.49e-(HCG) 50873.17e-(LCG) 49863.77e-(HDR)
Dynamic range	65.58dB (HCG) 64.62dB (LCG) 79.14dB (HDR)
SNRmax	41.21dB(HCG) 47.06dB(LCG) 46.98dB(LCG)
Sensitivity	1.1x108 (e-/((W/m2).s))
Peak QE	93.7% @550nm
Dark current	0.15(e-/s/pix) @-15C°
Gain range	1x-50x
Exposure time	100μs-1000sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 19V Power adapter
Power consumption	Cooled 48.26W / Uncooled 8.17W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	110mm×110mm×121.5mm
Weight	1.7kg
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

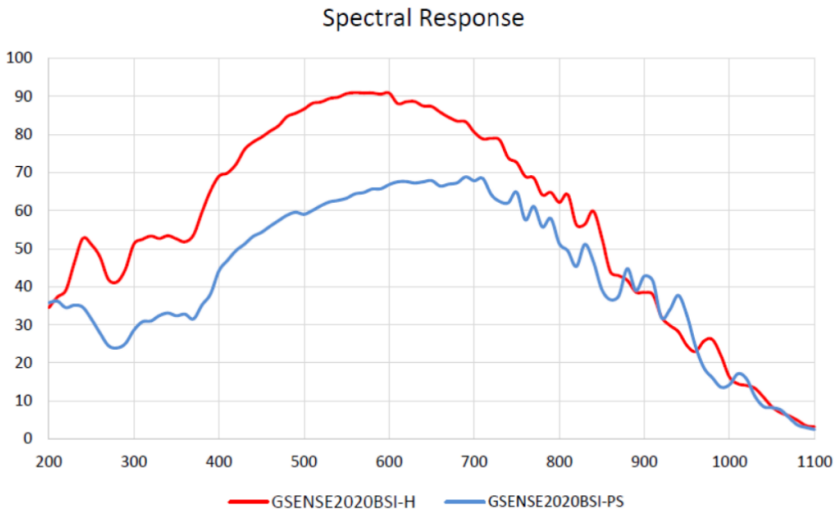


Figure 2-9 MaxCam-2020UV-TE spectral response curve

2.12 MaxCam-400UV-TE

Table 2-12 MaxCam-400UV-TE camera specifications

Parameter \ Model	MAX04CM
	4.2M pixels 2.0" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE400BSI
Pixel size	11 μm x 11 μm
Sensor size	2.0"
Frame rate	44@2048x2048 44@1024 x 1024
Conversion Gain	2.46e-(HCG) 19.88e-(LCG) 0.46e-(HDR)
Readout Noise	6.75e-(HCG) 33.37e-(LCG) 5.52e-(HDR)
Full Well	10086.89e-(HCG) 81427.2e-(LCG) 30471.53e-(HDR)
Dynamic range	63.24dB (HCG) 67.5dB (LCG) 74.58dB (HDR)
SNRmax	40.04dB(HCG) 49.11dB(LCG) 44.84dB(LCG)
Sensitivity	3.25x108 (e-/((W/m2).s))
Peak QE	95.3% @560nm
Dark current	1.5(e-/s/pix) @-10C°
Gain range	1x-50x
Exposure time	100μs-1000sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 19V Power adapter
Power consumption	Cooled 50.2W / Uncooled 7.33W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	110mm×110mm×121.5mm
Weight	1.7kg
Lens mount	M42 mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

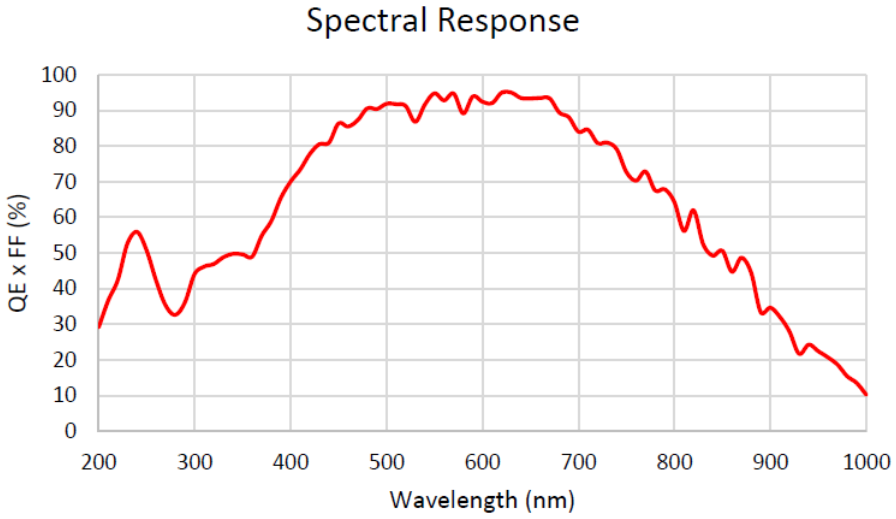


Figure 2-10 MaxCam-400UV-TE spectral response curve

3 SC-ITR Series Camera Specification (22)

3.1 SC492M-ITR

Table 3-1 SC492M-ITR camera specifications

Model / Parameter	ITR3CMOS45000KMA 45M pixels 1.4" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX492LLJ-C
Pixel size	2.315 μm x 2.315μm
Sensor size	1.4"
Frame rate	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720
Readout Noise	2.67e-(HCG) 2.74e-(LCG)
Full Well	14796.69e-(HCG) 14859.92e-(LCG)
Dynamic range	72dB (HCG) 72dB (LCG)
SNRmax	41.7dB(HCG) 41.72dB(LCG)
Sensitivity	175mV
Dark current	0.03mV
Gain range	1x-50x
Exposure time	100μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	24.12w
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 102mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

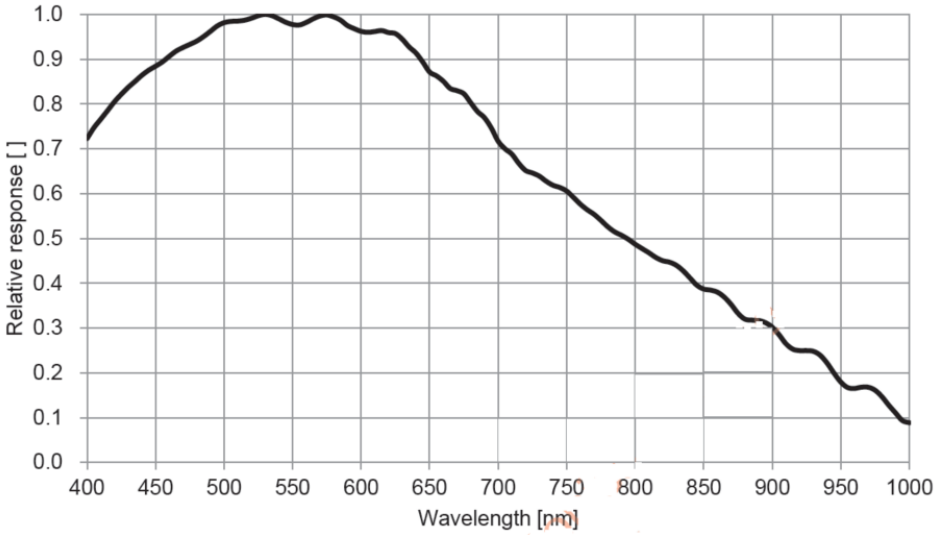


Figure 3-1 SC492M-ITR spectral response curve

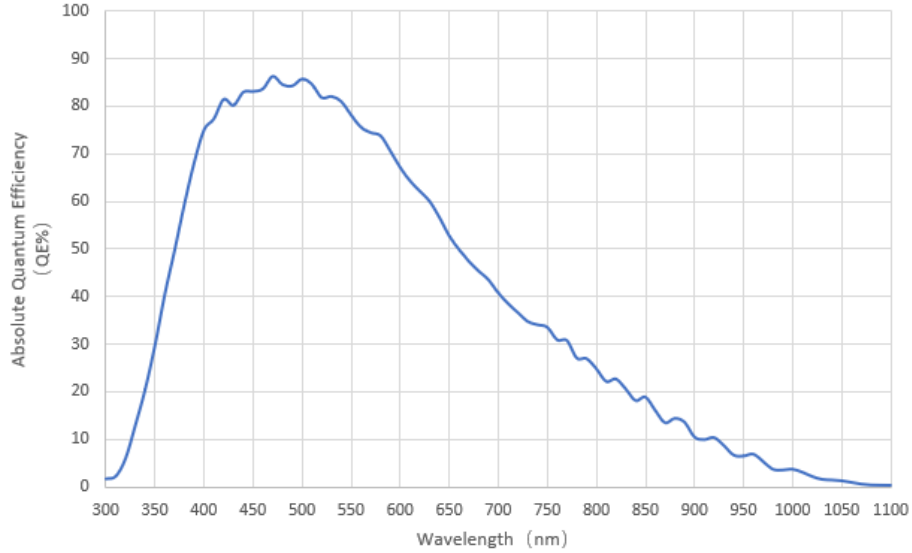


Figure 3-2 SC492M-ITR spectral absolute quantum efficiency

3.2 SC571C-ITR

Table 3-2 SC571C-ITR camera specifications

Model / Parameter	ITR3CMOS26000KPA 26M pixels 1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX571BQR-C
Pixel size	3.76 μm x 3.76 μm
Sensor size	1.8"
Frame rate	14fps@6224x4168 37fps@3104x2084 110fps@2064x1388
Readout Noise	1.31e-(HCG) 3.15e-(LCG)
Full Well	16569.55e-(HCG) 51591.91e-(LCG)
Dynamic range	81.78dB (HCG) 84dB (LCG)
SNRmax	42.19dB(HCG) 47.13dB(LCG)
Sensitivity	485mv
Dark current	0.07mv
Gain range	1x-50x
Exposure time	100μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	28.32w
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

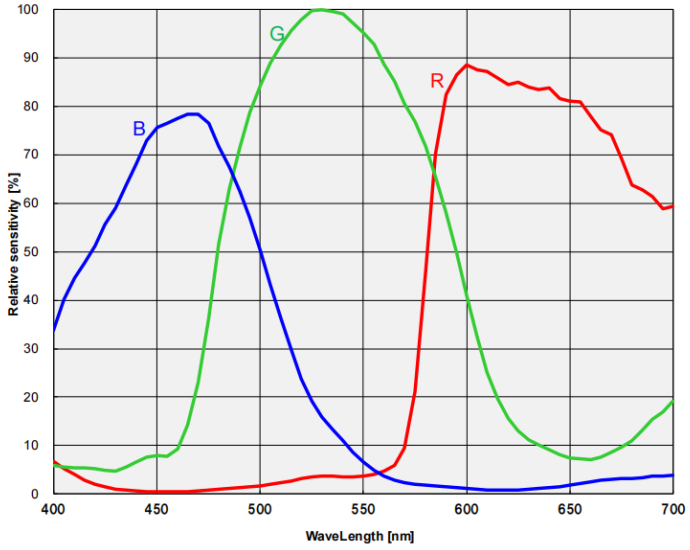


Figure 3-3 SC571C-ITR spectral response curve

3.3 SC571M-ITR

Table 3-3 SC571M-ITR camera specifications

Model / Parameter	ITR3CMOS26000KMA 26M pixels 1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX571BLR-J
Pixel size	3.76 μm x 3.76 μm
Sensor size	1.8"
Frame rate	14fps@6224x4168 37fps@3104x2084 110fps@2064x1388
Readout Noise	0.94e-(HCG) 2.23e-(LCG)
Full Well	16770.94e-(HCG) 51081.55e-(LCG)
Dynamic range	84.72dB (HCG) 86.88dB (LCG)
SNRmax	42.25dB(HCG) 47.08dB(LCG)
Sensitivity	871mv
Dark current	0.07mv
Gain range	1x-50x
Exposure time	100μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 16bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	25.08w
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

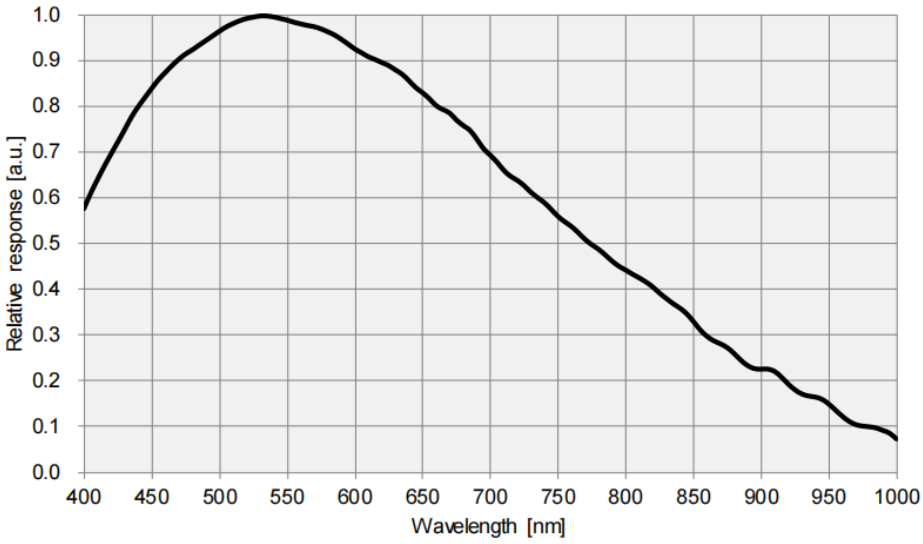


Figure 3-4 SC571M-ITR spectral response curve

3.4 SC571C-ITR

Table 3-4 SC571C-ITR camera specifications

Model / Parameter	ITR3CMOS21000KPA 21M pixels 4/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX269AQR
Pixel size	3.3 μm x 3.3 μm
Sensor size	4/3"
Frame rate	17@5280x3954 17@3952x3952 56@2640x1976 67@1760x1316 192@584x438
Readout Noise	0.91e-(HCG) 0.61e-(LCG)
Full Well	11356.85e-(HCG) 23015.4e-(LCG)
Dynamic range	72dB (HCG) 72dB (LCG)
SNRmax	40.55dB(HCG) 43.62dB(LCG)
Sensitivity	400mv
Dark current	0.1mv
Gain range	1x-50x
Exposure time	100μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 24.4W / Uncooled 5.81W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

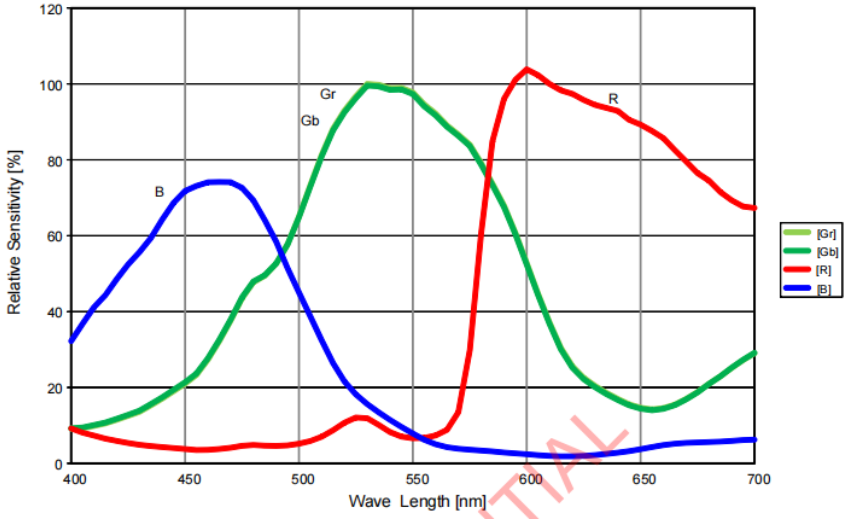


Figure 3-5 SC571C-ITR spectral response curve

3.5 SC183C-ITR

Table 3-5 SC183C-ITR camera specifications

Model / Parameter	ITR3CMOS20000KPA	ITR3CMOS20000KPA -G
	20M pixels 1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX183CQK	
Pixel size	2.4 μm x 2.4 μm	
Sensor size	1"	
Frame rate	19.0fps@5440 x 3684 48.8fps@2736 x 1824 59.4fps@1824 x 1216	4.5fps@5440 x 3684 18.5fps@2736 x 1824 41.7fps@1824 x 1216
Readout Noise	3.38e-	
Full Well	15929.69e-	
Dynamic range	72dB	
SNRmax	42.02dB	
Sensitivity	462mV	
Dark current	0.21mV	
Gain range	1x-50x	
Exposure time	53μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	14.64W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 101.5mm	
Weight	860g	
Lens mount	C mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

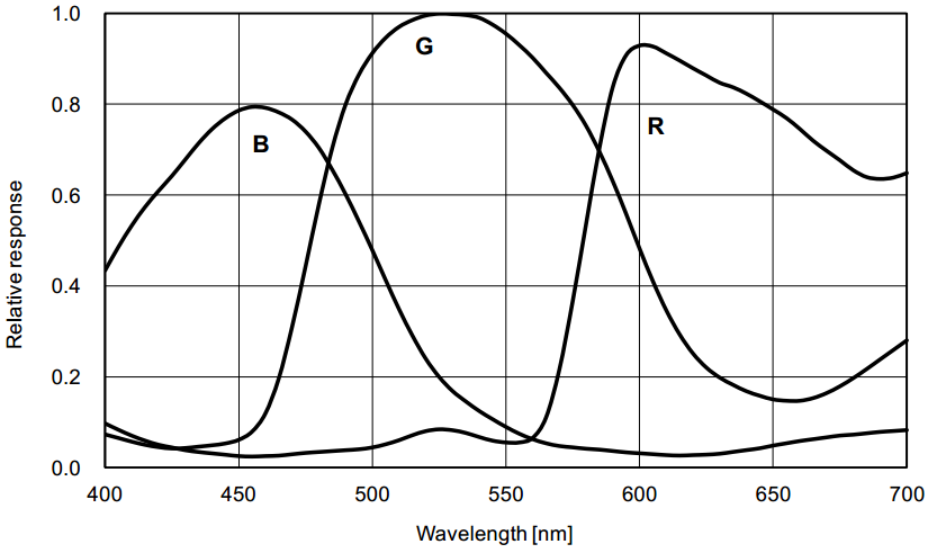


Figure 3-6 SC183C-ITR spectral response curve

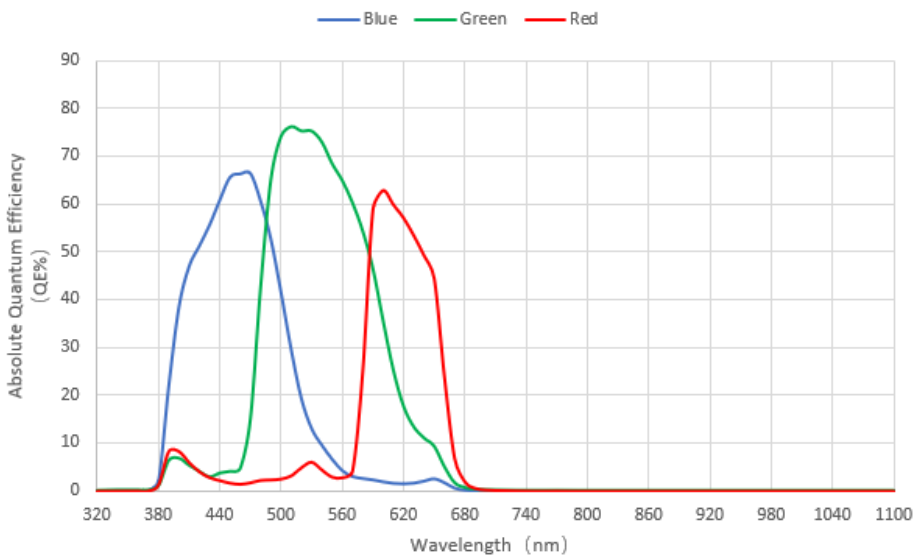


Figure 3-7 SC183C-ITR spectral absolute quantum efficiency

3.6 SC183M-ITR

Table 3-6 ISC183M-ITR camera specifications

Model / Parameter	ITR3CMOS20000KMA	ITR3CMOS20000KMA -G
	20M pixels 1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX183CQK	
Pixel size	2.4 μm x 2.4 μm	
Sensor size	1"	
Frame rate	19.0fps@5440 x 3684 48.8fps@2736 x 1824 59.4fps@1824 x 1216	4.5fps@5440 x 3684 18.5fps@2736 x 1824 41.7fps@1824 x 1216
Readout Noise	3.38e-	
Full Well	15929.69e-	
Dynamic range	72dB	
SNRmax	42.02dB	
Sensitivity	462mV	
Dark current	0.21mV	
Gain range	1x-50x	
Exposure time	53μs-3600sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	14.64W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 101.5mm	
Weight	860g	
Lens mount	C mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

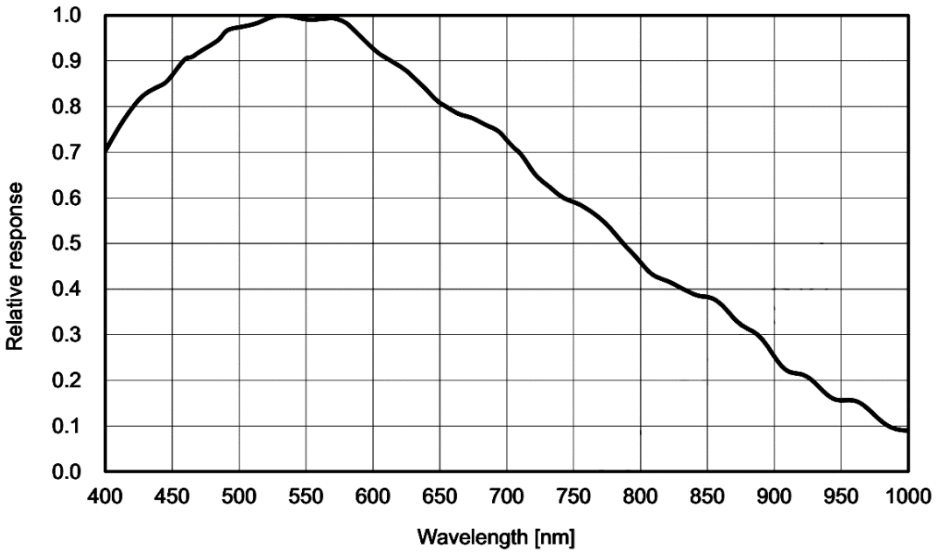


Figure 3-8 SC183M-ITR spectral response curve

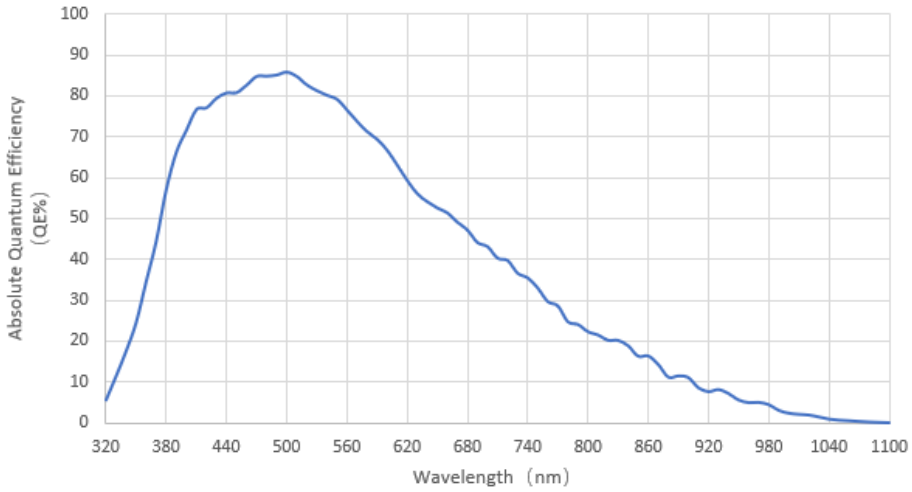


Figure 3-9 SC183M-ITR spectral absolute quantum efficiency

3.7 SC294C-ITR

Table 3-7 SC294C-ITR camera specifications

Parameter \ Model	ITR3CMOS10300KPA
	10.3M pixels 1.4" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX294CJK
Pixel size	2.315 μm x 2.315 μm
Sensor size	4/3"
Frame rate	30.0@4128x2808 38.5 @4096x2160 59.8@2048x1080 87.2@1360x720
Readout Noise	0.26e-(HCG) 2.51e-(LCG)
Full Well	15017.21e-(HCG) 64919.86e-(LCG)
Dynamic range	84dB (HCG) 84dB (LCG)
SNRmax	41.77dB(HCG) 48.12dB(LCG)
Sensitivity	419mv
Dark current	0.12mV
Gain range	1x-50x
Exposure time	150μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 30.9W / Uncooled 11.82W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 102mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

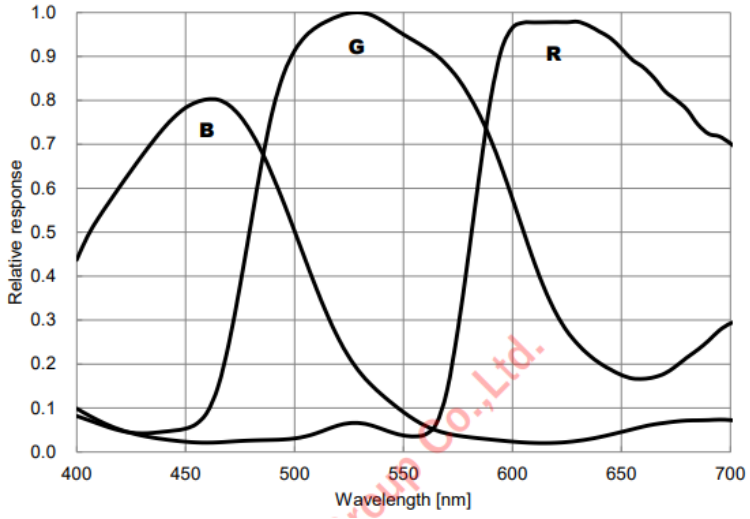


Figure 3-10 SC294C-ITR spectral response curve

3.8 SC294M-ITR

Table 3-8 SC294M-ITR camera specifications

Parameter \ Model	ITR3CMOS10300KMA
	10.3M pixels 1.4" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX294LLJ-M
Pixel size	2.315 μm x 2.315μm
Sensor size	4/3"
Frame rate	30.0@4128x2808 38.5 @4096x2160 59.8@2048x1080 87.2@1360x720
Readout Noise	0.26e-(HCG) 2.51e-(LCG)
Full Well	15017.21e-(HCG) 64919.86e-(LCG)
Dynamic range	84dB (HCG) 84dB (LCG)
SNRmax	41.77dB(HCG) 48.12dB(LCG)
Sensitivity	701mv
Dark current	0.12mV
Gain range	1x-50x
Exposure time	150μs-3600s
Shutter	Rolling shutter
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 30.9W / Uncooled 11.82W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 102mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

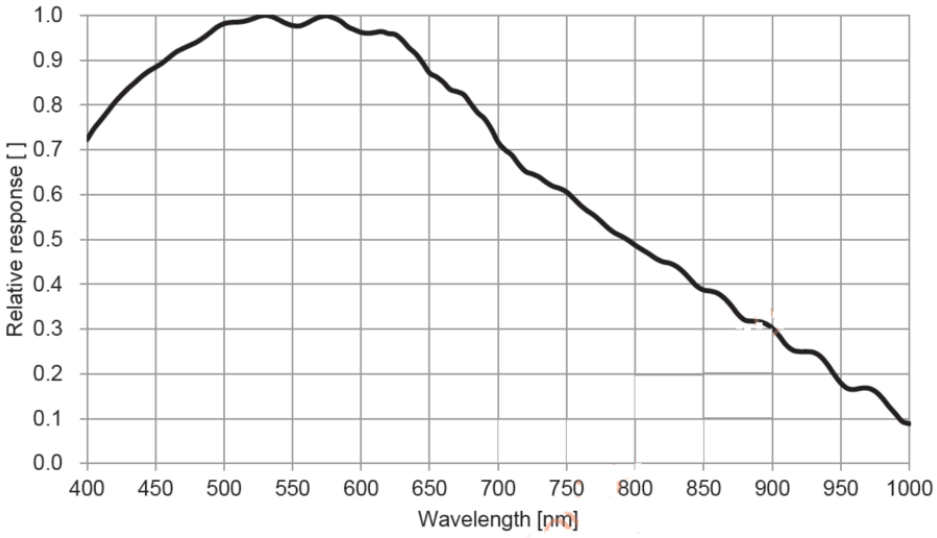


Figure 3-11 SC294M-ITR spectral response curve

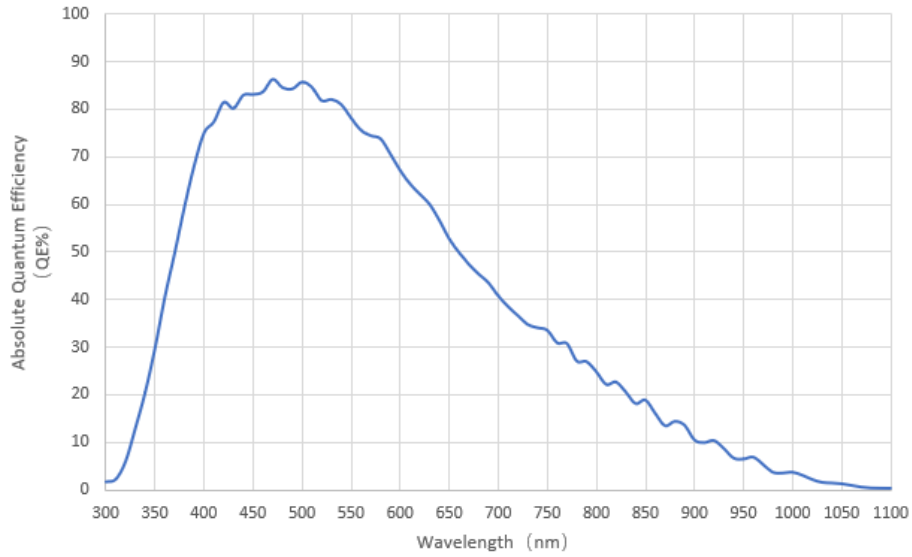


Figure 3-12 SC294M-ITR spectral absolute quantum efficiency

3.9 ISC533C-ITR

Table 3-9 SC533C-ITR camera specifications

Model / Parameter	ITR3CMOS09000KPA 9M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX533CQK-C
Pixel size	3.76 μm x 3.76 μm
Sensor size	1"
Frame rate	40@2992x3000 62@1488x1500 186@992x998
Readout Noise	1.47e-(HCG) 3.8e-(LCG)
Full Well	16745.76e-(HCG) 51073.49e -(LCG)
Dynamic range	81.12dB (HCG) 82.56dB (LCG)
SNRmax	42.24dB(HCG) 47.08dB(LCG)
Sensitivity	534mv
Dark current	0.04mV
Gain range	1x-50x
Exposure time	100μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 22.37W / Uncooled 7.27W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

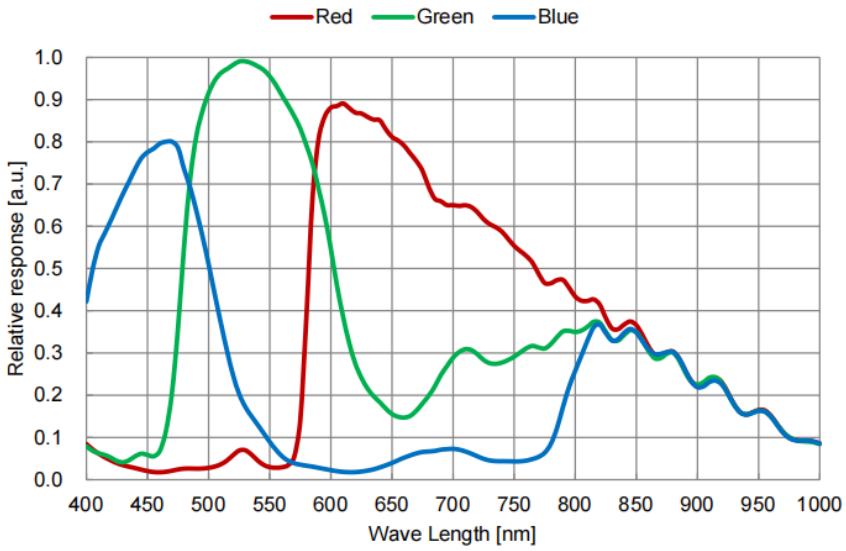


Figure 3-13 SC533C-ITR spectral response curve

3.10 SC533M-ITR

Table 3-10 SC533M-ITR camera specifications

Model / Parameter	ITR3CMOS09000KMA 9M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX533CLK-D
Pixel size	3.76 μm x 3.76 μm
Sensor size	1"
Frame rate	40@2992x3000 62@1488x1500 186@992x998
Readout Noise	1.47e-(HCG) 3.8e-(LCG)
Full Well	16745.76e-(HCG) 51073.49e -(LCG)
Dynamic range	81.12dB (HCG) 82.56dB (LCG)
SNRmax	42.24dB(HCG) 47.08dB(LCG)
Sensitivity	877mv
Dark current	0.04mV
Gain range	1x-50x
Exposure time	100μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 22.37W / Uncooled 7.27W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

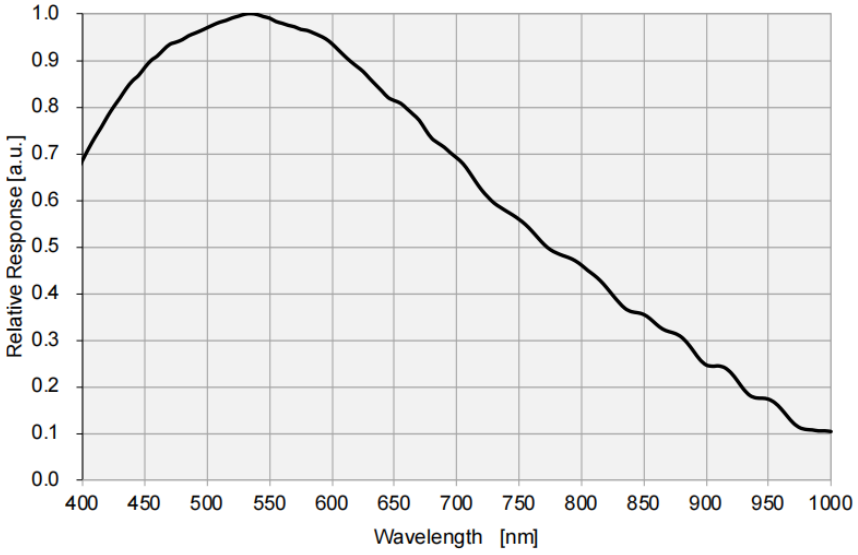


Figure 3-14 SC533M-ITR spectral response curve

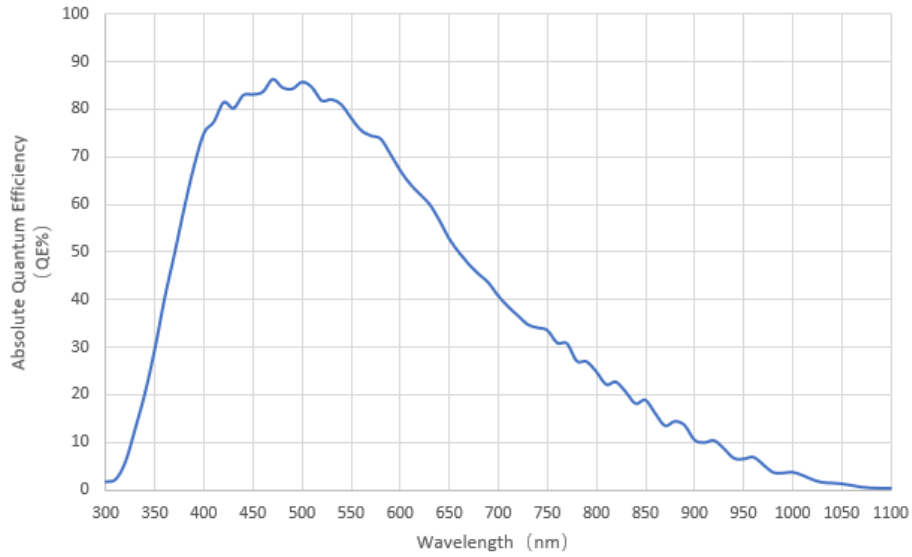


Figure 3-15 SC533M-ITR spectral absolute quantum efficiency

3.11 SC585C-ITR

Table 3-11 SC585C-ITR camera specifications

Model / Parameter	ITR3CMOS08300KPA
	8.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX585-AAQJ1-C
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.2"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Readout Noise	2.81e-(LCG) 0.42e-(HCG)
Full Well	40029.57e-(LCG) 4152.75e-(HCG)
Dynamic range	72dB (LCG) 72dB (HCG)
SNRmax	46.02dB(LCG) 36.18dB(HCG)
Sensitivity	5970mV
Dark current	0.13mV
Gain range	1x-50x
Exposure time	30μs-3600sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 26.88W / Uncooled 10.26W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

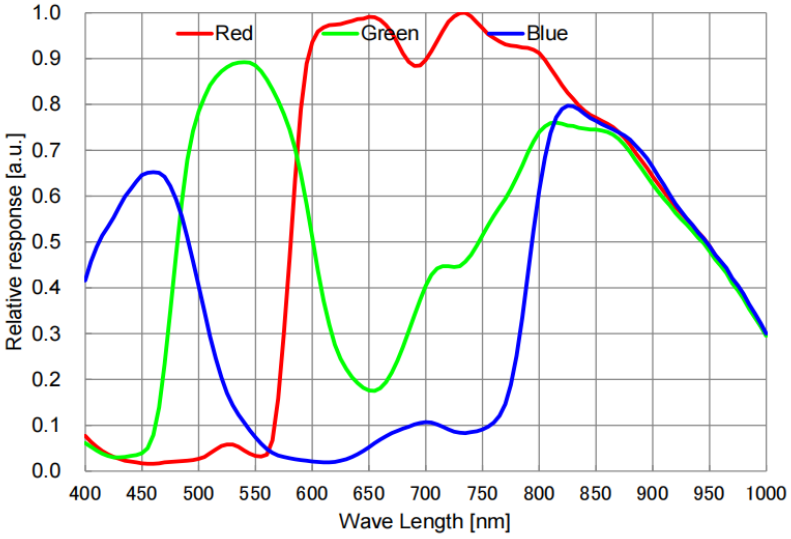


Figure 3-16 SC585C-ITR spectral response curve

3.12 SC428C-ITR

Table 3-12 SC428C-ITRA camera specifications

Model / Parameter	ITR3CMOS07100KPA	ITR3CMOS07100KPA-G
	7.1M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX428LQJ	
Pixel size	4.5 μm x 4.5 μm	
Sensor size	1.1"	
Frame rate	51.4fps@3200 x 2200 133.8fps@1584 x 1100	16.4fps@3200 x 2200 66fps@1584 x 1100
Readout Noise	2.38e-	
Full Well	11154.09e-	
Dynamic range	72dB	
SNRmax	40.47dB	
Sensitivity	2058mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	6μs-3600sec	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	25.2W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 101.5mm	
Weight	860g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

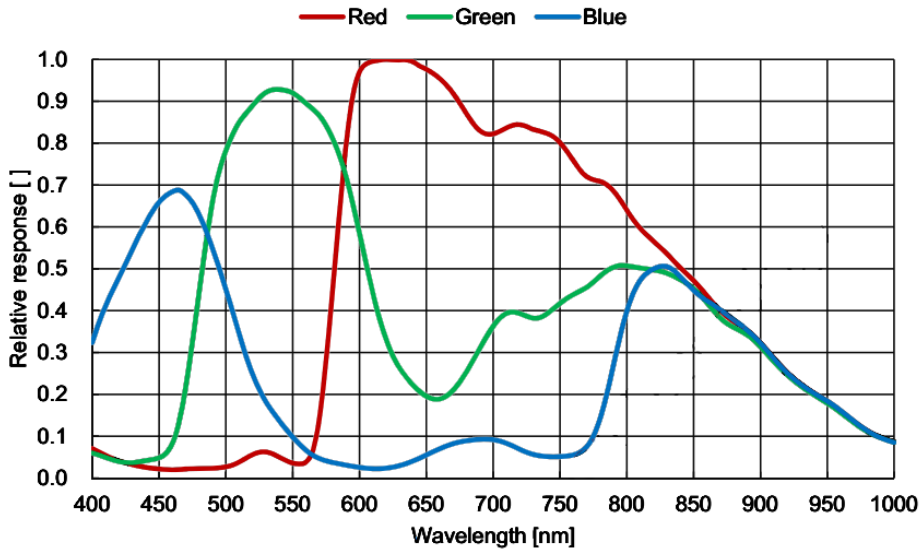


Figure 3-17 SC428C-ITR spectral response curve

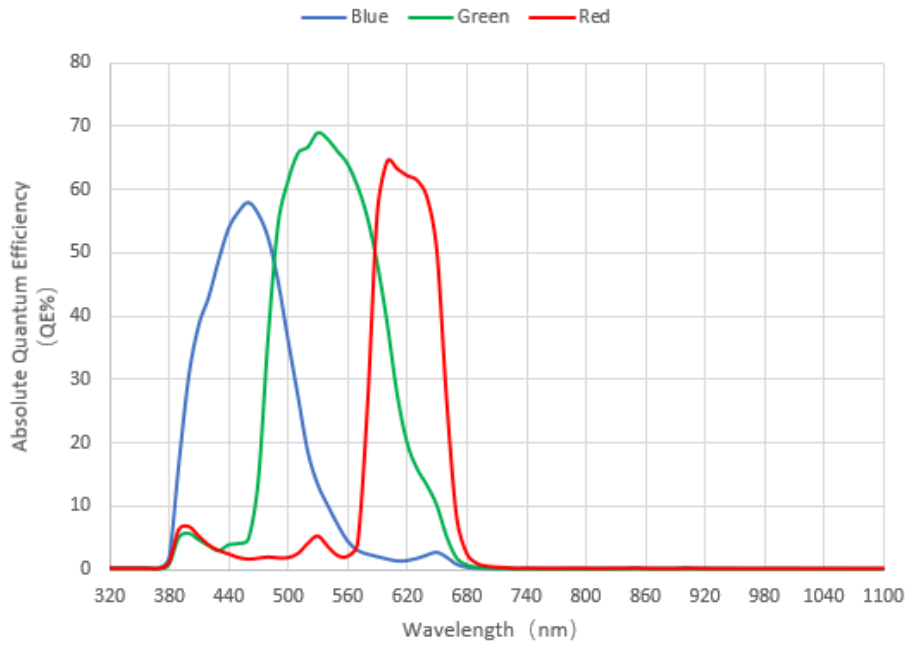


Figure 3-18 SC428C-ITR spectral absolute quantum efficiency

3.13 SC428-M-ITR

Table 3-13 SC428-M-ITR camera specifications

Parameter \ Model	ITR3CMOS07100KMA	ITR3CMOS07100KMA-G
	7.1M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX428LLJ	
Pixel size	4.5 μm x 4.5 μm	
Sensor size	1.1"	
Frame rate	51.4fps@3200 x 2200 133.8fps@1584 x 1100	16.4fps@3200 x 2200 66fps@1584 x 1100
Readout Noise	2.38e-	
Full Well	11154.09e-	
Dynamic range	72dB	
SNRmax	40.47dB	
Sensitivity	3354mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	6μs-3600s	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	25.2W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 101.5mm	
Weight	860g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

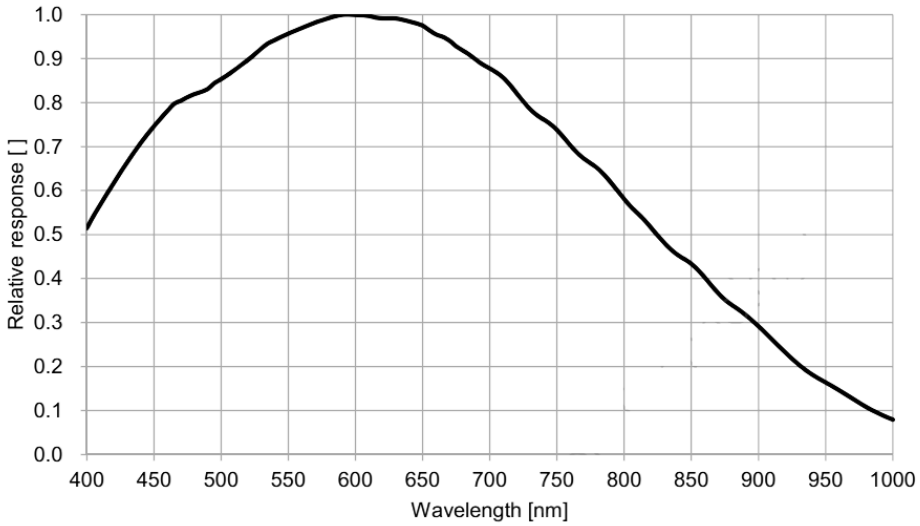


Figure 3-19 SC428-M-ITR spectral response curve

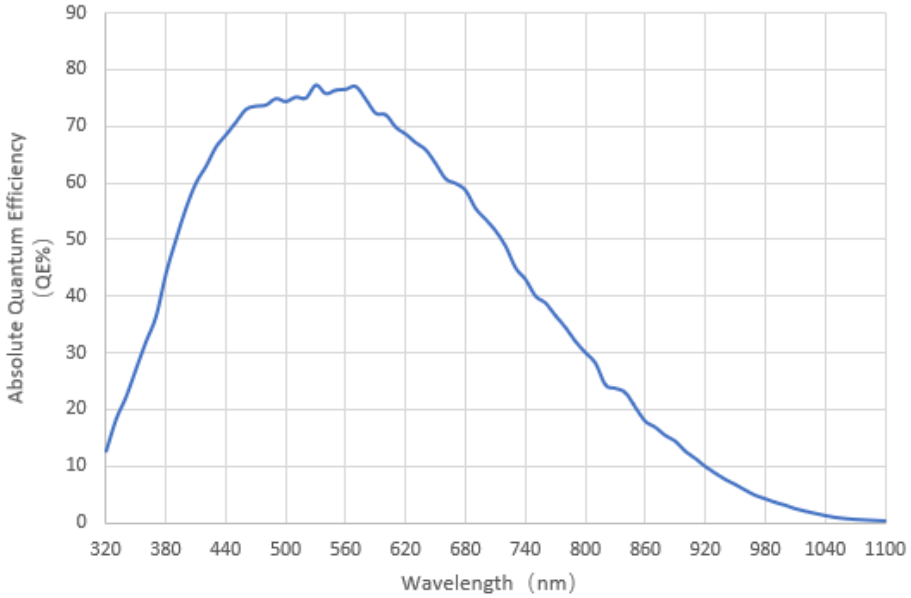


Figure 3-20 SC428M-ITR spectral absolute quantum efficiency

3.14 SC432C-ITR

Table 3-14 SC432C-ITR camera specifications

Model / Parameter	ITR3CMOS01700KPA	ITR3CMOS01700KPA-G
	1.7M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX432LQJ	
Pixel size	9.0 μm x 9.0 μm	
Sensor size	1.1"	
Frame rate	98.6fps@1600 x 1100	66fps@1600 x 1100
Readout Noise	TBD	
Full Well	TBD	
Dynamic range	TBD	
SNRmax	TBD	
Sensitivity	4910mV	
Dark current	0.3mV	
Gain range	1x-50x	
Exposure time	6μs-3600s	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	<25W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 101.5mm	
Weight	860g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

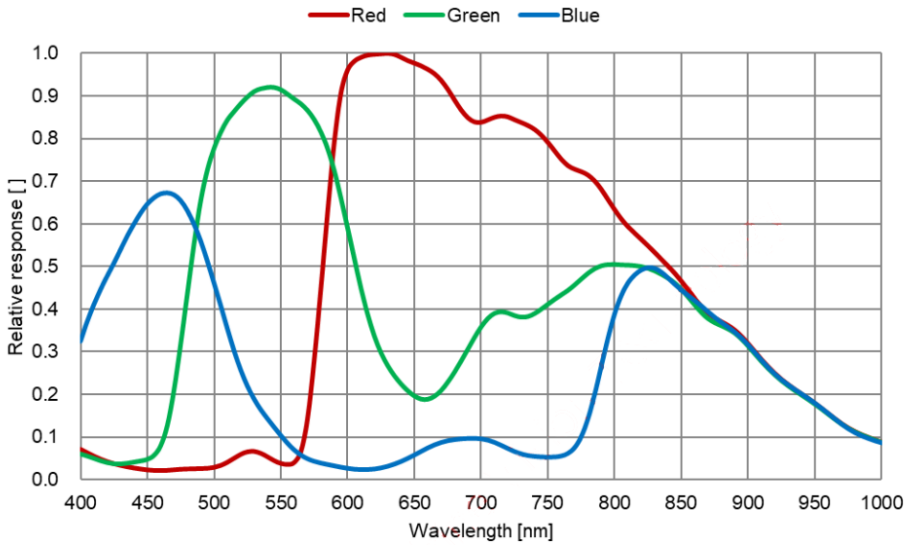


Figure 3-21 SC432C-ITR spectral response curve

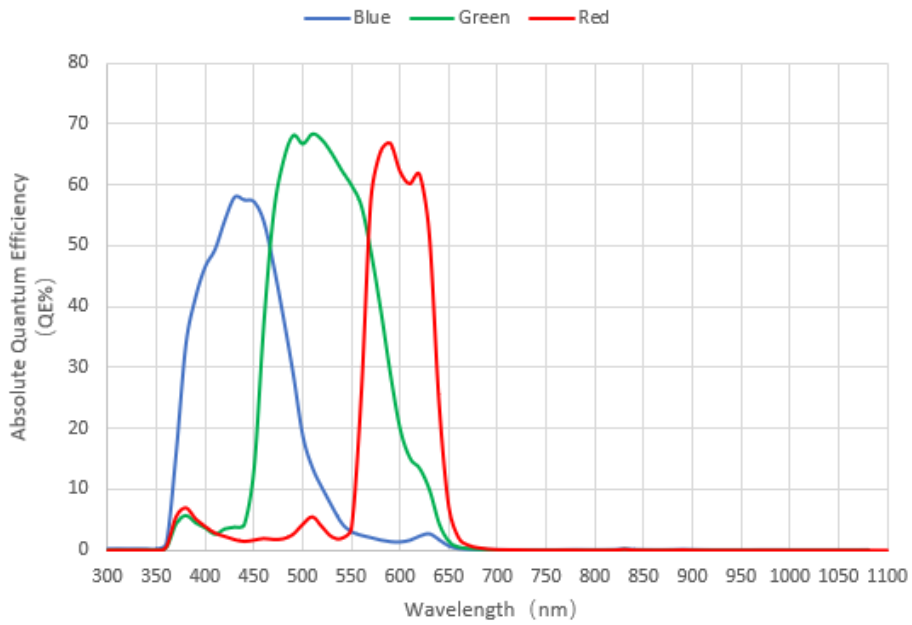


Figure 3-22 SC432C-ITR spectral absolute quantum efficiency

3.15 SC432M-ITR

Table 3-15 SC432M-ITR camera specifications

Model / Parameter	ITR3CMOS01700KMA	ITR3CMOS01700KMA-G
	1.7M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX432LLJ	
Pixel size	9.0 μm x 9.0 μm	
Sensor size	1.1"	
Frame rate	98.6fps@1600 x 1100	66fps@1600 x 1100
Readout Noise	TBD	
Full Well	TBD	
Dynamic range	TBD	
SNRmax	TBD	
Sensitivity	8100mV	
Dark current	0.3mV	
Gain range	1x-50x	
Exposure time	6μs-3600s	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	<25W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 101.5mm	
Weight	860g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

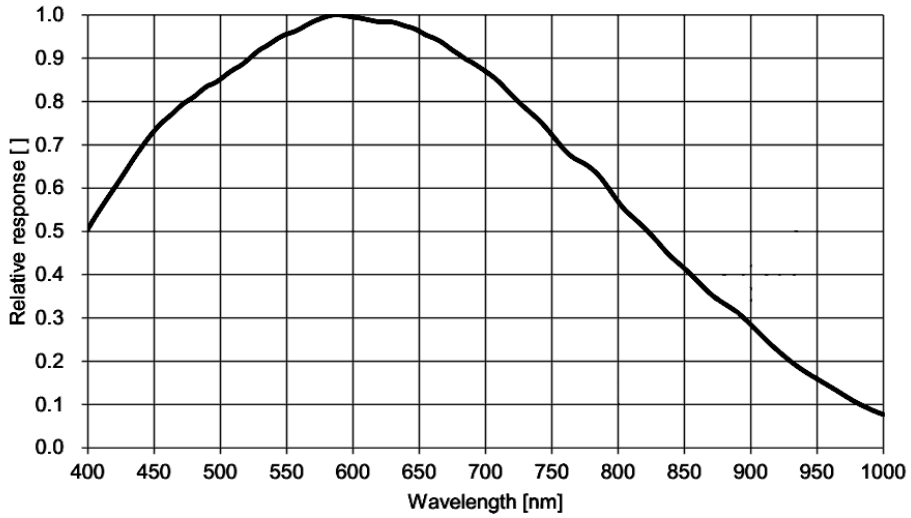


Figure 3-23 SC432M-ITRspectral response curve

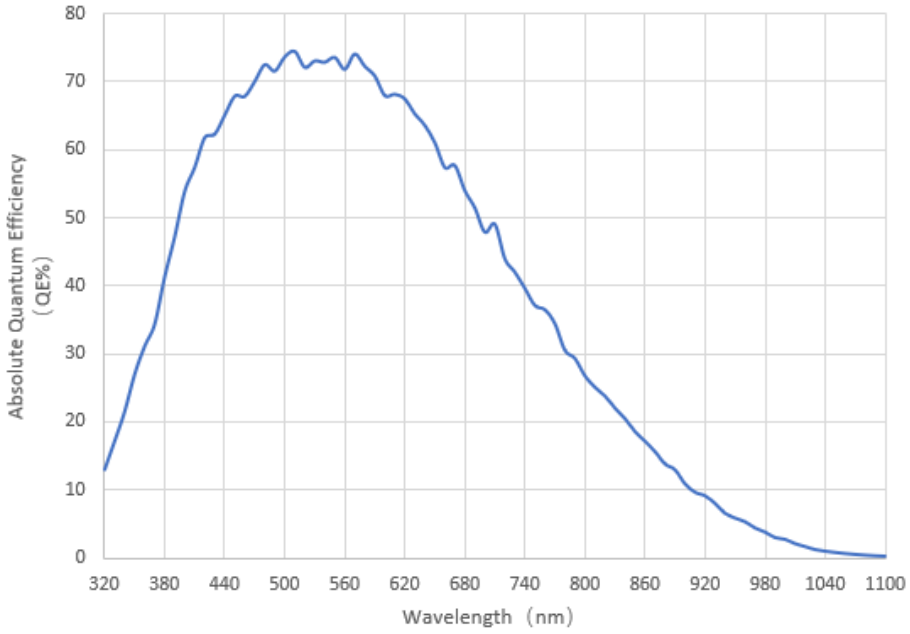


Figure 3-24 SC432M-ITR spectral absolute quantum efficiency

3.16 SC9701UV-ITR

Table 3-16 SC9701UV-ITR camera specifications

Model / Parameter	ITR3CMOS01300KMA 1.3M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GLUX9701BSI
Pixel size	9.76 μm x 9.76 μm
Sensor size	1"
Frame rate	30fps@1280 x 1024 30fps@640 x 512
Readout Noise	5.28e-(HCG) 35.19e-(LCG) 1.79e-(HDR)
Full Well	12927.7e-(HCG) 89855.19e-(LCG) 20205.74e-(HDR)
Dynamic range	67.78dB (HCG) 68.14dB (LCG) 81.08dB (HDR)
SNRmax	41.12dB(HCG) 49.54dB(LCG) 43.06dB(HDR)
Peak QE	89%@610nm
Sensitivity	$2.57x10^8$(e-/((W/m2).s))@610nm
Dark current	2.07e-/s/pix@ -10℃ die temp
Gain range	1x-50x
Exposure time	63μs-3600s
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, Hardware 2x2
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / HDR16bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	<20W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

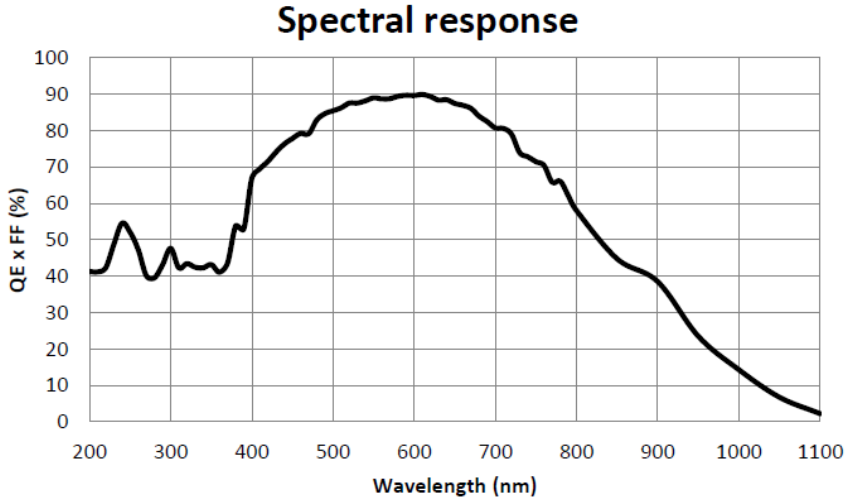


Figure 3-25 SC9701UV-ITR spectral response curve

3.17 SC1605UV-ITR

Table 3-17 SC1605UV-ITR camera specifications

Model / Parameter	ITR3CMOS00500KMA 0.5M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GLUX1605BSI
Pixel size	16 μm x 16 μm
Sensor size	1"
Frame rate	60fps@800 x 600 60fps@400 x 300
Readout Noise	5.88e-(HCG) 36.5e-(LCG) 2.71e-(HDR)
Full Well	13541.8e-(HCG) 89258.25e-(LCG) 46604.55e-(HDR)
Dynamic range	67.24dB (HCG) 67.77dB (LCG) 84.72dB (HDR)
SNRmax	41.32dB(HCG) 49.51dB(LCG) 46.68dB(HDR)
Peak QE	95%@560nm
Sensitivity	$6.4x10^8$(e-/((W/m2).s))
Dark current	3.71e-/s/pix@ -10℃ die temp
Gain range	1x-50x
Exposure time	27μs-3600s
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, Hardware 2x2
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / HDR16bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	<20W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 101.5mm
Weight	860g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

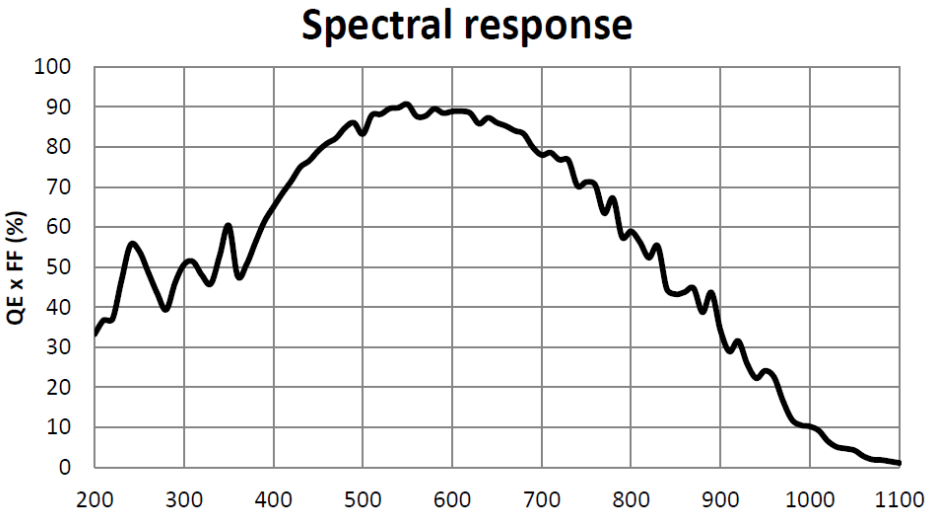


Figure 3-26 SC1605UV-ITR spectral response curve

4 SC-CTR Series Camera Specification (15)

4.1 SC287M-CTR

Table 4-1 SC287M-CTR camera specifications

Parameter \ Model	SC287M-CTR
	0.39M pixels 1/2.9" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX287LLR
Pixel size	6.9 μm x 6.9 μm
Sensor size	1/2.9"
Frame rate	20fps@720 x 540
Conversion Gain	2.66e-/ADU
Readout Noise	0.76e-
Full Well	10877.21e-
Dynamic range	72dB
SNRmax	40.37dB
Peak QE	71%@575nm
Sensitivity	7320mV
Dark current	0.76mV
Gain range	1x-50x
Exposure time	6μs-300sec
Shutter	Global shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 3.12W / Uncooled 3.06W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 45.5mm
Weight	396.6g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

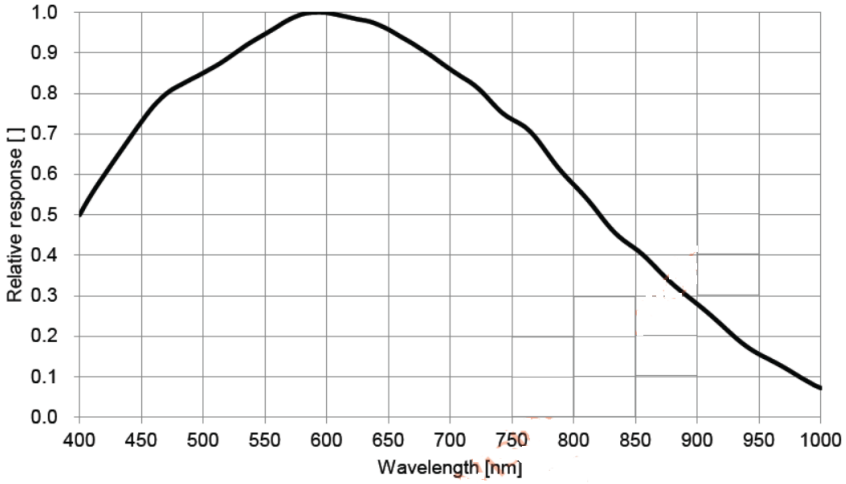


Figure 4-1 SC287M-CTR spectral response curve

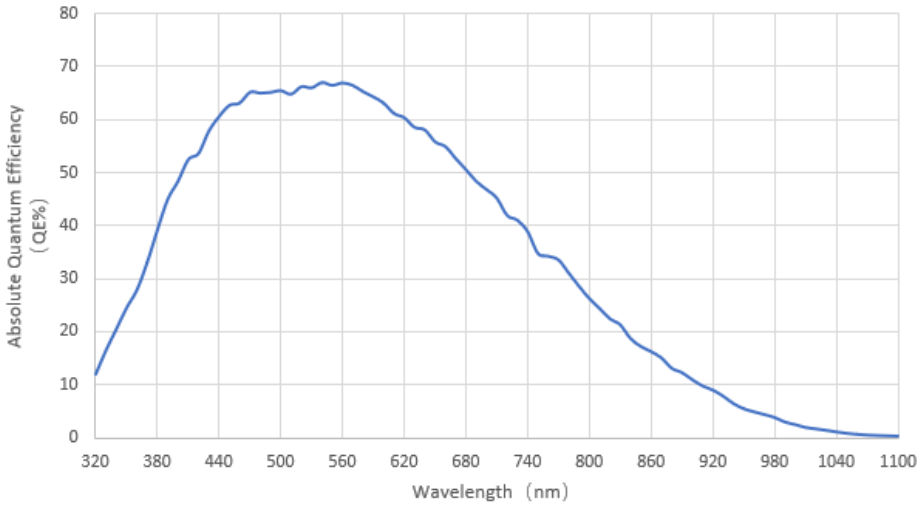


Figure 4-2 SC287M-CTR spectral absolute quantum efficiency

4.2 SC426M-CTR

Table 4-2 SC426M-CTR camera specifications

Model / Parameter	SC462M-CTR 0.503M pixels 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX426LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1/1.7"
Frame rate	20fps@800 x 620
Conversion Gain	4.83e-/ADU
Readout Noise	0.76e-
Full Well	19768.75e-
Dynamic range	72dB
SNRmax	42.96dB
Peak QE	78%@575nm
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-300sec
Shutter	Global shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	Cooled 3.65W / Uncooled 3.22W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 45.5mm
Weight	396.6g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

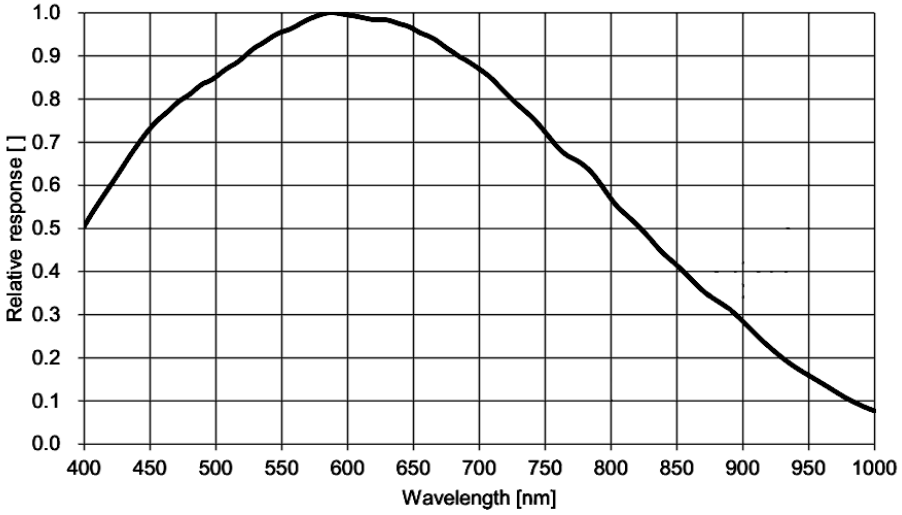


Figure 4-3 SC426M-CTR spectral response curve

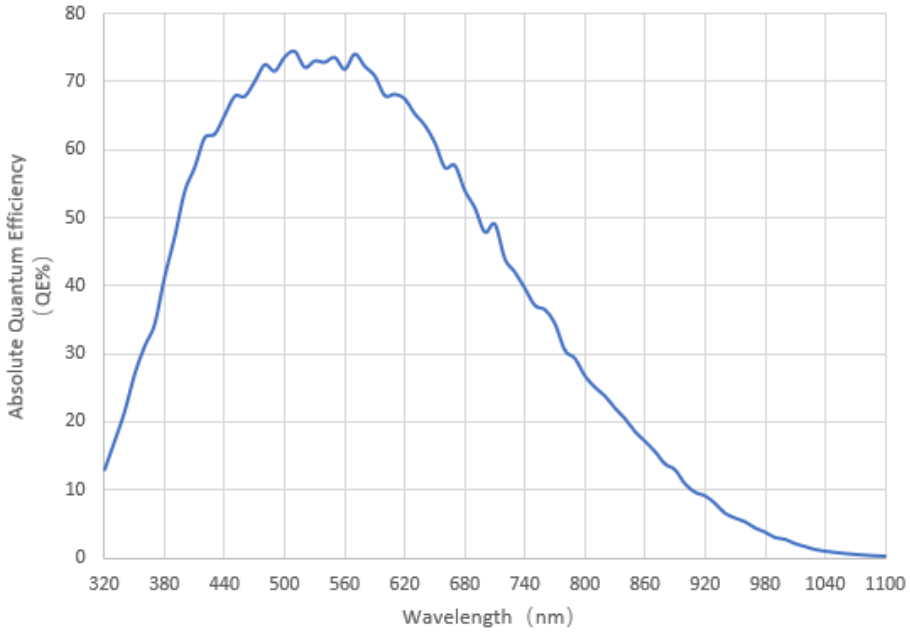


Figure 4-4 SC426M-CTR spectral absolute quantum efficiency

4.3 SC432C-CTR /-G

Table 4-3 SC432C-CTR /-G camera specifications

Model / Parameter	SC432C-CTR	SC432C-CTR-G
	1.7M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX432LQJ	
Pixel size	9.0 μm x 9.0 μm	
Sensor size	1.1"	
Frame rate	98.6fps@1600 x 1100	66fps@1600 x 1100
Readout Noise	TBD	
Full Well	TBD	
Dynamic range	TBD	
SNRmax	TBD	
Sensitivity	4910mV	
Dark current	0.3mV	
Gain range	1x-50x	
Exposure time	6μs-300sec	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	<25W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 45.5mm	
Weight	396.6g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

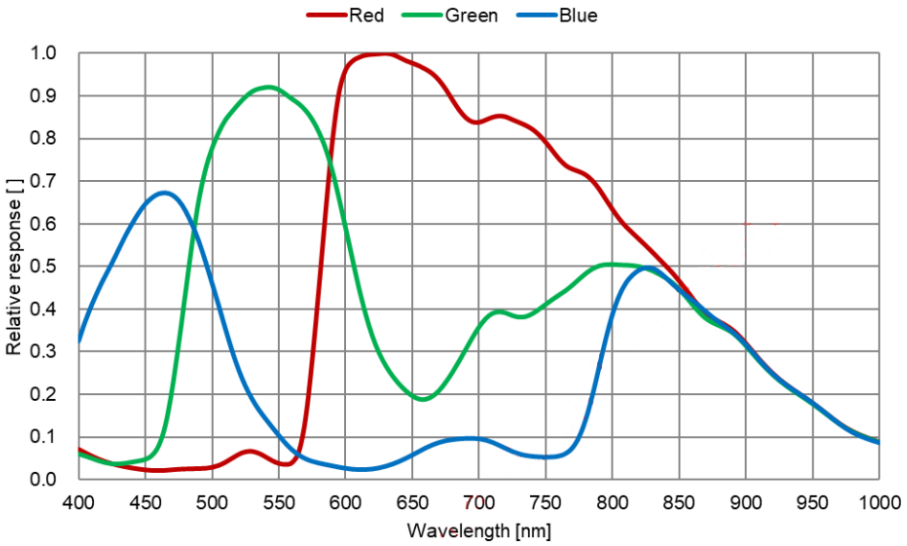


Figure 4-5 SC432C-CTR spectral response curve

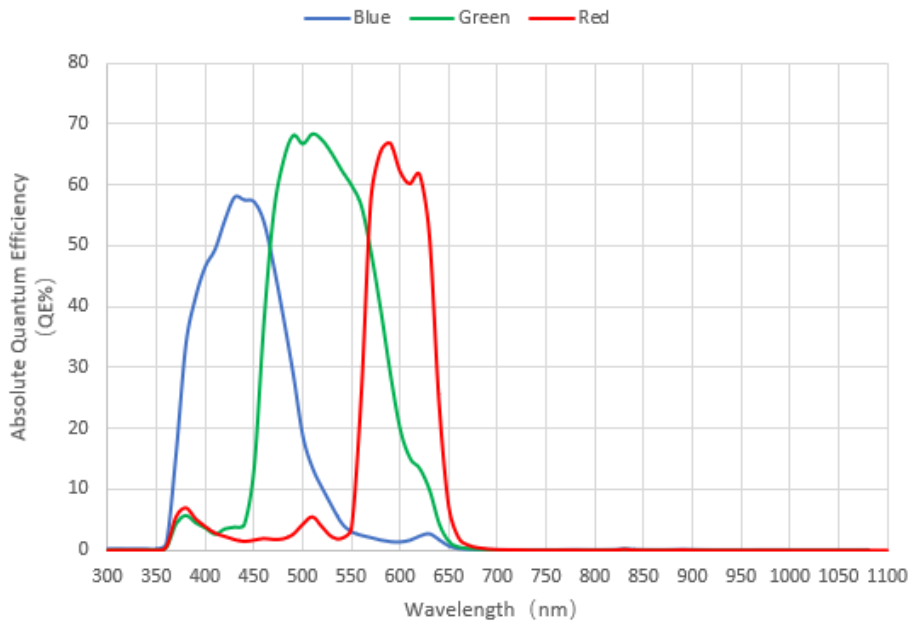


Figure 4-6 SC432C-CTR spectral absolute quantum efficiency

4.4 SC432M-CTR /-G

Table 4-4 SC432M-CTR /-G camera specifications

Model / Parameter	SC432M-CTR	SC432M-CTR-G
	1.7M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX432LLJ	
Pixel size	9.0 μm x 9.0 μm	
Sensor size	1.1"	
Frame rate	98.6fps@1600 x 1100	66fps@1600 x 1100
Readout Noise	TBD	
Full Well	TBD	
Dynamic range	TBD	
SNRmax	TBD	
Sensitivity	8100mV	
Dark current	0.3mV	
Gain range	1x-50x	
Exposure time	6μs-300sec	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	<25W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 45.5mm	
Weight	396.6g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

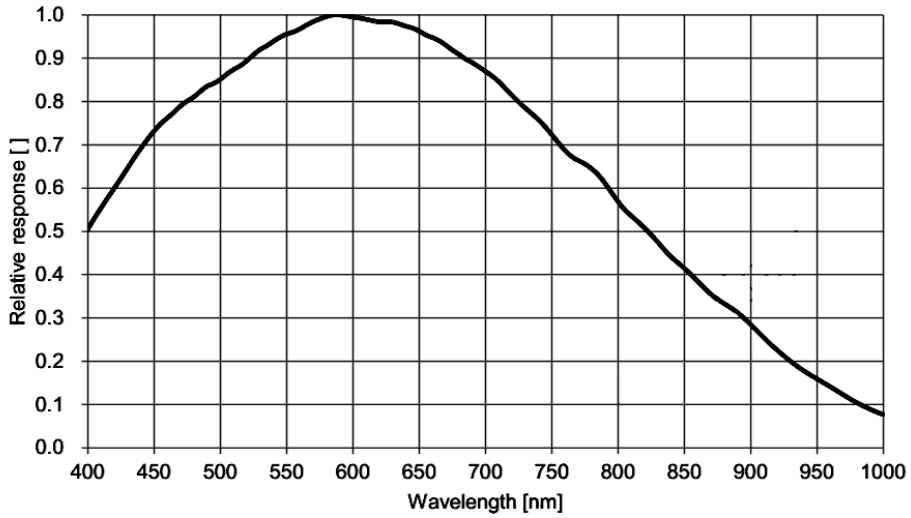


Figure 4-7 SC432M-CTR spectral response curve

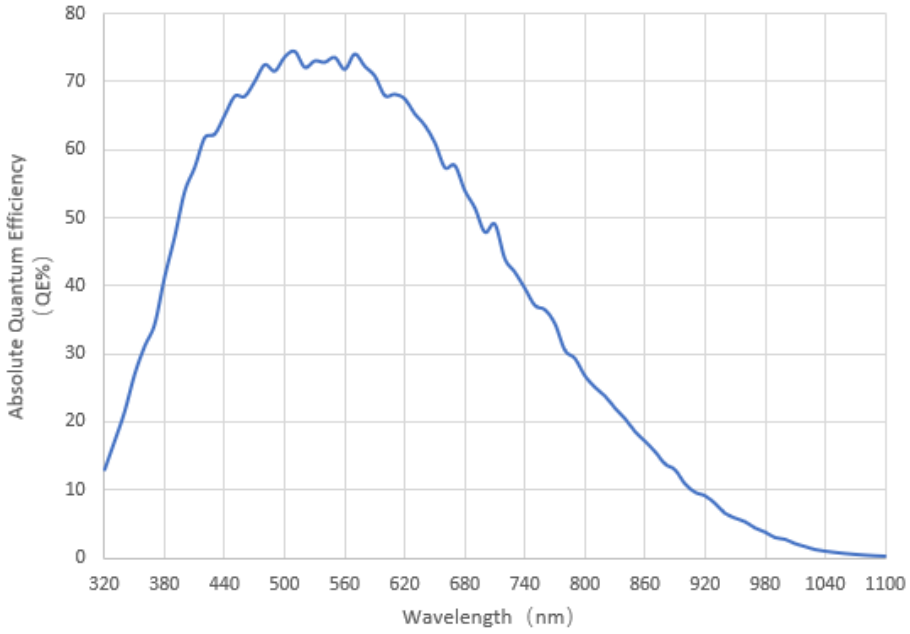


Figure 4-8 SC432M-CTR spectral absolute quantum efficiency

4.5 SC428C-CTR/-G

Table 4-5 SC428C-CTR /-G camera specifications

Model / Parameter	SC428C-CTR	SC428C-CTR-G
	7.1M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX428LQJ	
Pixel size	4.5 μm x 4.5 μm	
Sensor size	1.1"	
Frame rate	51.4fps@3200 x 2200 133.8fps@1584 x 1100	16.4fps@3200 x 2200 66fps@1600 x 1100
Readout Noise	2.38e-	
Full Well	11154.09e-	
Dynamic range	72dB	
SNRmax	40.47dB	
Sensitivity	2058mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	6μs-300sec	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	25.2W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 45.5mm	
Weight	396.6g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

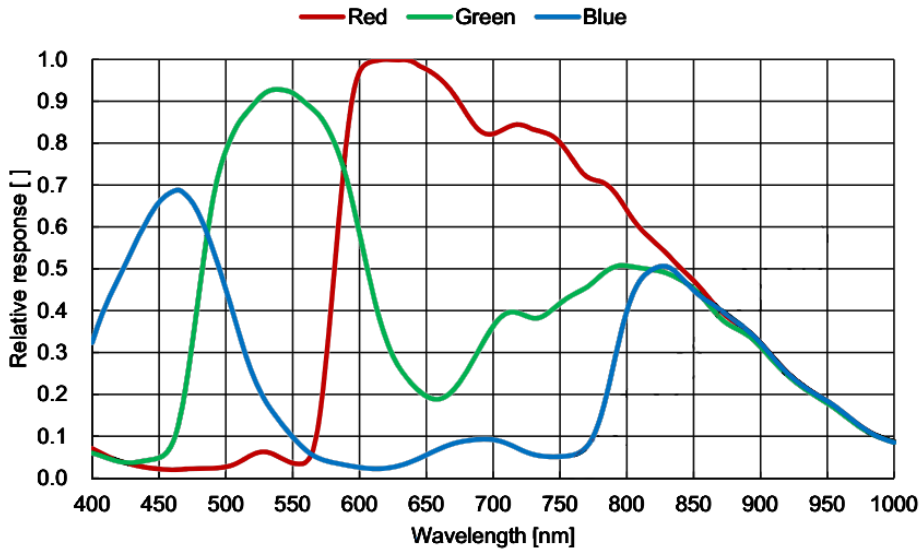


Figure 4-9 SC428C-CTR spectral response curve

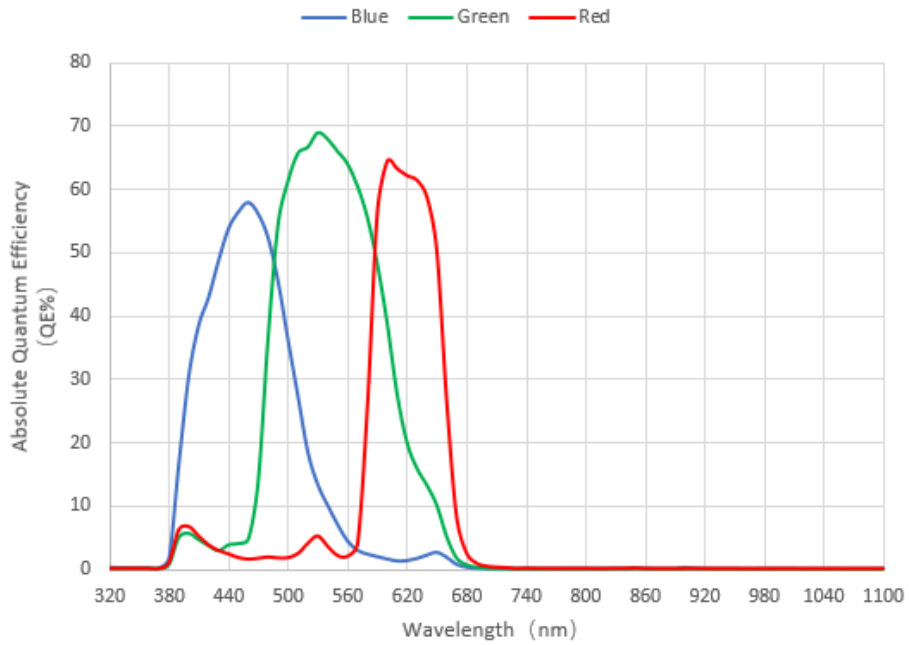


Figure 4-10 SC428C-CTRspectral absolute quantum efficiency

4.6 SC428M-CTR /-G

Table 4-6 SC428M-CTR /-G camera specifications

Model / Parameter	SC428M-CTR	SC428M-CTR-G
	7.1M pixels 1.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX428LLJ	
Pixel size	4.5 μm x 4.5 μm	
Sensor size	1.1"	
Frame rate	51.4fps@3200 x 2200 133.8fps@1584 x 1100	16.4fps@3200 x 2200 66fps@1600 x 1100
Readout Noise	2.38e-	
Full Well	11154.09e-	
Dynamic range	72dB	
SNRmax	40.47dB	
Sensitivity	3354mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	6μs-300sec	
Shutter	Global shutter	
Binning	Software2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	25.2W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 45.5mm	
Weight	396.6g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

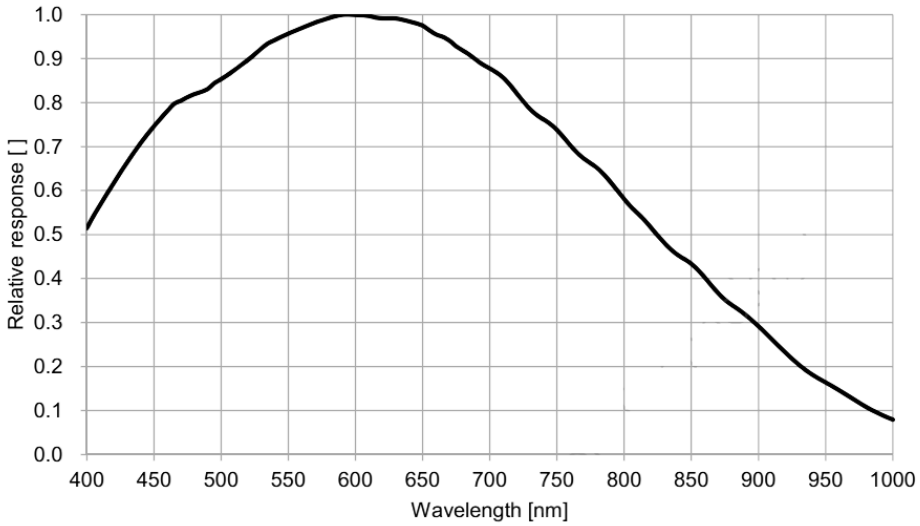


Figure 4-11 SC428M-CTR spectral response curve

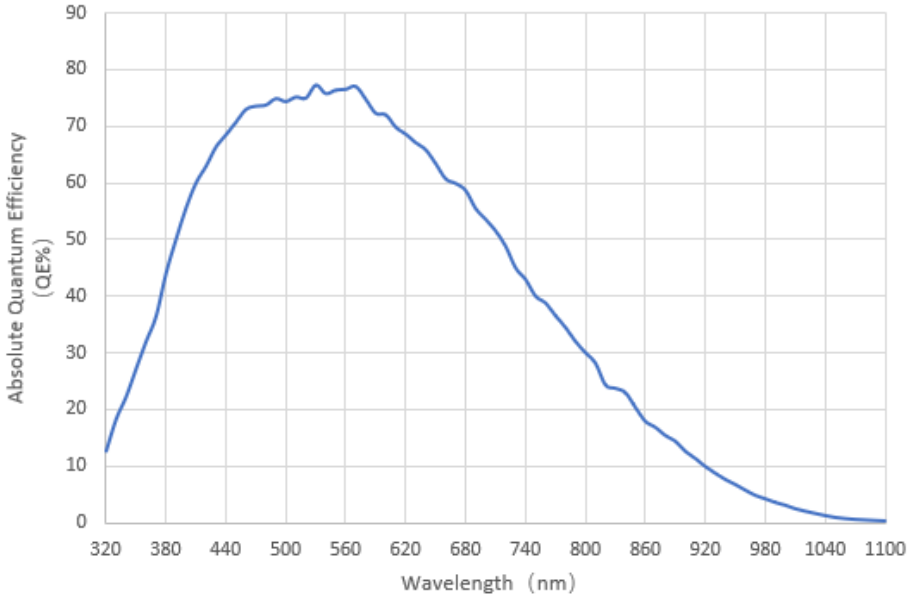


Figure 4-12 SC428M-CTR spectral absolute quantum efficiency

4.7 SC183C-CTR /-G

Table 4-7 SC183C-CTR /-G camera specifications

Model / Parameter	SC183C-CTR	SC183C-CTR-G
	20M pixels 1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX183CQK	
Pixel size	2.4 μm x 2.4 μm	
Sensor size	1"	
Frame rate	19.0fps@5440 x 3684 48.8fps@2736 x 1824 59.4fps@1824 x 1216	4.5fps@5440 x 3684 18.5fps@2736 x 1824 41.7fps@1824 x 1216
Readout Noise	3.38e-	
Full Well	15929.69e-	
Dynamic range	72dB	
SNRmax	42.02dB	
Sensitivity	462mV	
Dark current	0.21mV	
Gain range	1x-50x	
Exposure time	53μs-300sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	14.64W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 45.5mm	
Weight	396.6g	
Lens mount	C mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

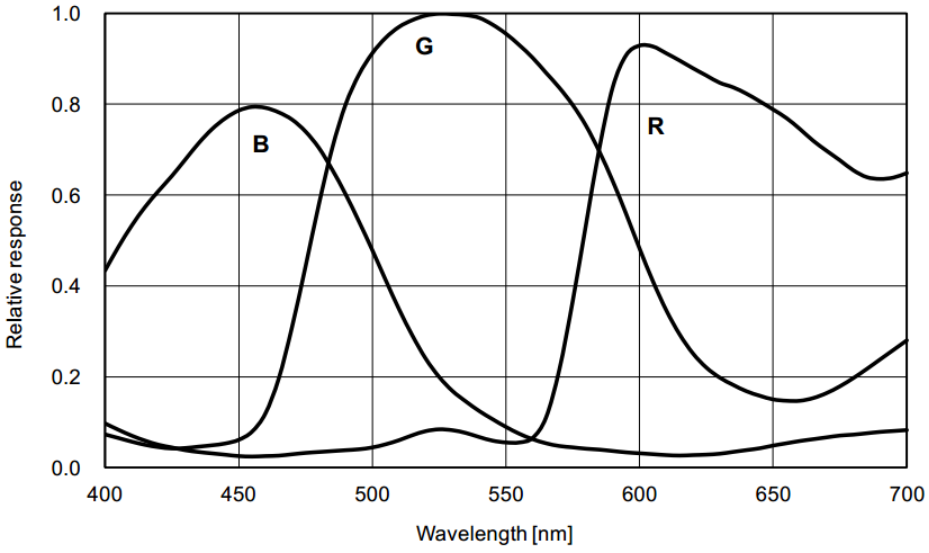


Figure 4-13 SC183C-CTR spectral response curve

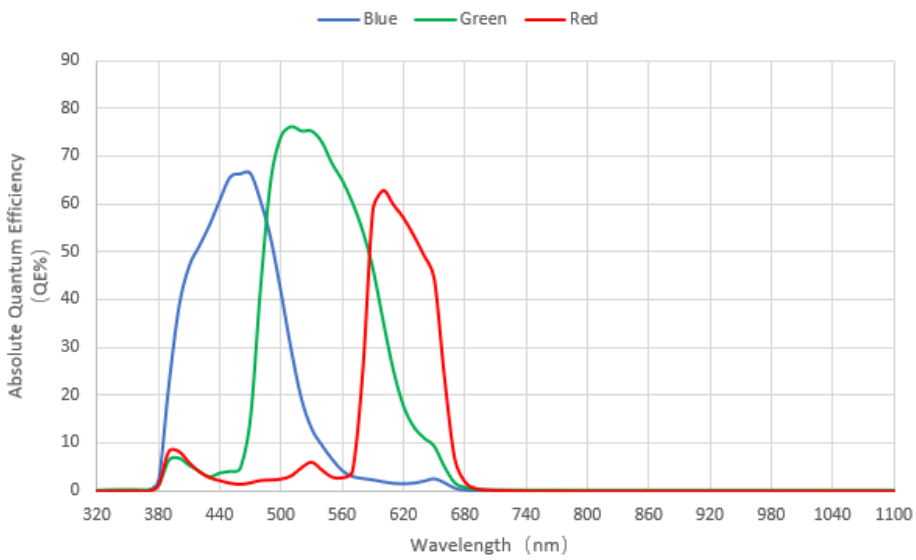


Figure 4-14 SC183C-CTR spectral absolute quantum efficiency

4.8 SC183M-CTR /-G

Table 4-8 SC183M-CTR /-G camera specifications

Model / Parameter	CTR3CMOS20000KMA	CTR3CMOS20000KMA -G
	20M pixels 1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX183CQK	
Pixel size	2.4 μm x 2.4 μm	
Sensor size	1"	
Frame rate	19.0fps@5440 x 3684 48.8fps@2736 x 1824 59.4fps@1824 x 1216	4.5fps@5440 x 3684 18.5fps@2736 x 1824 41.7fps@1824 x 1216
Readout Noise	3.38e-	
Full Well	15929.69e-	
Dynamic range	72dB	
SNRmax	42.02dB	
Sensitivity	462mV	
Dark current	0.21mV	
Gain range	1x-50x	
Exposure time	53μs-300sec	
Shutter	Rolling shutter	
Binning	Software2x2, 3x3, hardware2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 12bit	
General specification		
Power supply	Power with USB3.0 or 12V Power adapter	12V Power adapter
Power consumption	14.64W	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃	
Humidity	20%-80%, no condensation	
Size	80mm x 80mm x 45.5mm	
Weight	396.6g	
Lens mount	C mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

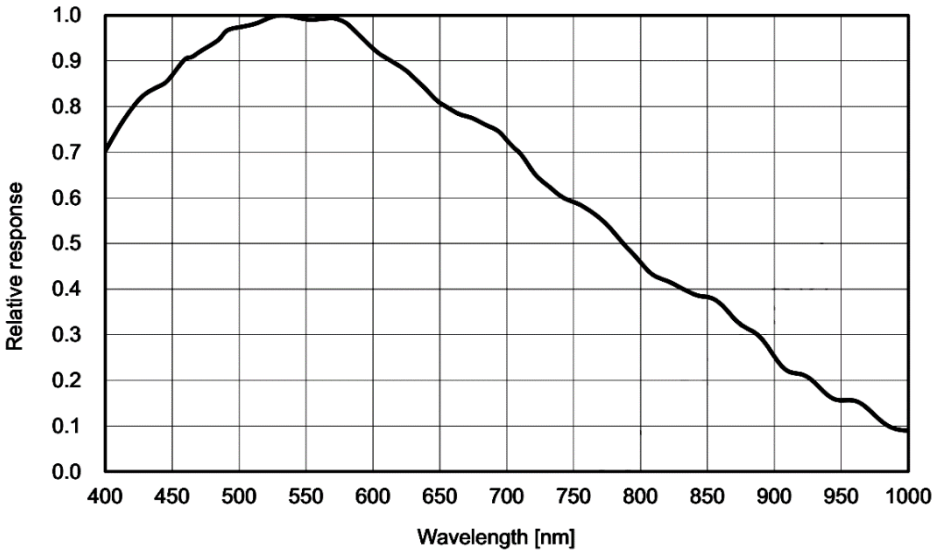


Figure 4-15 SC183M-CTR spectral response curve

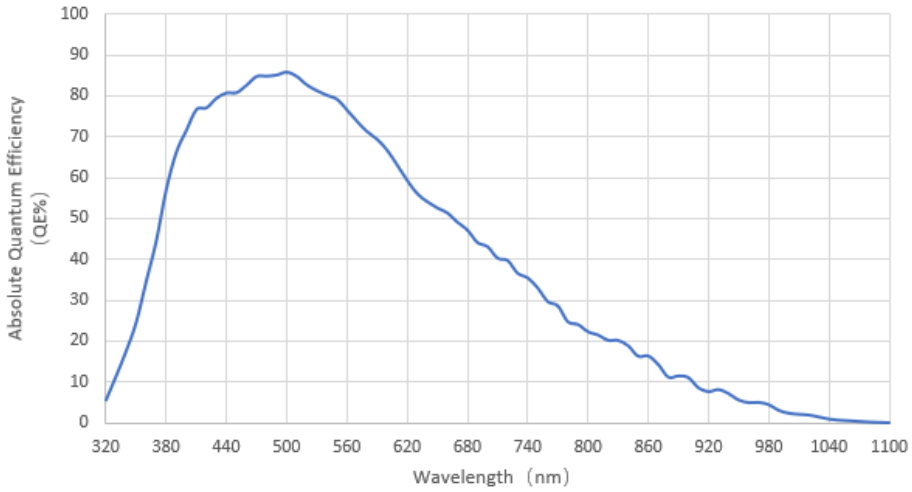


Figure 4-16 SC183M-CTR spectral absolute quantum efficiency

4.9 SC492M-CTR

Table 4-9 SC492M-CTR camera specifications

Parameter \ Model	SC492M-CTR
	45M pixels 1.4" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX492LLJ-C
Pixel size	2.315 μm x 2.315μm
Sensor size	1.4"
Frame rate	8.1@8176x5616 30.0@4080x2808 8.1@7408x5556 33.0@3696x2778 10.4@8176x4320 34.7@4096x2160 62.5@2048x1080 86.5@1360x720
Readout Noise	2.67e-(HCG) 2.74e-(LCG)
Full Well	14796.69e-(HCG) 14859.92e-(LCG)
Dynamic range	72dB (HCG) 72dB (LCG)
SNRmax	41.7dB(HCG) 41.72dB(LCG)
Sensitivity	175mV
Dark current	0.03mV
Gain range	1x-50x
Exposure time	100μs-300sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4, hardware2x2, 3x3, 4x4
Data interface	USB3.0（USB3.1 GEN1）
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General specification	
Power supply	Power with USB3.0 or 12V Power adapter
Power consumption	24.12w
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	80mm x 80mm x 45.5mm
Weight	396.6g
Lens mount	C mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

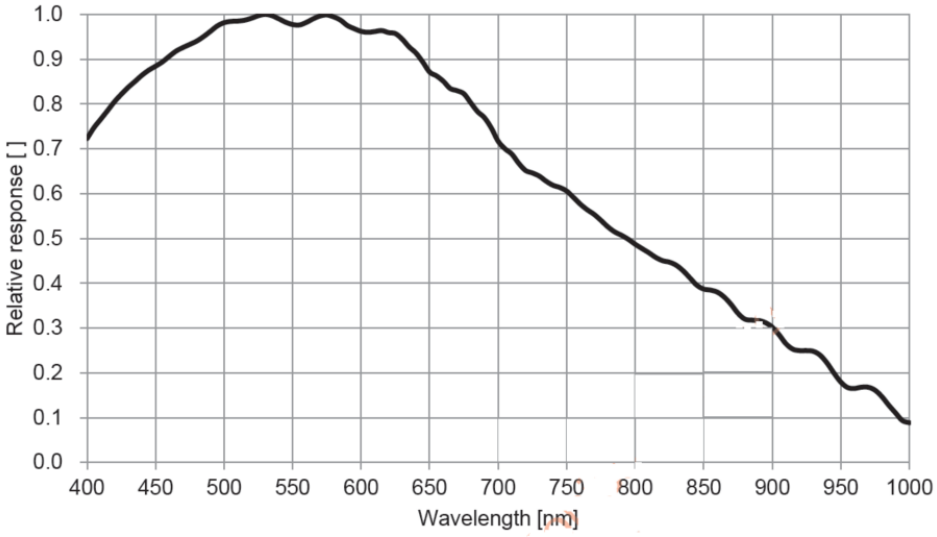


Figure 4-17 SC492M-CTR spectral response curve

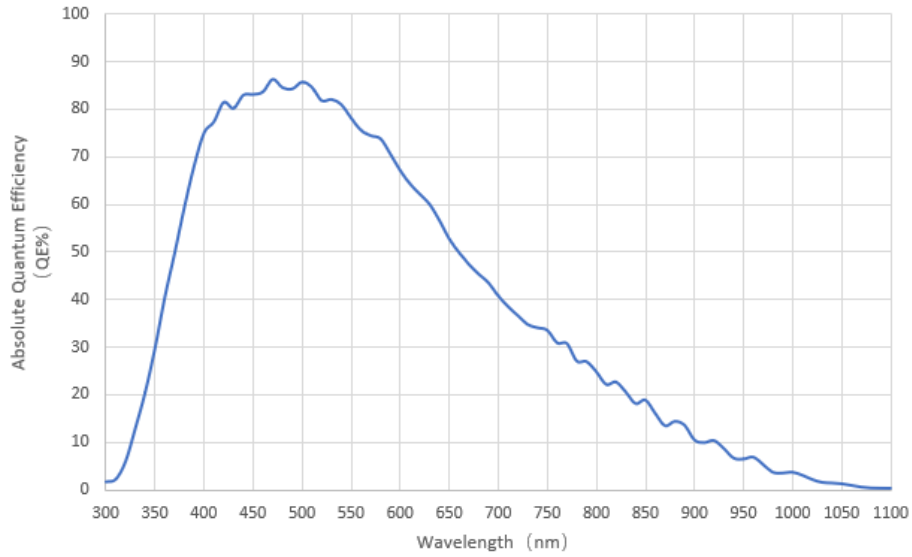


Figure 4-18 SC492M-CTR spectral absolute quantum efficiency

5 ICM Series Camera Specification (54)

5.1 SC433C-ICM

Table 5-1 SC433C-ICM camera specifications

Parameter \ Model	I3ISPM00500KPA
	0.5M 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX433LQJ
Pixel size	9.0 μm×9.0 μm
Sensor size	1/1.7"
Frame rate	166.5fps@812×620
Dynamic range	72.3dB
Signal-to-Noise ratio	50.0dB
Sensitivity	4910mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input, one non-isolated output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

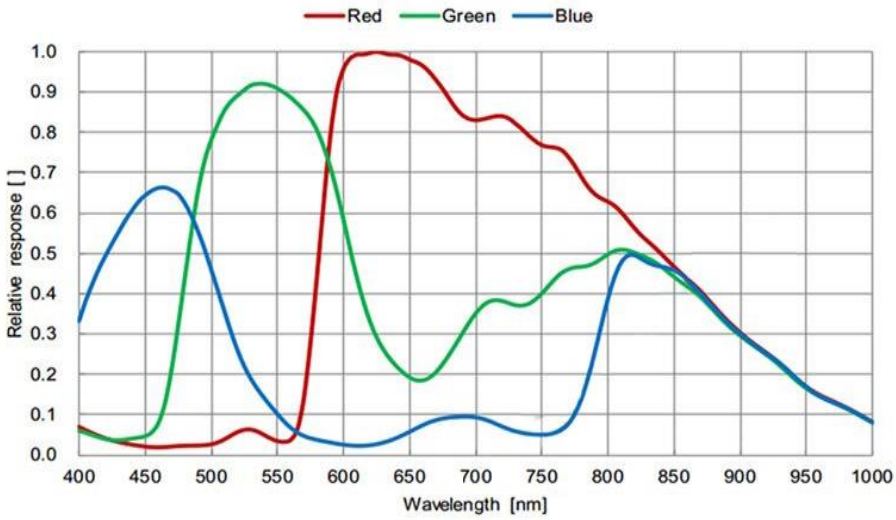


Figure 5-1 SC433C-ICM spectral response curve

5.2 SC273C-ICM

Table 5-2 SC273C-ICM camera specifications

Parameter \ Model	I3ISPM01500KPA
	1.5M pixels 1/2.9" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX273LQR
Pixel size	3.45 μm×3.45 μm
Sensor size	1/2.9"
Frame rate	227.2fps@1440×1080 382.7fps@720×540
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

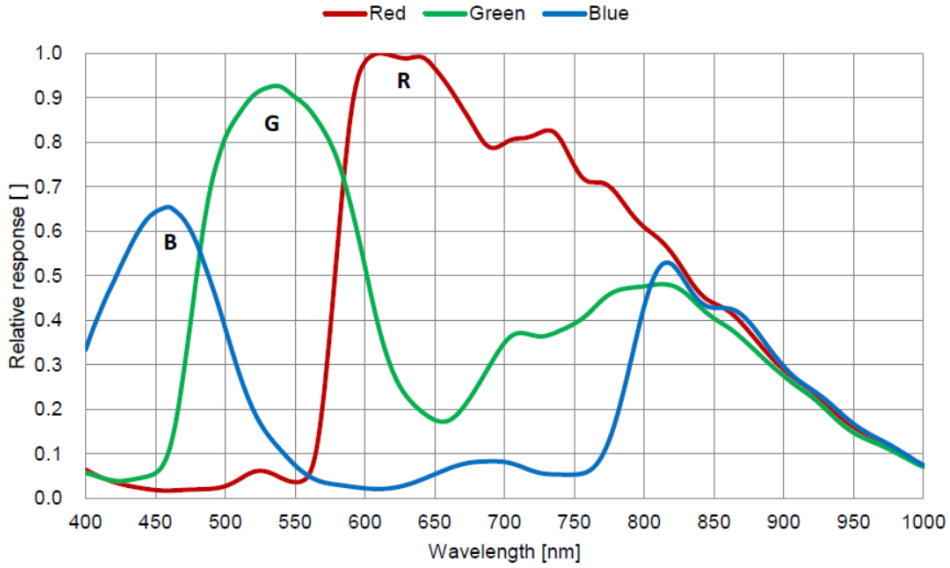


Figure 5-2 SC273C-ICM spectral response curve

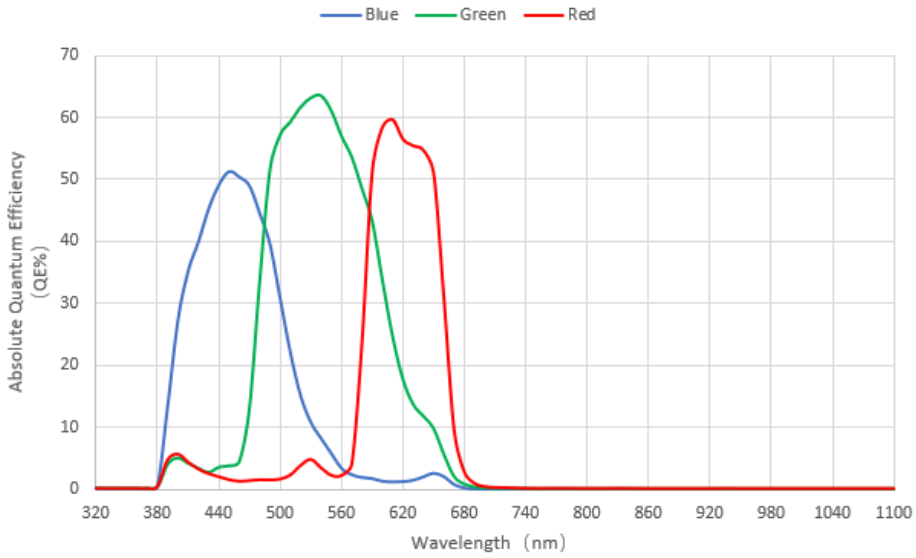


Figure 5-3 SC273C-ICM absolute quantum efficiency

5.3 SC174C-ICM

Table 5-3 SC174C-ICM camera specifications

Parameter \ Model	I3ISPM02300KPA
	2.3M pixels 1/1.2" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX174LQJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	164.5fps@1920 x 1200
Dynamic range	73.6dB
Signal-to-Noise ratio	44.8dB
Sensitivity	1016mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

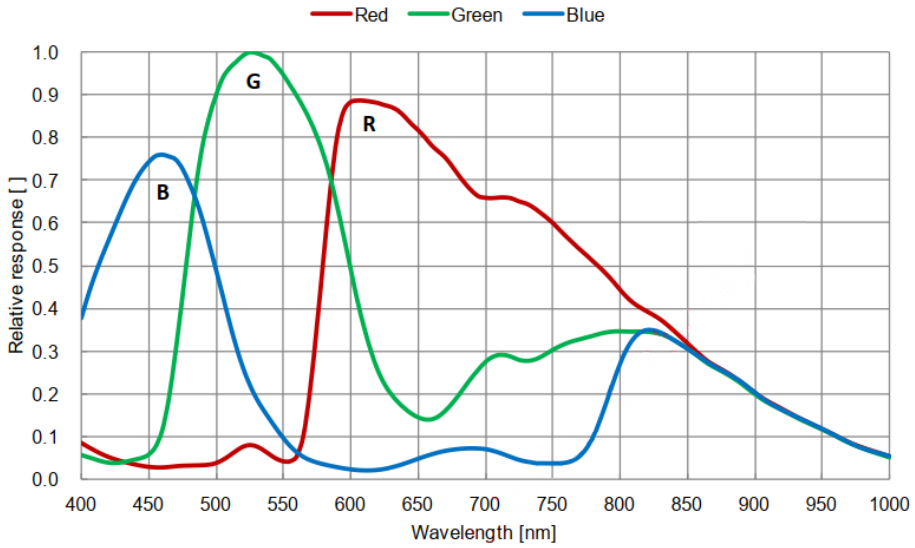


Figure 5-4 SC174C-ICM spectral response curve

5.4 SC249C-ICM

Table 5-4 SC249C-ICM camera specifications

Parameter \ Model	I3ISPM02300KPB
	2.3M pixels 1/1.2" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX249LQJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	30fps@1920 x 1200
Dynamic range	73.6dB
Signal-to-Noise ratio	44.8dB
Sensitivity	1016mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	42μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.2W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

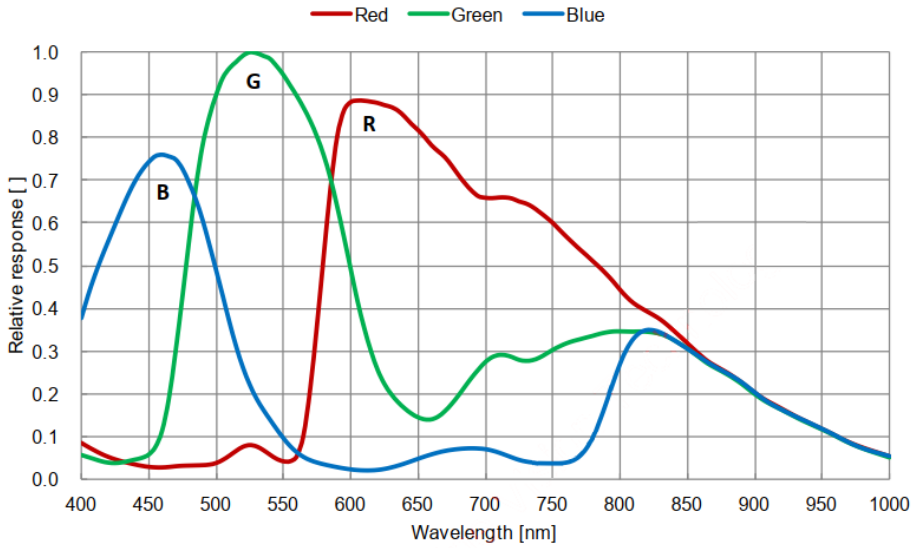


Figure 5-5 SC249C-ITR spectral response curve

5.5 SC4002C-ICM

Table 5-5 SC4002C-ICM camera specifications

Parameter \ Model	I3ISPM02400KPA
	2.4M pixels 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX4002
Pixel size	4.0 μm x 4.0 μm
Sensor size	1/1.7"
Frame rate	155fps@2048×1200 620fps@1024×600
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	3.26x10^{7}e-/((W/m2)·s)
Dark current	8.3e-/s
Gain range	1x-50x
Exposure time	55μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.2W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

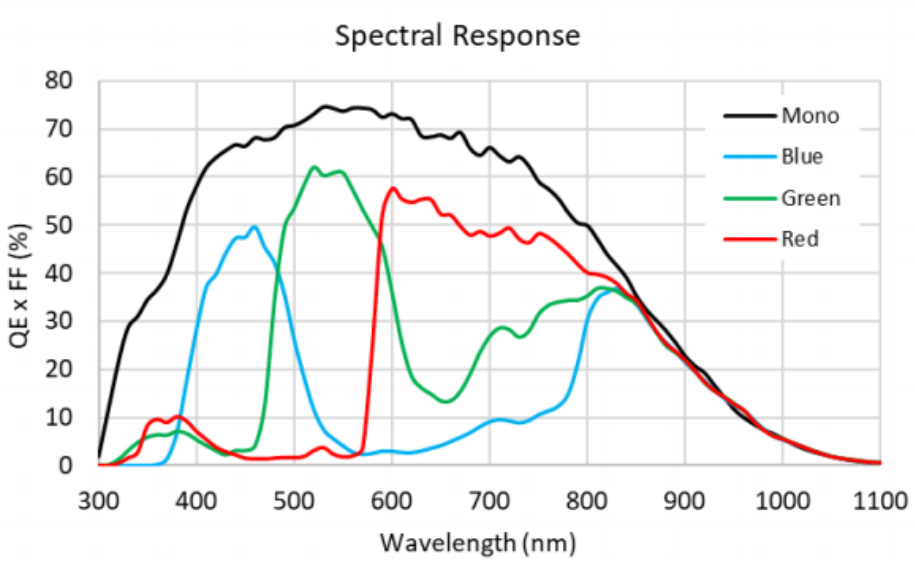


Figure 5-6 SC4002C-ICM spectral response curve

5.6 SC252C-ICM

Table 5-6 SC252C-ICM camera specifications

Parameter \ Model	I3ISPM03100KPA
	3.1M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX252LQR
Pixel size	3.45 μm×3.45 μm
Sensor size	1/1.8"
Frame rate	115fps@2048×1536 230.3fps@1024×768
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	2.65W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

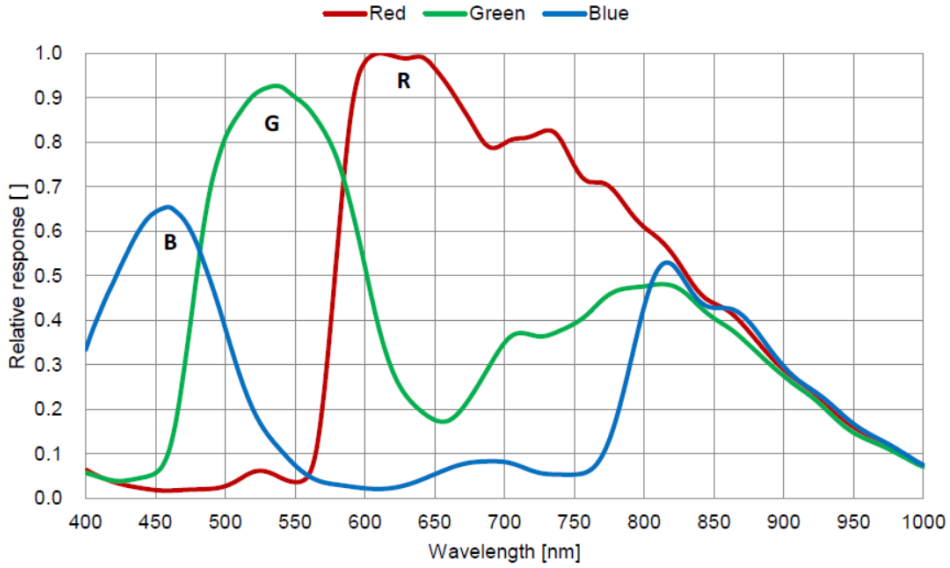


Figure 5-7 SC252C-ICM spectral response curve

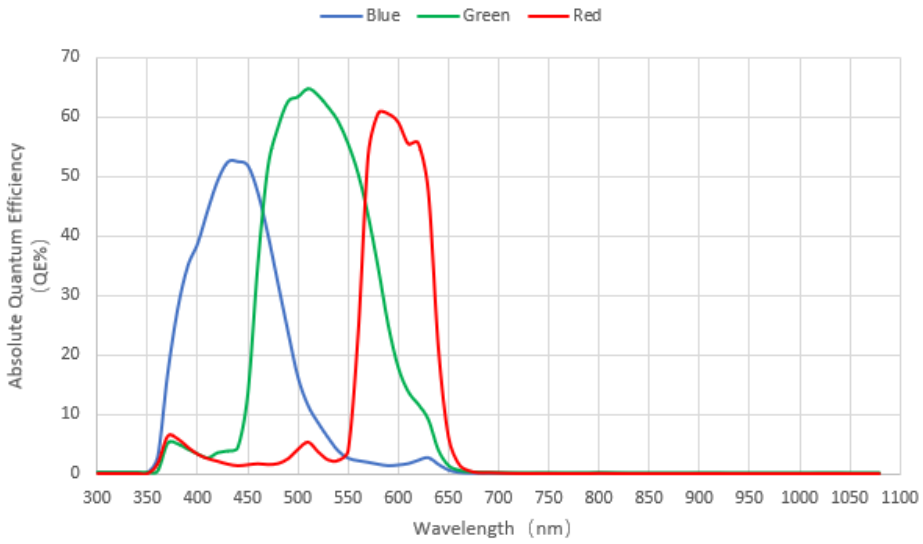


Figure 5-8 SC252C-ICM absolute quantum efficiency

5.7 SC265C-ICM

Table 5-7 SC265C-ICM camera specifications

Parameter \ Model	I3ISPM03100KPB
	3.1M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX265LQR
Pixel size	3.45 μm×3.45 μm
Sensor size	1/1.8"
Frame rate	55.4fps@2048×1536 115.1fps@1024×768
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	2.55W
Temperature	Working temperature -10~50℃, storage temperature30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

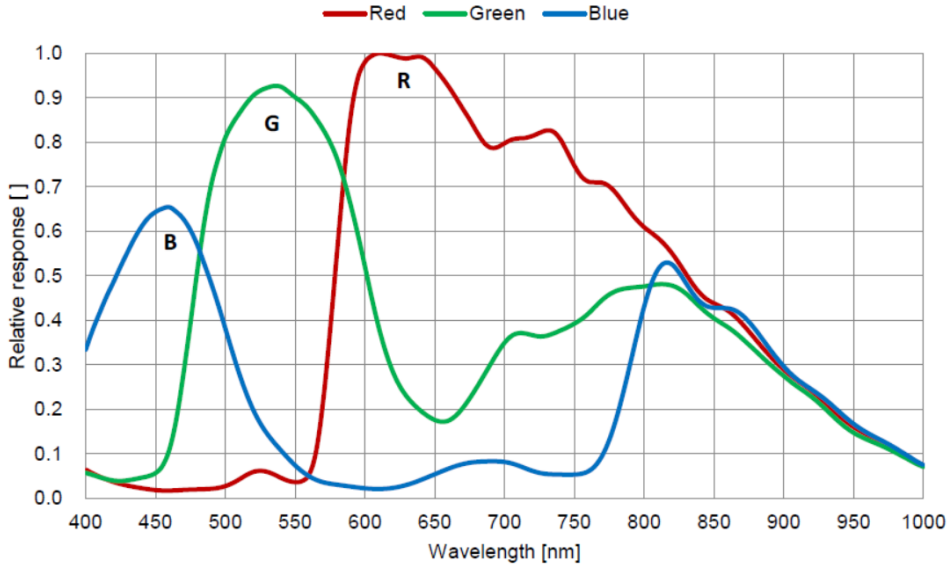


Figure 5-9 SC265C-ICM spectral response curve

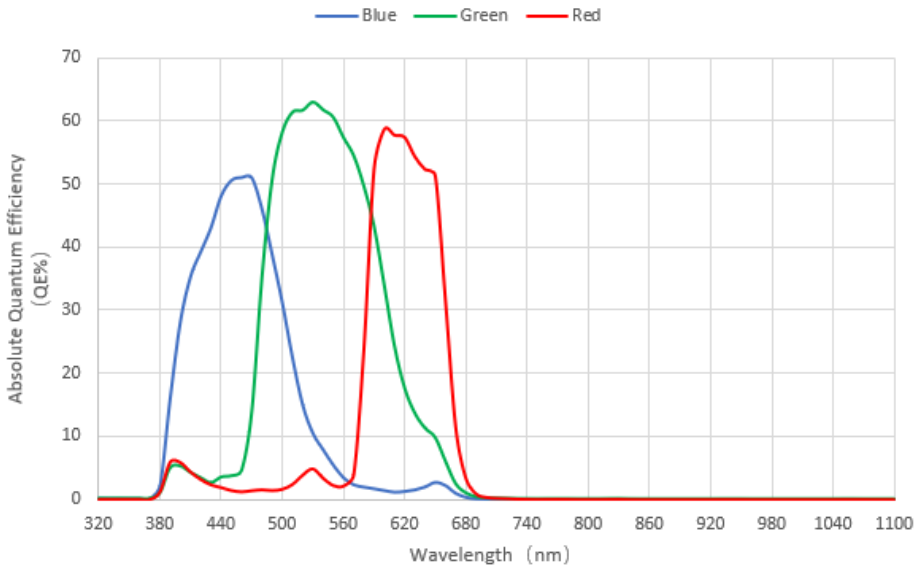


Figure 5-10 SC265C-ICM absolute quantum efficiency

5.8 SC900C-ICM

Table 5-8 SC900C-ICM camera specifications

Parameter \ Model	I3ISPM03200KPA
	3.2M pixels 1/3.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX900AQR
Pixel size	2.25 μm × 2.25 μm
Sensor size	1/3.1"
Frame rate	55.4fps@2048 × 1536 126.8fps@1024 × 768
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	1162mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	11μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

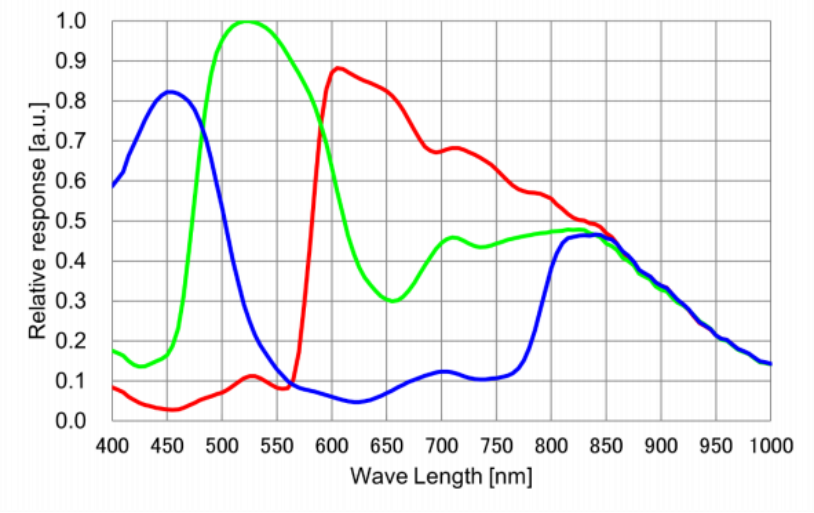


Figure 5-11 SC900C-ICM spectral response curve

5.9 SC664C-ICM

Table 5-9 SC664C-ICM camera specifications

Parameter \ Model	I3ISPM04200KPA
	4.2M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX664-AAQR1
Pixel size	2.9 μm × 2.9 μm
Sensor size	1/1.8"
Frame rate	88.1fps@2688×1520 116.1fps@1344×760
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	5970mV
Dark current	0.13mV
Gain range	1x-50x
Exposure time	13μs-15sec
Shutter	Rolling shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

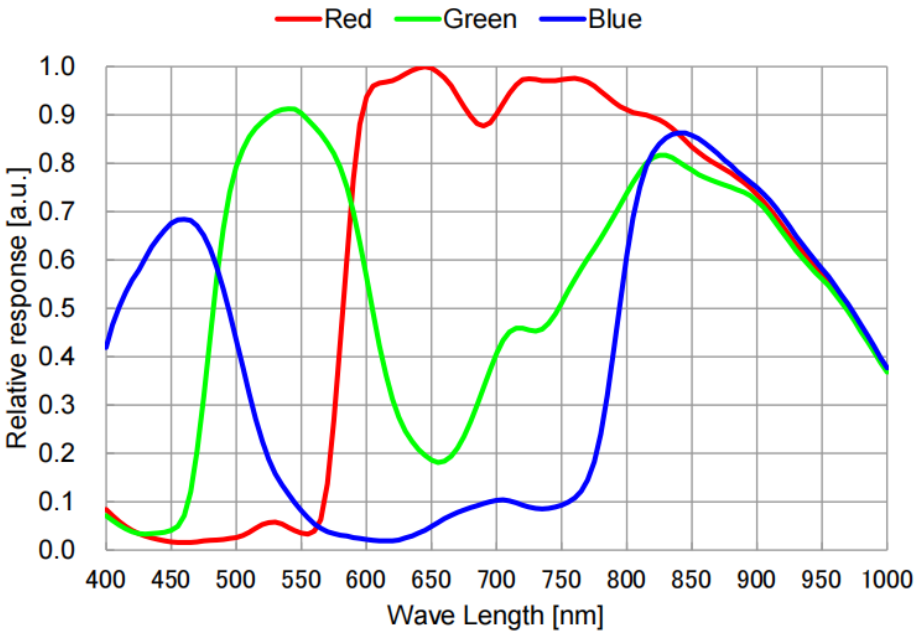


Figure 5-12 SC664C-ICM spectral response curve

5.10 SC250C-ICM

Table 5-10 SC250C-ICM camera specifications

Parameter \ Model	I3ISPM05000KPA
	5M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX250LQR
Pixel size	3.45 μm×3.45 μm
Sensor size	2/3"
Frame rate	71.2fps@2448×2048 175.2fps@1224×1024
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	3.05W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

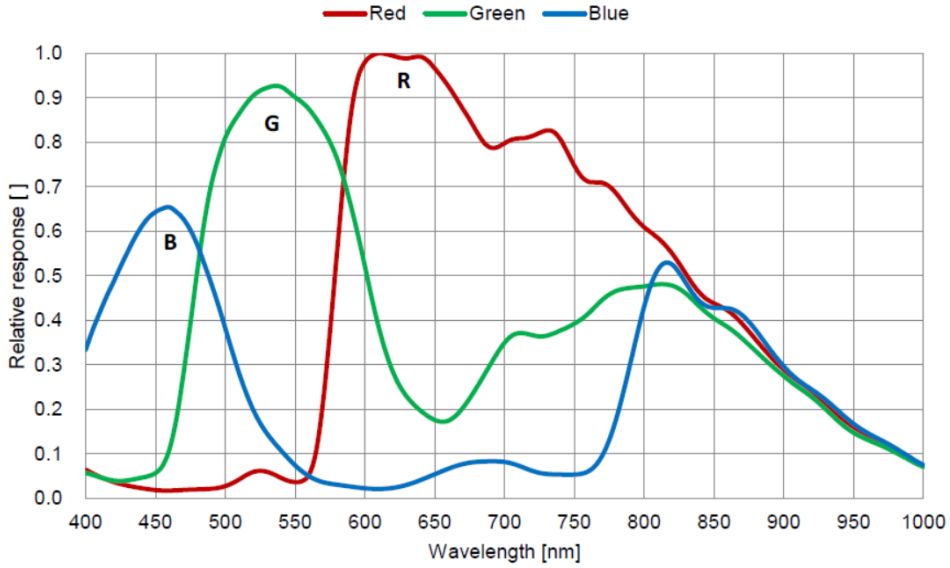


Figure 5-13 SC250C-ICM spectral response curve

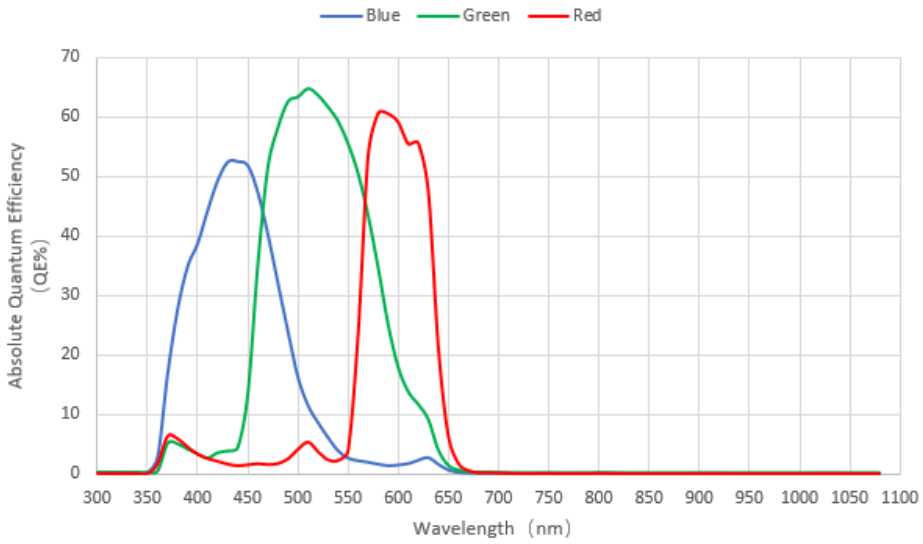


Figure 5-14 SC250C-ICM absolute quantum efficiency

5.11 SC264C-ICM

Table 5-11 SC264C-ICM camera specifications

Parameter \ Model	I3ISPM05000KPB	I3ISPM05000KPB-G
	5M pixels 2/3" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX264LQR	
Pixel size	3.45 μm×3.45 μm	
Sensor size	2/3"	
Frame rate	35.6fps@2448×2048 87.6fps@1224×1024	24.3fps@2448 × 2048 87.7fps@1224 × 1024
Dynamic range	73.6dB	
Signal-to-Noise ratio	40.4dB	
Sensitivity	1146mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	15μs-15sec	
Shutter	Global shutter	
Binning	Software 2×2, 3×3, 4×4	
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output	One opto-coupling isolated input, one opto-coupling isolated output, two non-isolated input/output
Data Format	8bit / 12bit	
General Specifications		
Power supply	Power with USB3.0	12V Power adapter
Power consumption	<3.5W	TBD
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	33mm×33mm×33mm	33mm×33mm×42mm
Weight	70g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

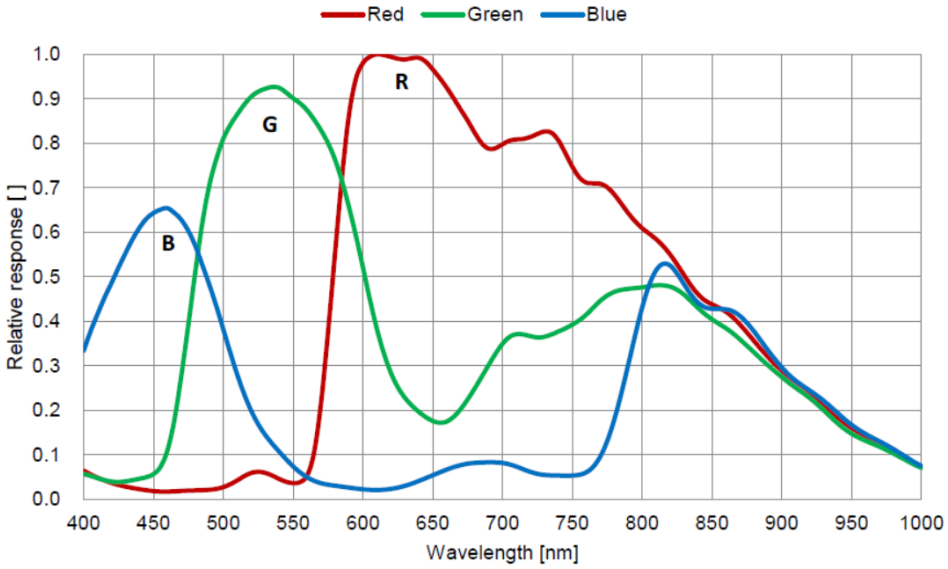


Figure 5-15 SC264C-ICM spectral response curve

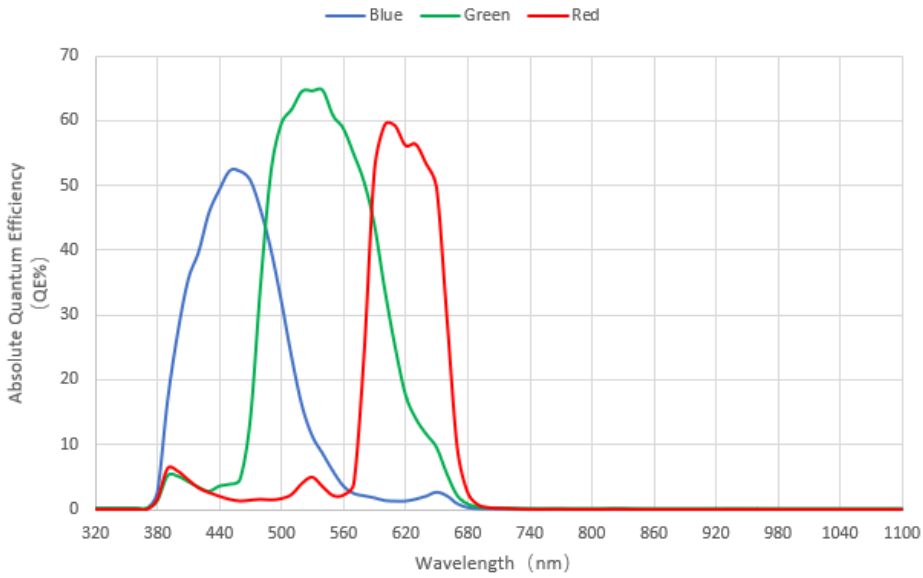


Figure 5-16 SC264C-ICM absolute quantum efficiency

5.12 SC3405C-ICM

Table 5-12 SC3405C-ICM camera specifications

Parameter \ Model	I3ISPM05100KPA
	5.1M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX3405
Pixel size	3.4 μm × 3.4 μm
Sensor size	2/3"
Frame rate	71fps@2448 × 2048 100fps@1224 × 1024
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	2.36x10^{7}e-/((W/m2)·s)
Dark current	4.4e-/s
Gain range	1x-50x
Exposure time	10μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

5.13 SC178C-ICM

Table 5-13 SC178C-ICM camera specifications

Parameter \ Model	I3ISPM06300KPA
	6.3M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX178LQJ
Pixel size	2.4 μm×2.4 μm
Sensor size	1/1.8"
Frame rate	58.7fps@3072×2048 59.5fps@1536×1024
Dynamic range	71dB
Signal-to-Noise ratio	40dB
Sensitivity	425mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	17μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

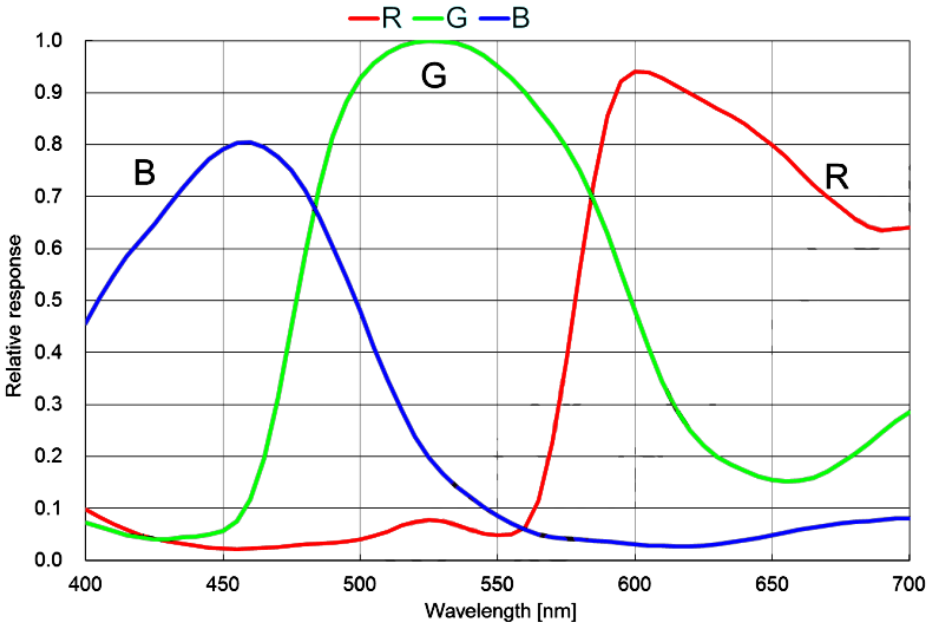


Figure 5-17 SC178C-ICM spectral response curve

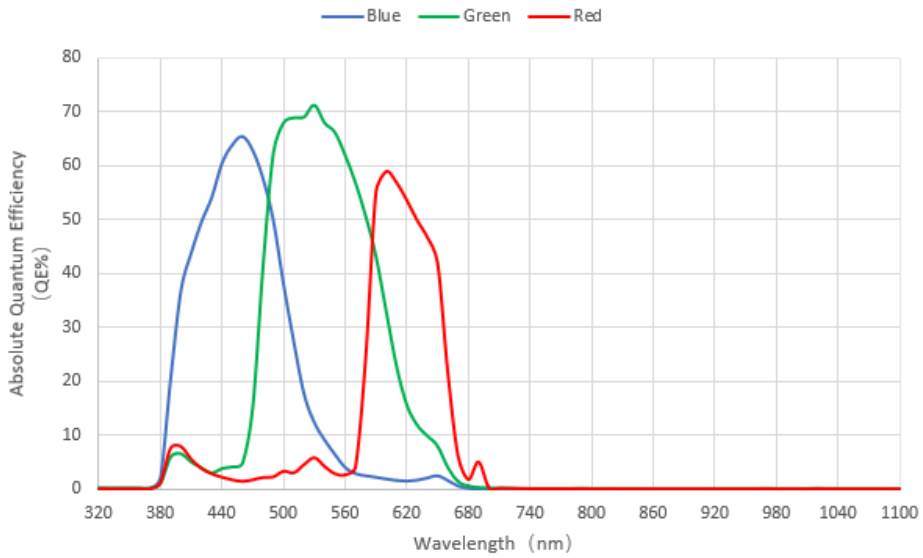


Figure 5-18 SC178C-ICM absolute quantum efficiency

5.14 SC546C-ICM

Table 5-14 SC546C-ICM camera specifications

Parameter \ Model	I3ISPM08000KPA
	8M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX546-AAQJ
Pixel size	2.74 μm x 2.74 μm
Sensor size	2/3"
Frame rate	41fps@2840x2840 118fps@1420x1420
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	1574mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

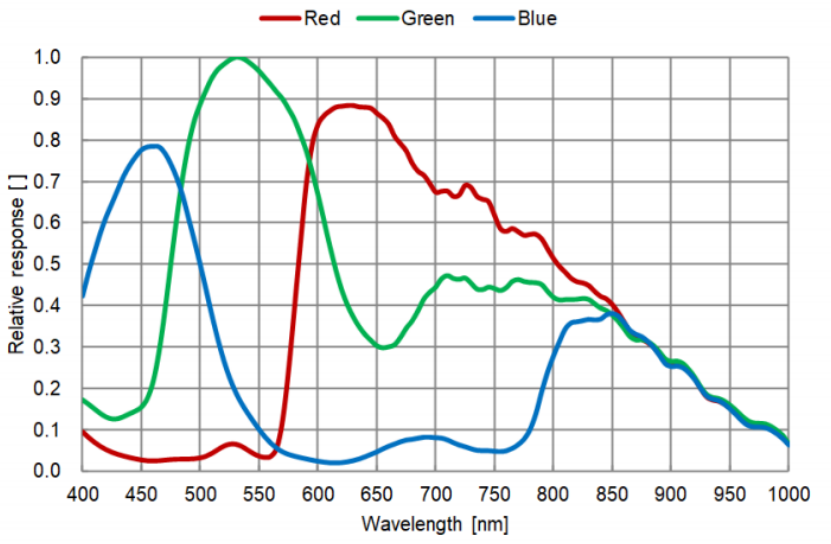


Figure 5-19 SC546C-ICM spectral response curve

5.15 SC678C-ICM

Table 5-15 SC678C-ICM camera specifications

Parameter \ Model	I3ISPM08300KPA
	8.3M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX678-AAQR
Pixel size	2.0 μm x 2.0 μm
Sensor size	1/1.8"
Frame rate	45fps@3840x2160 70fps@1920x1080
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	3541mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android； X86/X64/armhf/armel/arm64
Certification	CE, FCC

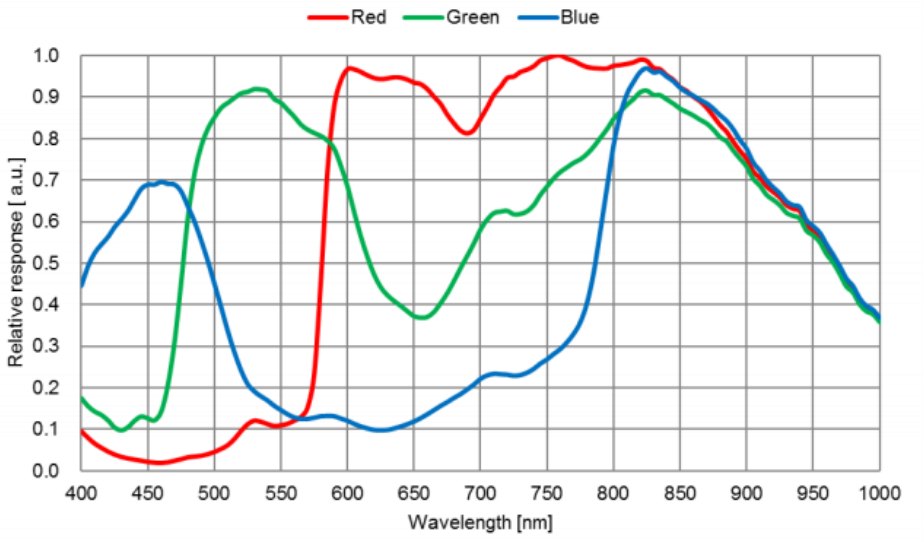


Figure 5-20 SC678C-ICM spectral response curve

5.16 SC585C-ICM

Table 5-16 SC585C-ICM camera specifications

Parameter \ Model	I3ISPM08300KPB
	8.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX585-AAQJ1-C
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.2"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	5970mV
Dark current	0.13mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<2.3W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

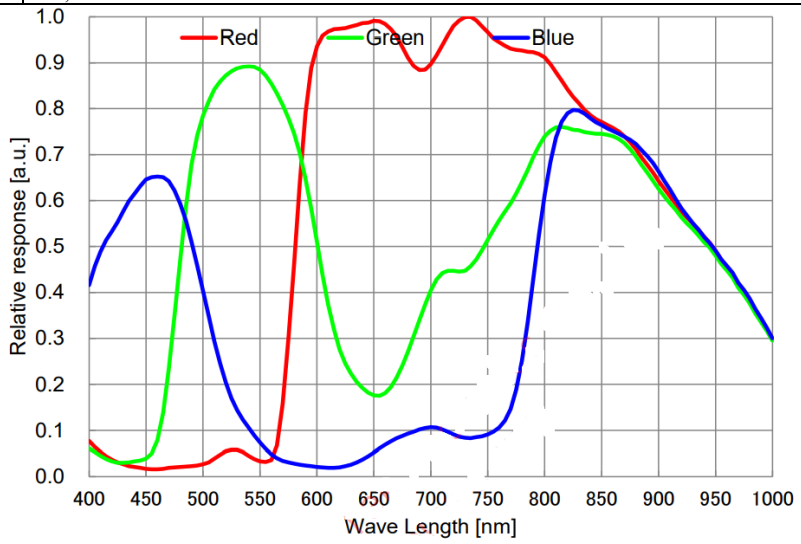


Figure 5-21 SC585C-ICM spectral response curve

5.17 SC226C-ICM

Table 5-17 SC226C-ICMA camera specifications

Parameter \ Model	I3ISPM12000KPA
	12M pixels 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX226CQJ
Pixel size	1.85 μm x 1.85 μm
Sensor size	1/1.7"
Frame rate	29.9fps@4064×3046 59.9fps@2048×1080
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	3637mV
Dark current	0.5mV
Gain range	1x-50x
Exposure time	400μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

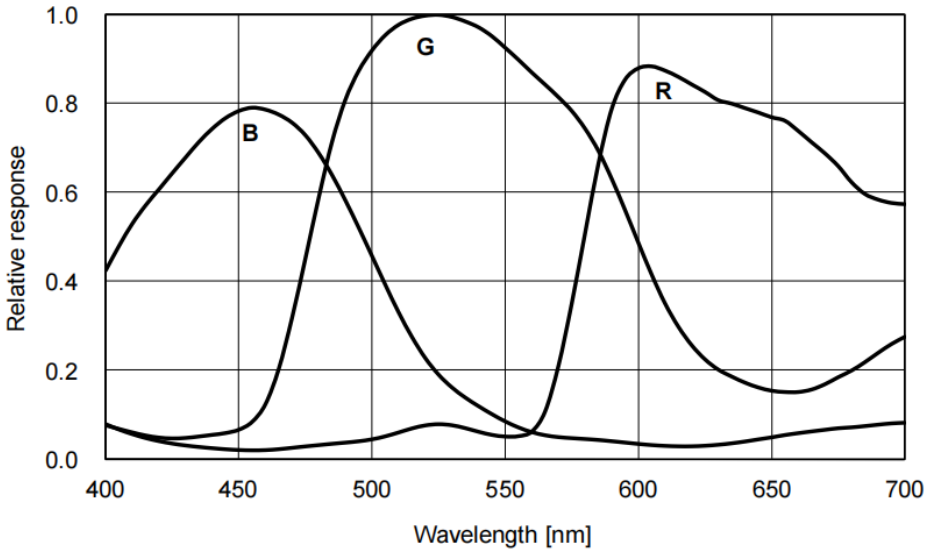


Figure 5-22 SC226C-ICM spectral response curve

5.18 SC676C-ICM

Table 5-18 SC676C-ICM camera specifications

Parameter \ Model	I3ISPM12000KPB
	12M pixels 1/1.6" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX676-AACR
Pixel size	2.0 μm x 2.0 μm
Sensor size	1/1.6"
Frame rate	27.7fps@3536×3536 65.8fps@1760×1760
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	280mV
Dark current	0.1mV
Gain range	1x-50x
Exposure time	13μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

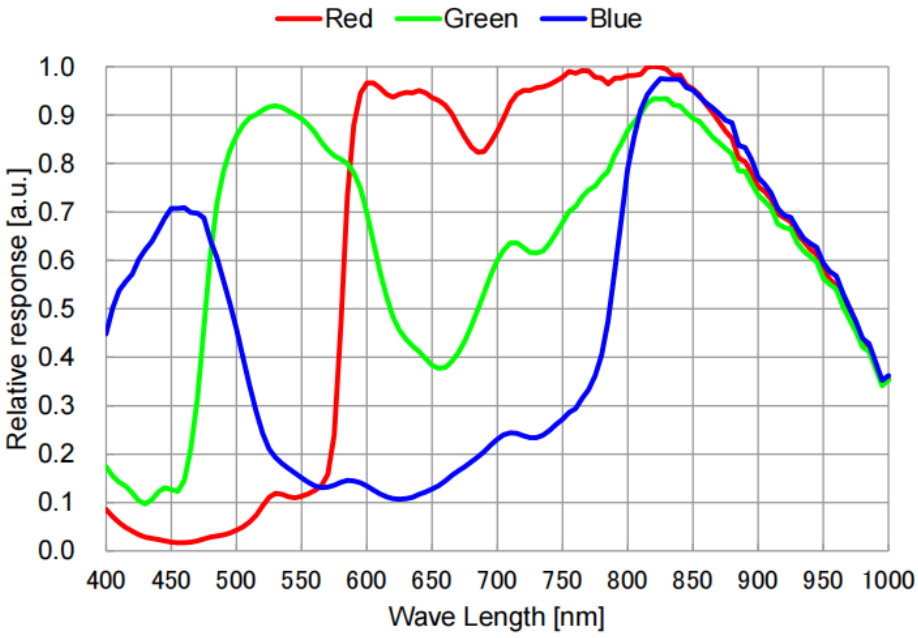


Figure 5-23 SC676C-ICM spectral response curve

5.19 SC432C-ICM

Table 5-19 SC432C-ICM camera specifications

Parameter \ Model	I3ISPM01700KPA
	1.7M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX432LQJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1"
Frame rate	98.6fps@1600 x 1100
Conversion Gain	4.9 (e-/ADU)
Readout Noise	4.53 (e-)
Full Well	20.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	4910mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<2.4W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

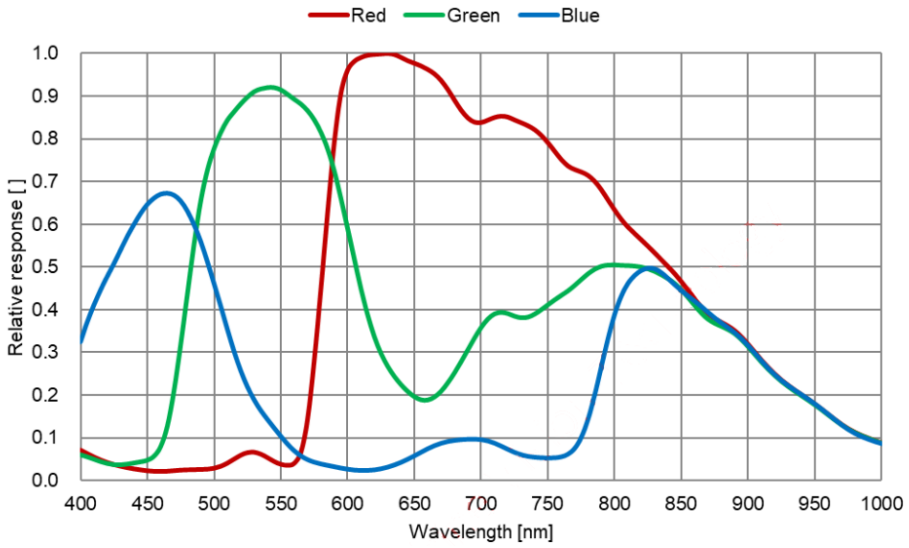


Figure 5-24 SC432C-ICM spectral response curve

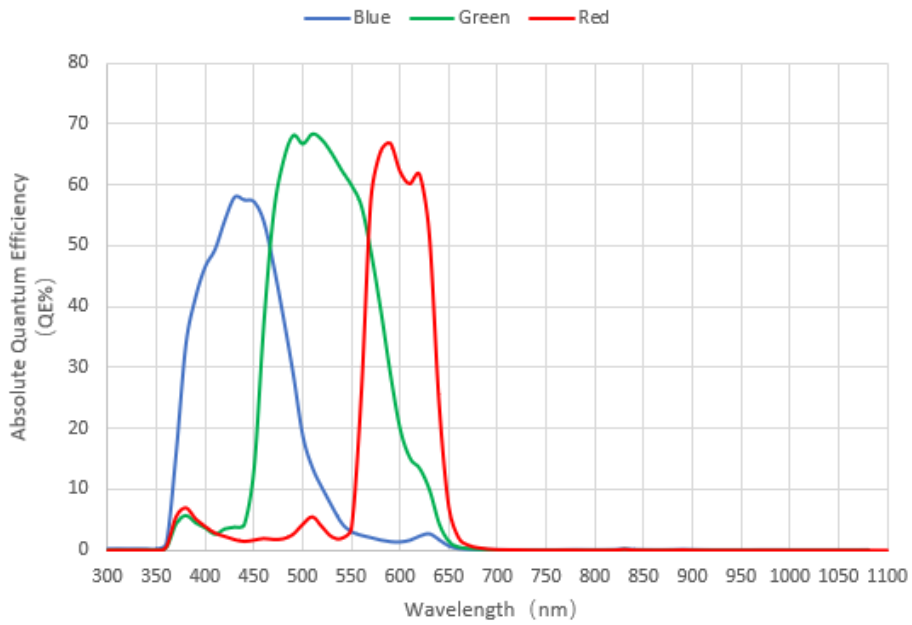


Figure 5-25 SC432C-ICM absolute quantum efficiency

5.20 SC425C-ICM

Table 5-20 SC425C-ICM camera specifications

Parameter \ Model	I3ISPM01700KPB
	1.7M pixels 1.1" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX425LQJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1"
Frame rate	210fps@1600 x 1100
Conversion Gain	4.9 (e-/ADU)
Readout Noise	4.53 (e-)
Full Well	20.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	4910mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mm×38mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

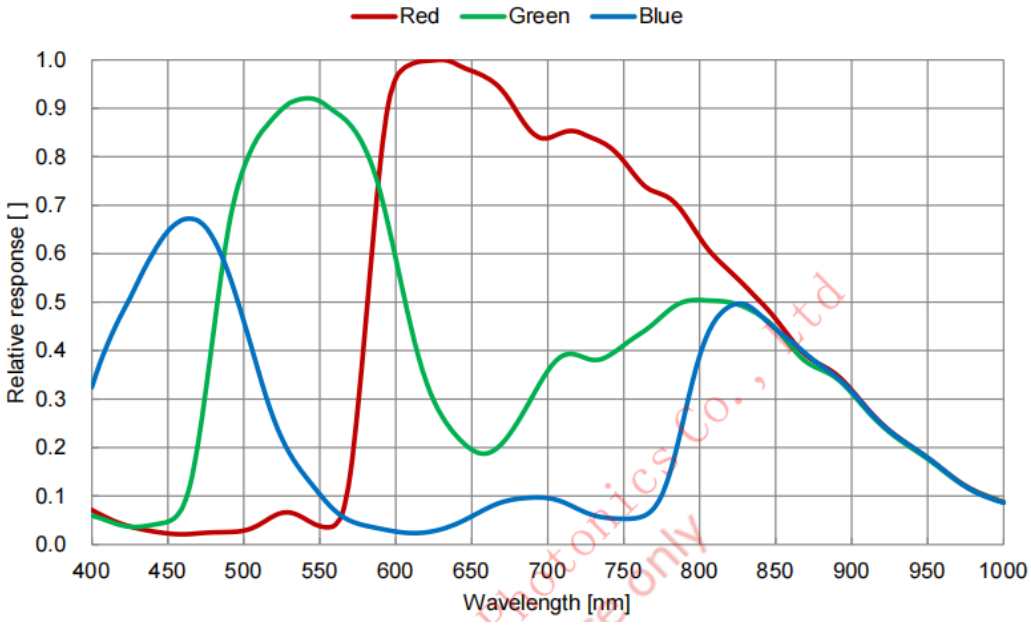


Figure 5-26 SC425C-ICM spectral response curve

5.21 SC430C-ICM

Table 5-21 SC430C-ICM camera specifications

Parameter \ Model	I3ISPM02000KPA
	2.0M pixels 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX430LQJ
Pixel size	4.5 μm x 4.5 μm
Sensor size	1/1.7"
Frame rate	132fps@1624×1240
Conversion Gain	TBD
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	2058mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

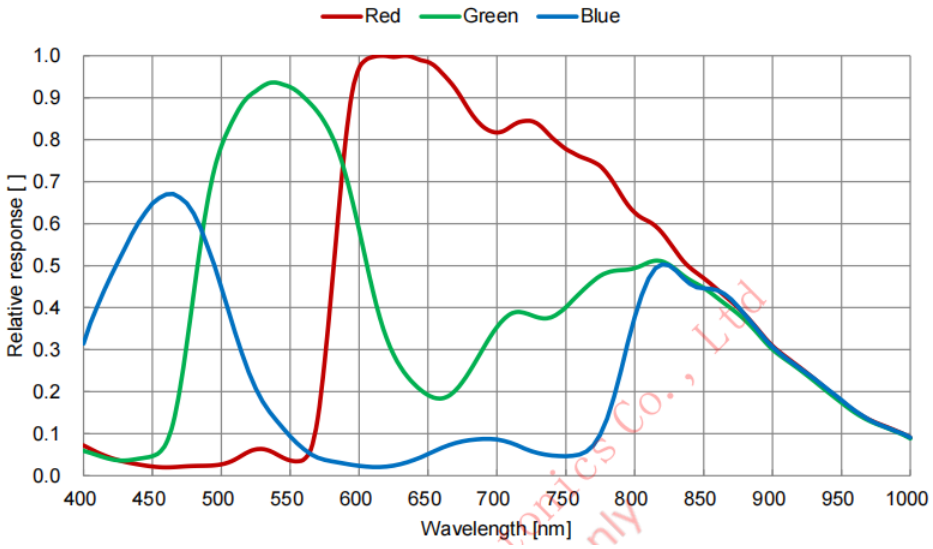


Figure 5-27 SC430C-ICM spectral response curve

5.22 SC421C-ICM

Table 5-22 SC421C-ICM camera specifications

Parameter \ Model	I3ISPM02800KPA
	2.8M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX421LQJ
Pixel size	4.5 μm x 4.5 μm
Sensor size	2/3"
Frame rate	121fps@1936 × 1464 425fps@968 × 732
Conversion Gain	2.69 (e-/ADU)
Readout Noise	2.55 (e-)
Full Well	11.0 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Sensitivity	2058mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

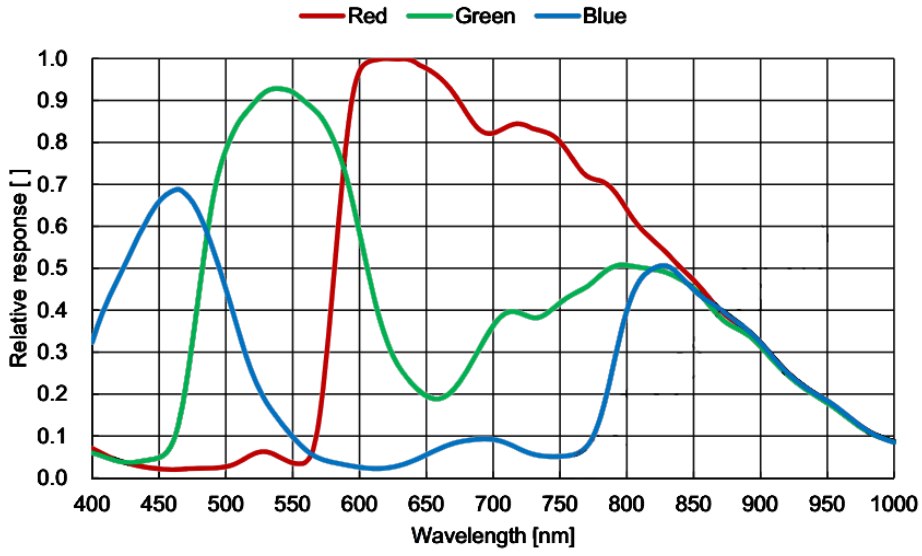


Figure 5-28 SC421C-ICM spectral response curve

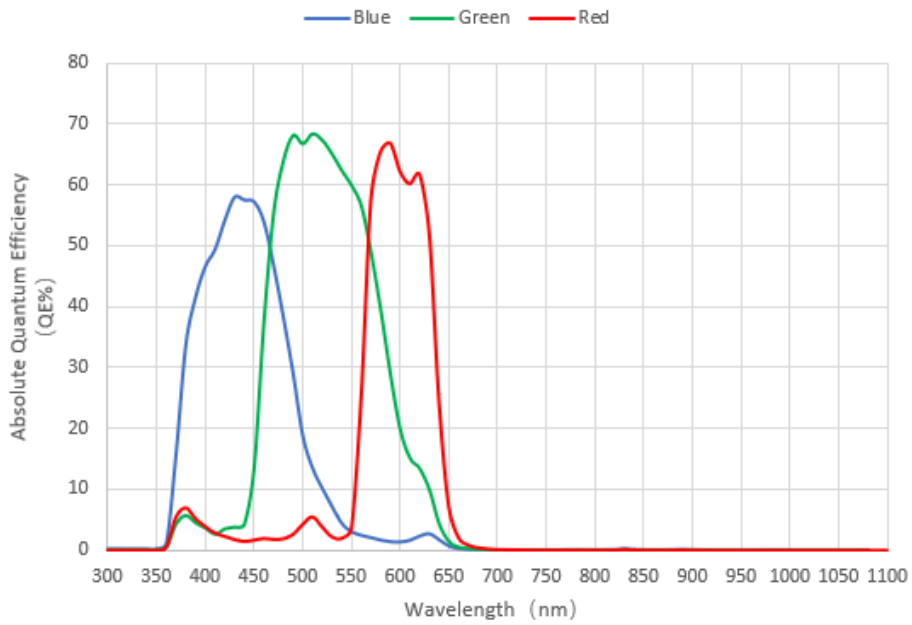


Figure 5-29 SC421C-ICM absolute quantum efficiency

5.23 SC428C-ICM

Table 5-23 SC428C-ICM camera specifications

Parameter \ Model	I3ISPM07100KPA
	7.1M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX428LQJ
Pixel size	4.5 μm x 4.5 μm
Sensor size	1.1"
Frame rate	51.4fps@3200 x 2200 133.8fps@1584 x 1100
Conversion Gain	2.74 (e-/ADU)
Readout Noise	2.54 (e-)
Full Well	11.2 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Sensitivity	2058mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

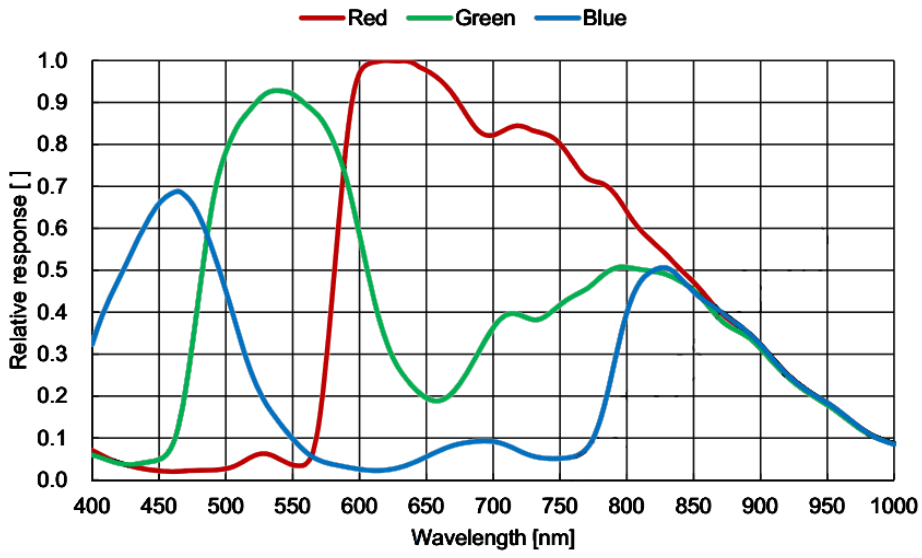


Figure 5-30 SC428C-ICM spectral response curve

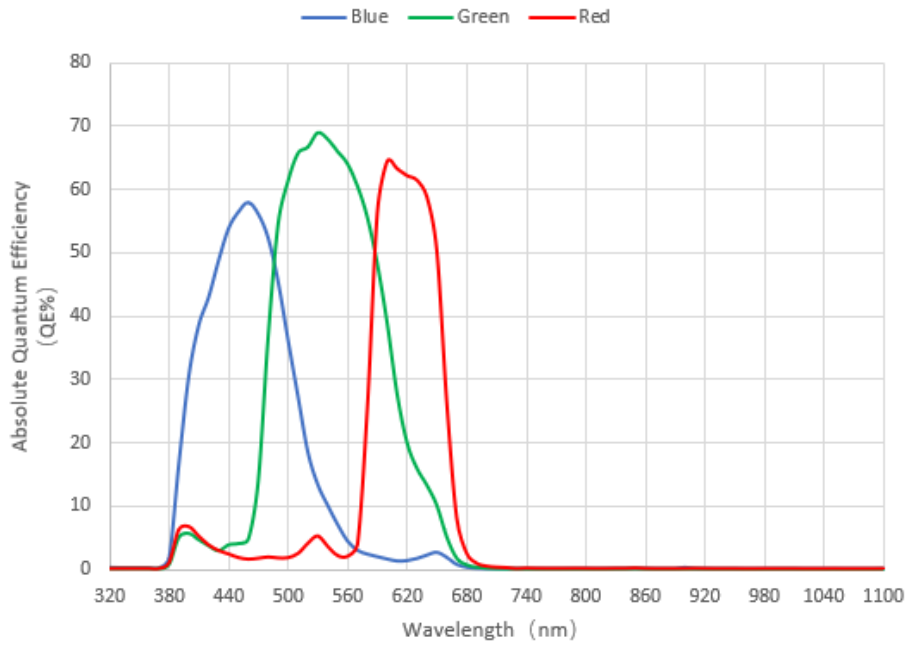


Figure 5-31 SC428C-ICM absolute quantum efficiency

5.24 SC304C-ICM

Table 5-24 SC304C-ICM camera specifications

Parameter \ Model	I3ISPM12300KPA
	12.3M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX304LQR-C
Pixel size	3.45 μm x 3.45 μm
Sensor size	1.1"
Frame rate	23.4fps@4096 x 3000 46.3ps@2048 x 1500 46.3fps@1024 x 750
Conversion Gain	2.68 (e-/ADU)
Readout Noise	2.11 (e-)
Full Well	11.0 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

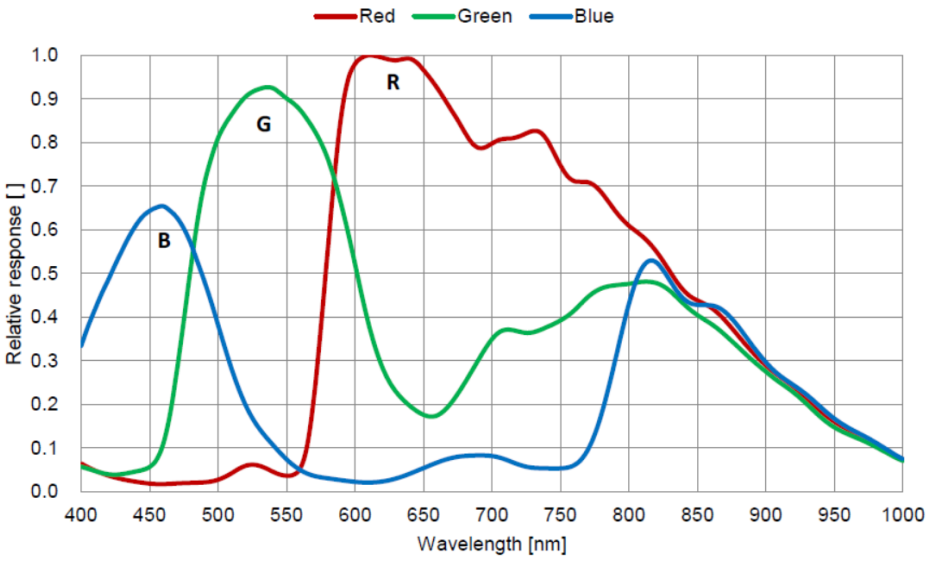


Figure 5-32 SC304C-ICM spectral response curve

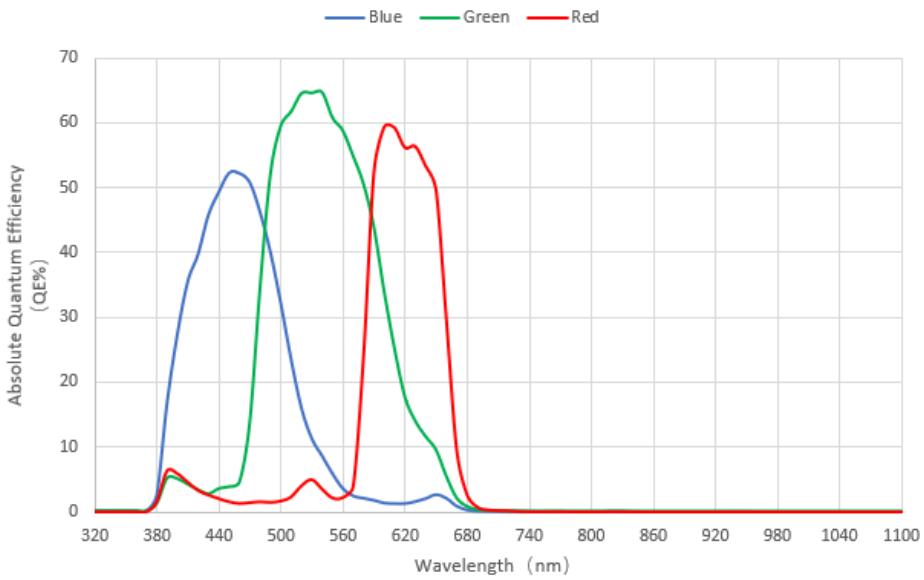


Figure 5-33 SC304C-ICM absolute quantum efficiency

5.25 SC3412C-ICM

Table 5-25 SC3412C-ICMcamera specifications

Parameter \ Model	I3ISPM12500KPA
	12.5M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX3412
Pixel size	3.4 μm x 3.4 μm
Sensor size	1.1"
Frame rate	30fps@4096x3072 60fps@2048x1536
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	$2.36x10^7$e-/((W/m2)·s)
Dark current	81.6e-/s
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

5.26 SC541C-ICM

Table 5-26 SC541C-ICM camera specifications

Parameter \ Model	I3ISPM20400KPA
	20.4M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX541-AAQJ
Pixel size	2.74 μm x 2.74 μm
Sensor size	1.1"
Frame rate	17.5fps@4496×4496 64.4fps@2240×2240 64.4fps@1120×1120
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	1574mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

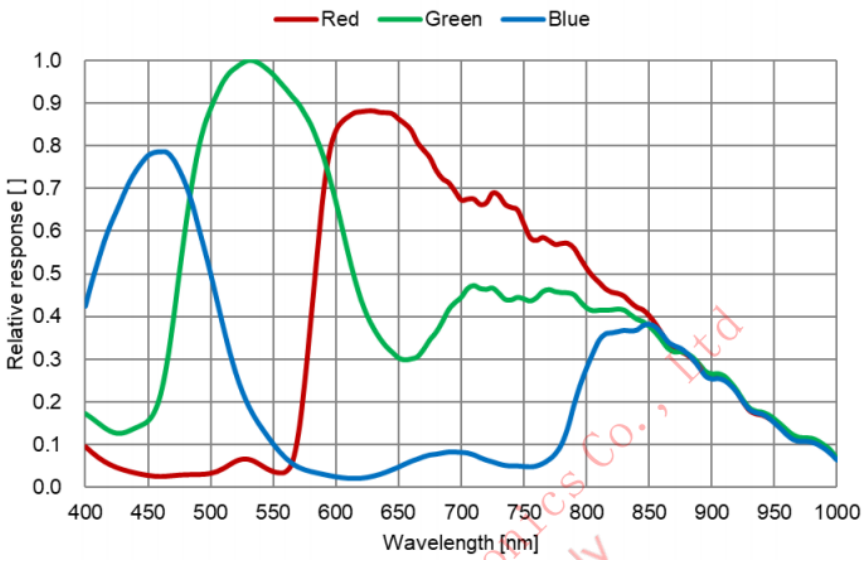


Figure 5-34 SC541C-ICM spectral response curve

5.27 SC433M-ICM

Table 5-27 SC433M-ICM camera specifications

Parameter \ Model	I3CMOS00500KMA
	0.5M pixel 1 / 1.7 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX433LLJ
Pixel size	9.0 μm×9.0 μm
Sensor size	1/1.7”
Frame rate	166.5fps@812×620
Dynamic range	72.3dB
Signal-to-Noise ratio	50.0dB
Peak QE	78%@575nm
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	software2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input, one non-isolated output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

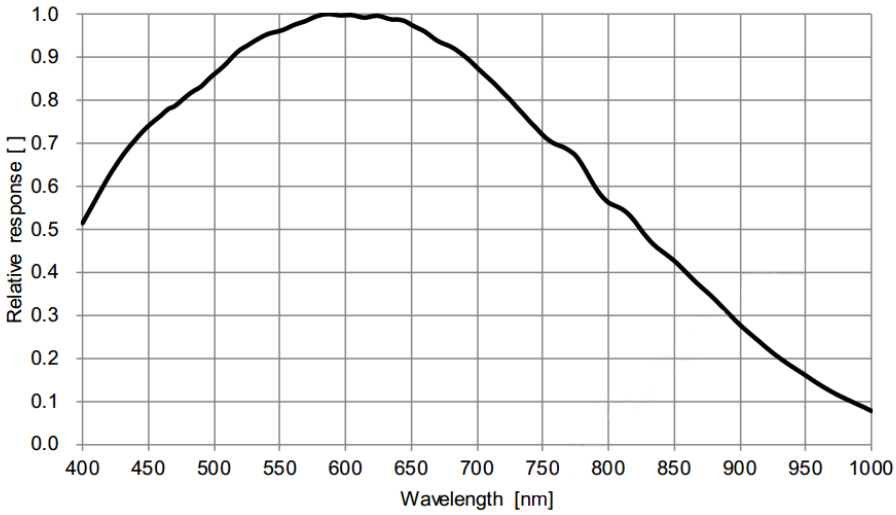


Figure 5-35 SC433M-ICM spectral response curve

5.28 SC273M-ICM

Table 5-28 SC273M-ICMcamera specifications

Parameter \ Model	I3CMOS01500KMA
	1.5M pixels 1/2.9" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX273LLR
Pixel size	3.45 μm×3.45 μm
Sensor size	1/2.9"
Frame rate	226.5fps@1440×1080 506fps@720×540
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.19mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	hardware2×2; software2×2, 3×3, 4×4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

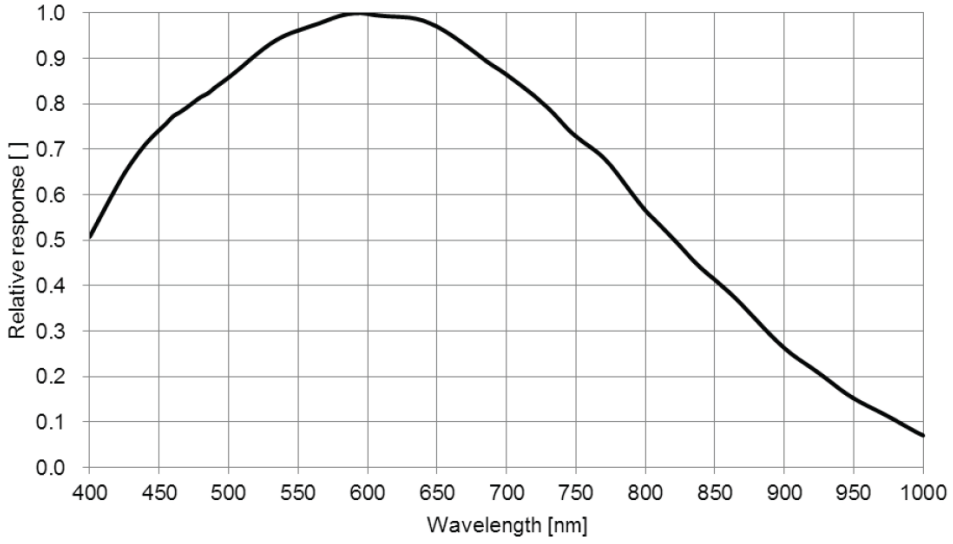


Figure 5-36 SC273M-ICM spectral response curve

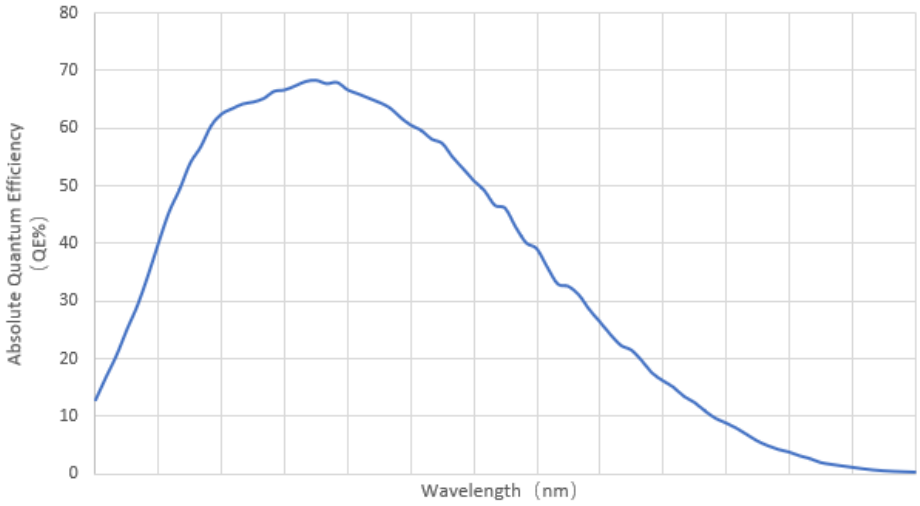


Figure 5-37 SC273M-ICM absolute quantum efficiency

5.29 SC174M-ICM

Table 5-29 SC174M-ICM camera specifications

Parameter \ Model	I3CMOS02300KMA
	2.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX174LLJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	164.5fps@1920 x 1200
Dynamic range	73.6dB
Signal-to-Noise ratio	44.8dB
Peak QE	78%@575nm
Sensitivity	1650mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	42μs-15sec
Shutter	Global shutter
Binning	software2×2, 3×3, 4×4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.2W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

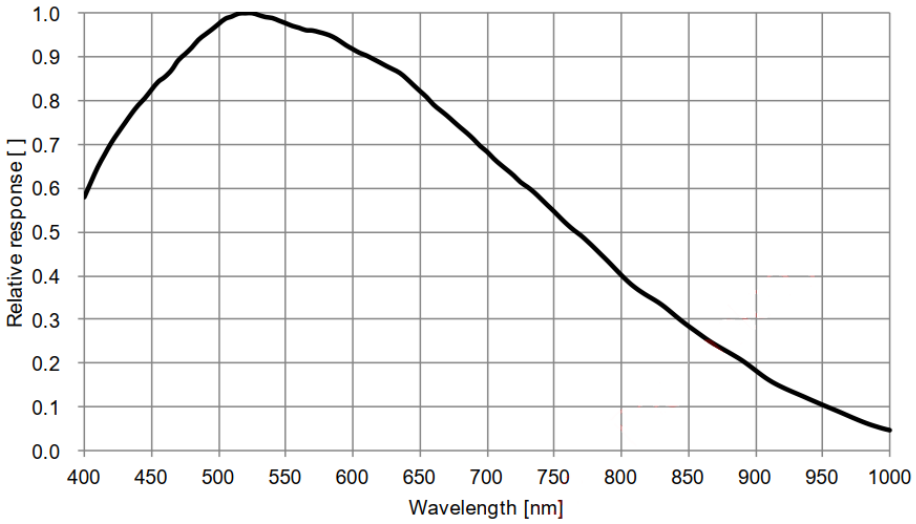


Figure 5-38 SC174M-ICM spectral response curve

5.30 SC249M-ICM

Table 5-30 SC249M-ICM camera specifications

Parameter \ Model	I3CMOS02300KMB
	2.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX249LLJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	30fps@1920 x 1200
Conversion Gain	73.6dB
Readout Noise	44.8dB
Peak QE	78%@575nm
Sensitivity	1650mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	42μs-15sec
Shutter	Global shutter
Binning	software2×2, 3×3, 4×4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.2W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

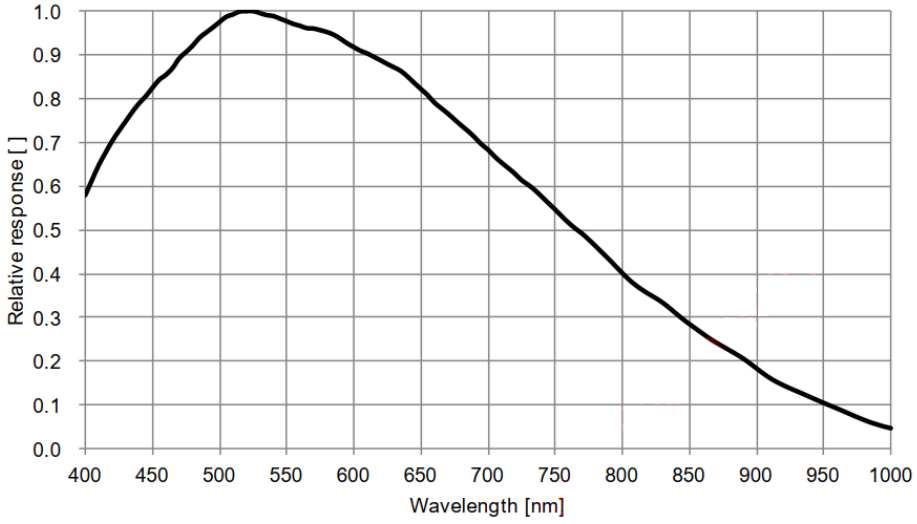


Figure 5-39 SC249M-ICM spectral response curve

5.31 SC4002M-ICM

Table 5-31 SC4002M-ICM camera specifications

Parameter \ Model	I3CMOS02400KMA
	2.4M pixels 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX4002
Pixel size	4.0 μm x 4.0 μm
Sensor size	1/1.7"
Frame rate	155fps@2048×1200 620fps@1024×600
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	3.26x10^{7}e-/((W/m2)·s)
Dark current	8.3e-/s
Gain range	1x-50x
Exposure time	55μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 10bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.2W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

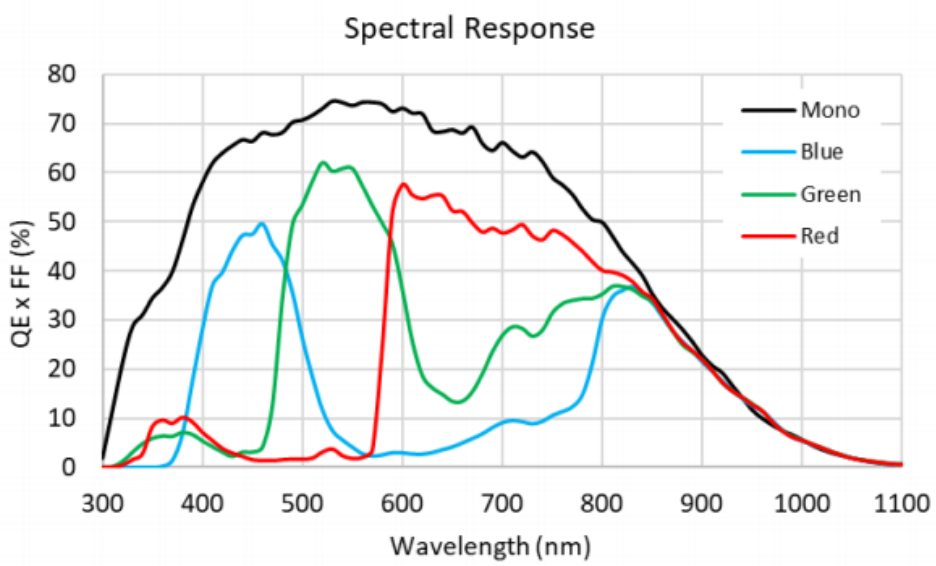


Figure 5-40 SC4002M-ICM spectral response curve

5.32 SC252M-ICM

Table 5-32 SC252M-ICM camera specifications

Parameter \ Model	I3CMOS03100KMA
	3.1M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX252LLR
Pixel size	3.45 μm×3.45 μm
Sensor size	1/1.8"
Frame rate	110.6fps@2048×1536 233.8fps@1024×768
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

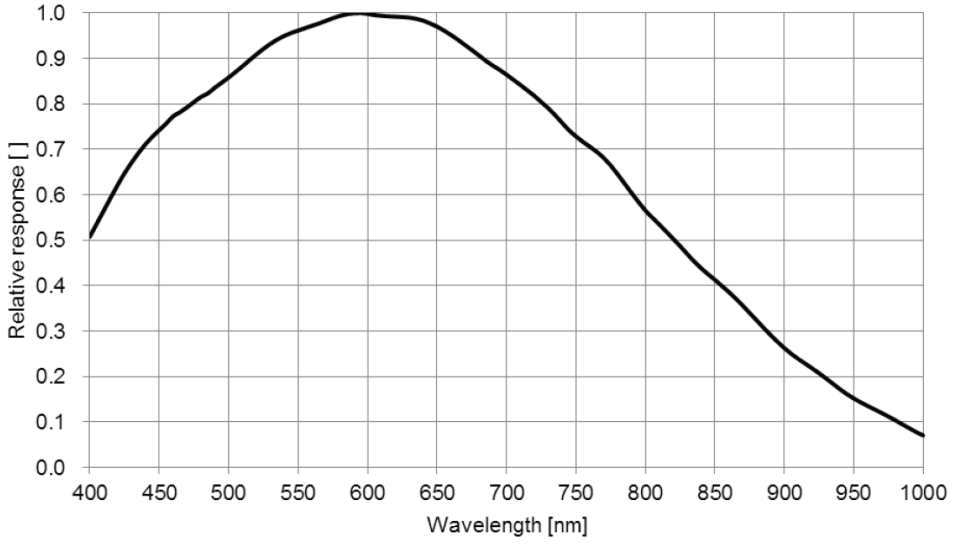


Figure 5-41 SC252M-ICM spectral response curve

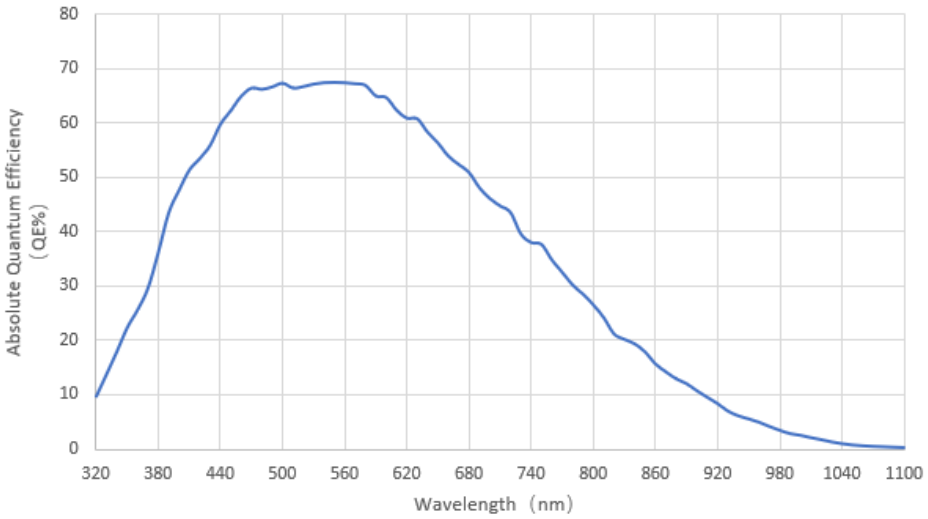


Figure 5-42 SC252M-ICM absolute quantum efficiency

5.33 SC265M-ICM

Table 5-33SC265M-ICM camera specifications

Parameter \ Model	I3CMOS03100KMB	I3CMOS03100KMB-G
	3.1M pixels 1/1.8" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX265LLR	
Pixel size	3.45 μm×3.45 μm	
Sensor size	1/1.8"	
Frame rate	55.4fps@2048×1536 115.1fps@1024×768	36.9fps@2048 × 1536 115.1fps@1024 × 768
Dynamic range	73.6dB	
Signal-to-Noise ratio	40.4dB	
Peak QE	71%@575nm	
Sensitivity	1830mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	15μs-15sec	
Shutter	Global shutter	
Binning	Software 2×2, 3×3, 4×4	
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output	One opto-coupling isolated input, one opto-coupling isolated output, two non-isolated input/output
Data Format	8bit / 12bit	
General Specifications		
Power supply	Power with USB3.0	12V Power adapter
Power consumption	<3.5W	TBD
Temperature	Working temperature -10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	33mm×33mm×33mm	33mm×33mm×42mm
Weight	70g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

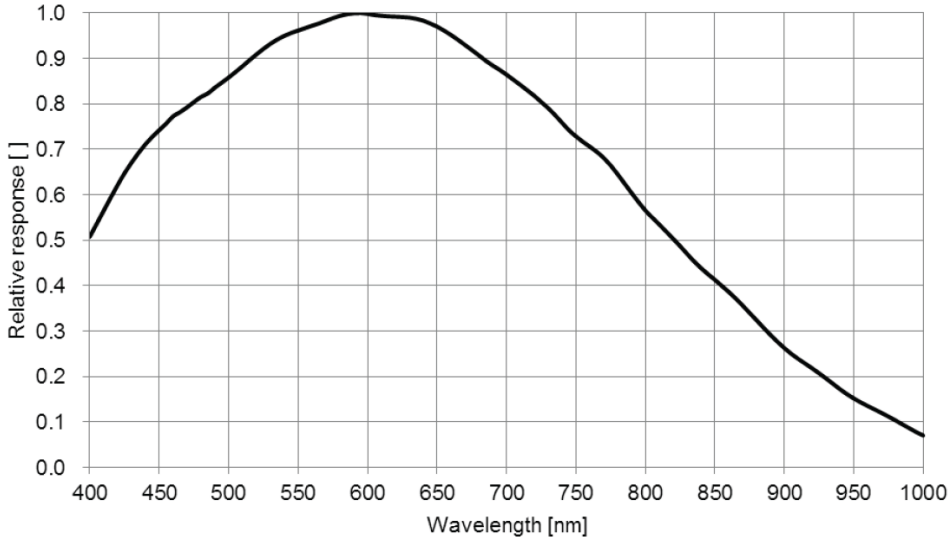


Figure 5-43 SC265M-ICM spectral response curve

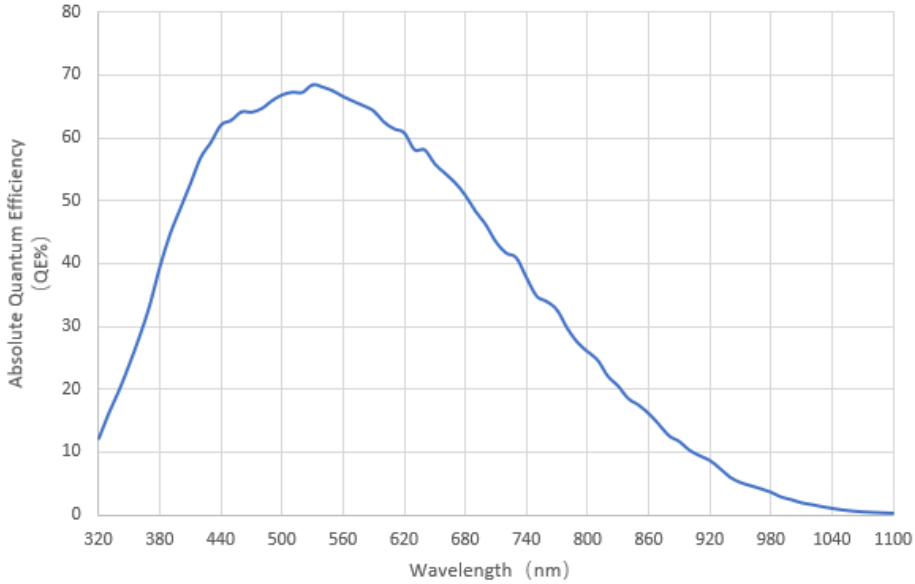


Figure 5-44 SC265M-ICM absolute quantum efficiency

5.34 SC900M-ICM/-G

Table 5-34 SC900M-ICM/-G camera specifications

Parameter \ Model	I3CMOS03200KMA	I3CMOS03200KMA-G
	3.2M pixels 1/3.1" CMOS USB3.0 / GigE industrial camera	
Camera		
Data interface	USB3.0	GigE
Sensor model	Sony IMX900AMR	
Pixel size	2.25 μm × 2.25 μm	
Sensor size	1/3.1"	
Frame rate	53.4fps@2048×1536 126.8fps@1024×768	16.9fps@2048×1536 66fps@1024×768
Dynamic range	TBD	
Signal-to-Noise ratio	TBD	
Sensitivity	1807mV	
Dark current	0.15mV	
Gain range	1x-50x	
Exposure time	11μs-15sec	
Shutter	Global shutter	
Binning	Software 2×2, 3×3, 4×4	
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output	One opto-coupling isolated input, one opto-coupling isolated output, two non-isolated input/output
Data Format	8bit / 12bit	
General Specifications		
Power supply	Power with USB3.0	12V Power adapter
Power consumption	<3.5W	TBD
Temperature	Working temperature -10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	33mm×33mm×33mm	33mm×33mm×42mm
Weight	70g	
Lens mount	C-mount	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android； X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

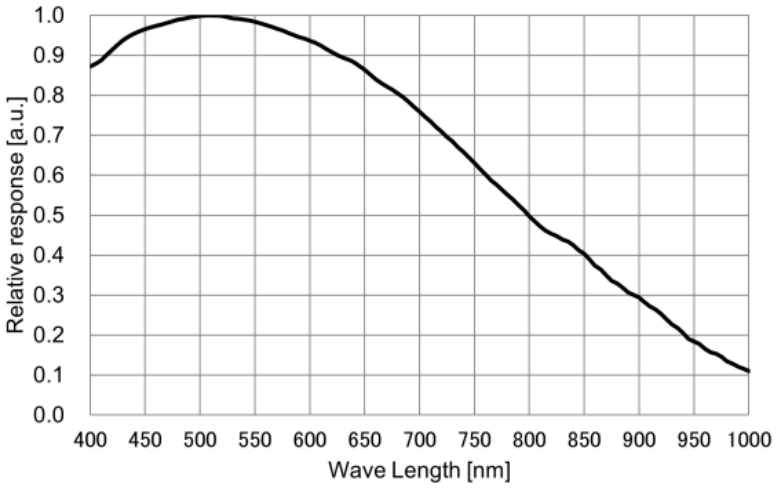


Figure 5-45 SC900M-ICM/-G spectral response curve

5.35 SC664M-ICM

Table 5-35 SC664M-ICM camera specifications

Parameter \ Model	I3CMOS04200KMA
	4.2M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX664-AAMR1
Pixel size	2.9 μm × 2.9 μm
Sensor size	1/1.8"
Frame rate	90fps@2688×1520
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	TBD
Dark current	TBD
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Rolling shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

5.36 SC250M-ICM

Table 5-36 I3CMOS05000KMA camera specifications

Parameter \ Model	I3CMOS05000KMA
	5M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX250LLR
Pixel size	3.45 μm×3.45 μm
Sensor size	2/3"
Frame rate	70.9fps@2448×2048 175.2fps@1224×1024
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

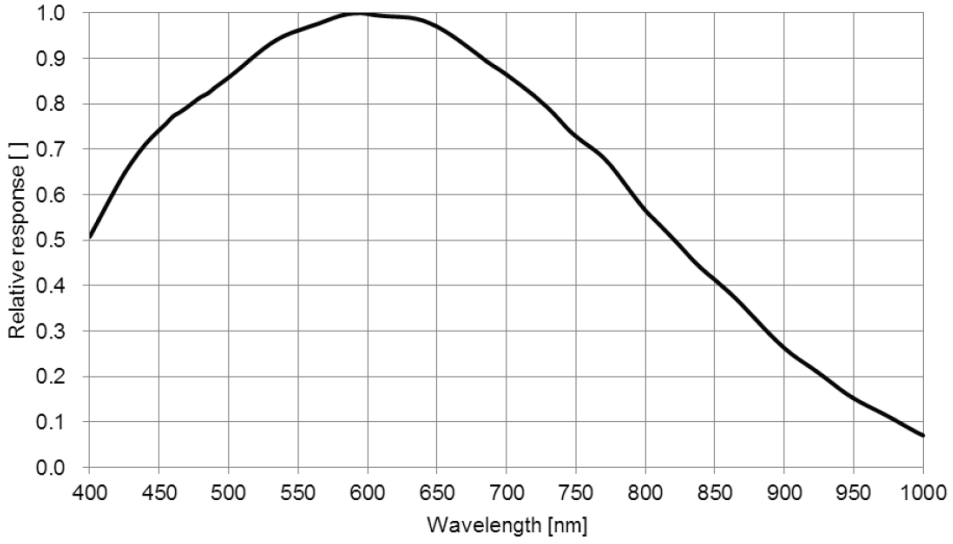


Figure 5-46 SC250M-ICM spectral response curve

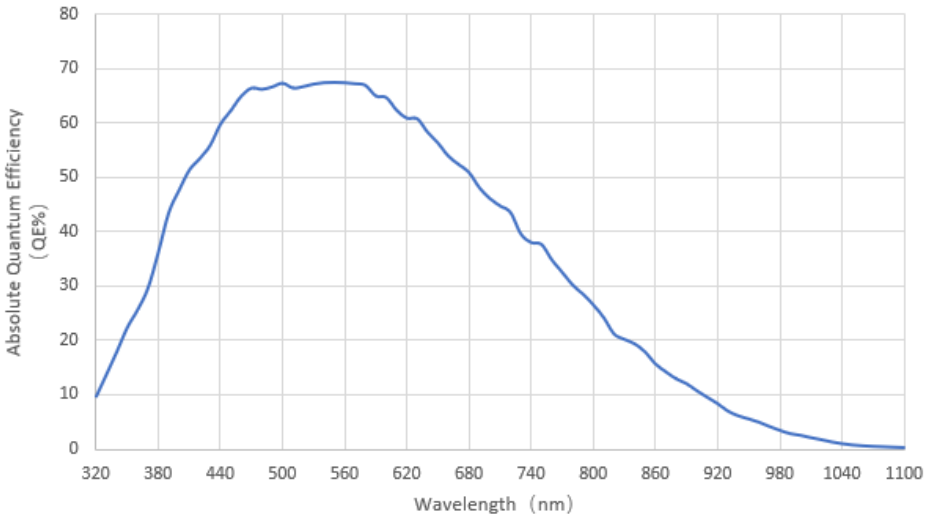


Figure 5-47 SC250M-ICM absolute quantum efficiency

5.37 SC264M-ICM

Table 5-37 SC264M-ICM camera specifications

Parameter \ Model	I3CMOS05000KMB
	5M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX264LLR
Pixel size	3.45 μm×3.45 μm
Sensor size	2/3"
Frame rate	35.6fps@2448×2048 87.6fps@1224×1024
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

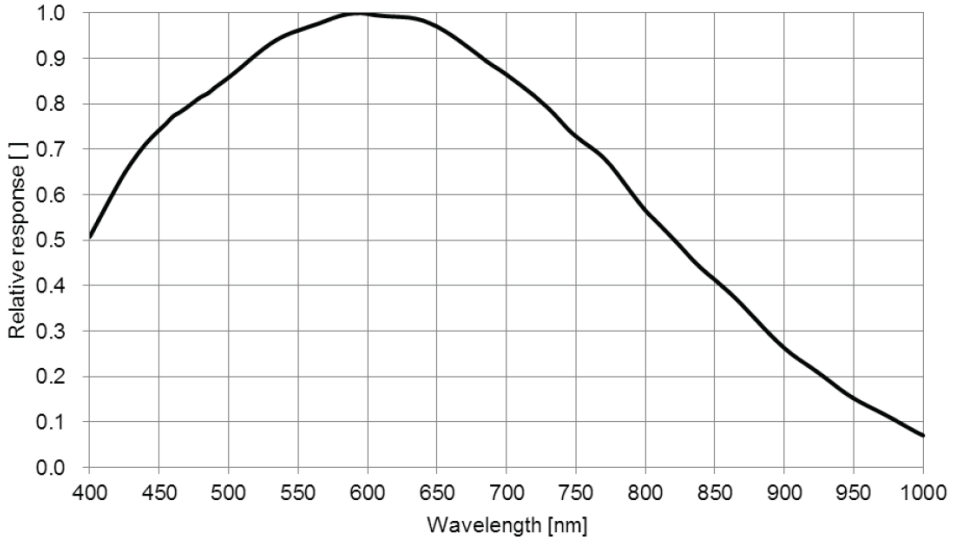


Figure 5-48 SC264M-ICM spectral response curve

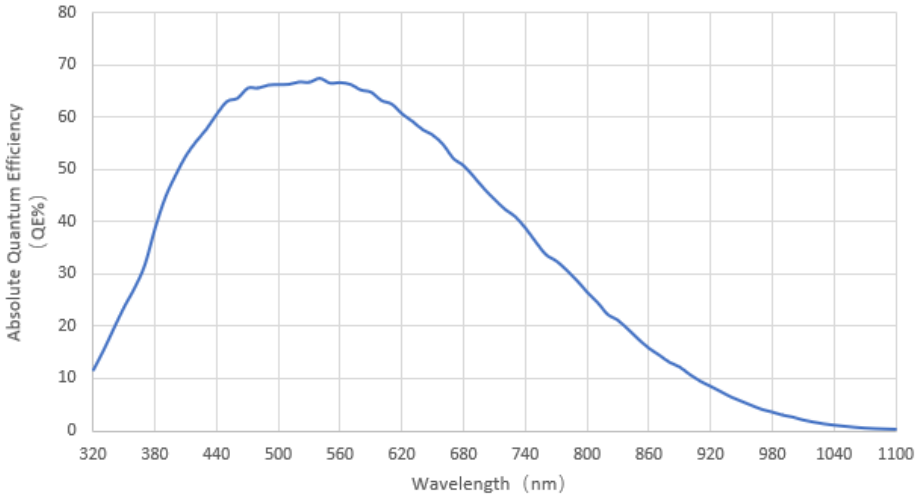


Figure 5-49 SC264M-ICM absolute quantum efficiency

5.38 SC250M-ICM-polarsens

Table 5-38 SC250M-ICM-polarsens camera specifications

Parameter \ Model	I3CMOS05000KMC
	5M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX250MZR（Polarsens）
Pixel size	3.45 μm×3.45 μm
Sensor size	2/3"
Frame rate	35.6fps@2448×2048 87.6fps@1224×1024
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	684mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

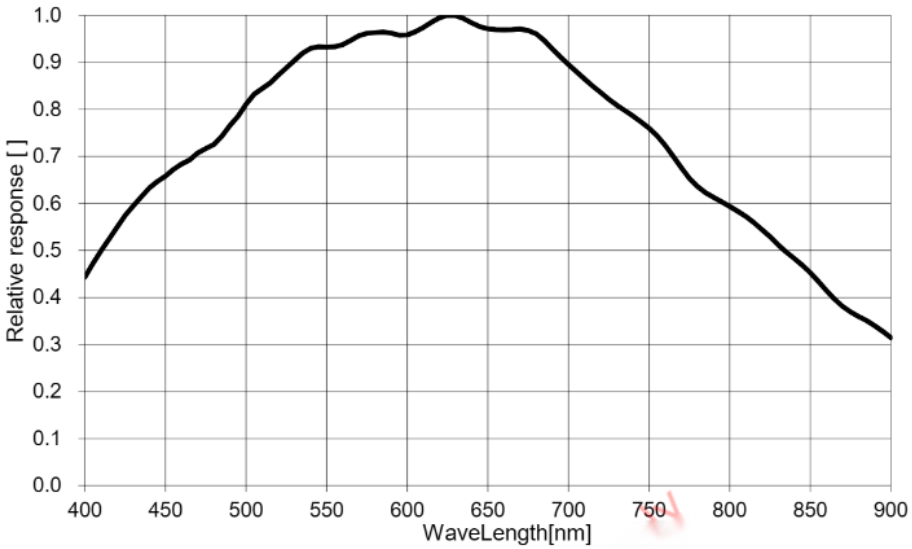


Figure 5-50 SC250M-ICM-polarsens spectral response curve

The four-directional Polarizations of this image sensor are arranged to get transmitted litght in the layout shown in the figure below. The 90° signal and 45° signal lines and the 135° signal and 0° signal lines are output successsively.

135	0	135	0
90	45	90	45
135	0	135	0
90	45	90	45

Figure 5-51 Polarization Coding Diagram

The polarization camera can effectively eliminate the reflection of the plastic surface, the reflection of the metal surface, and increase the three-dimensional sense of the metal surface. The comparison of the effect of ordinary camera and polarization camera is shown below.



Figure 5-52 Comparison of plastic surface effects between ordinary camera (left) and polarizing camera (right)



Figure 5-53 Plastic surface detail comparison



Figure 5-54 Ordinary camera (left) compared with polarizing camera (right) metal surface effect

5.39 SC3405M-ICM

Table 5-39 SC03405M-ICM camera specifications

Parameter \ Model	I3CMOS05100KMA
	5.1M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX3405
Pixel size	3.4 μm × 3.4 μm
Sensor size	2/3"
Frame rate	71fps@2448×2048 100fps@1224×1024
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Sensitivity	2.36x10^{7}e-/((W/m2)·s)
Dark current	4.4e-/s
Gain range	1x-50x
Exposure time	10μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android； X86/X64/armhf/armel/arm64
Certification	CE, FCC

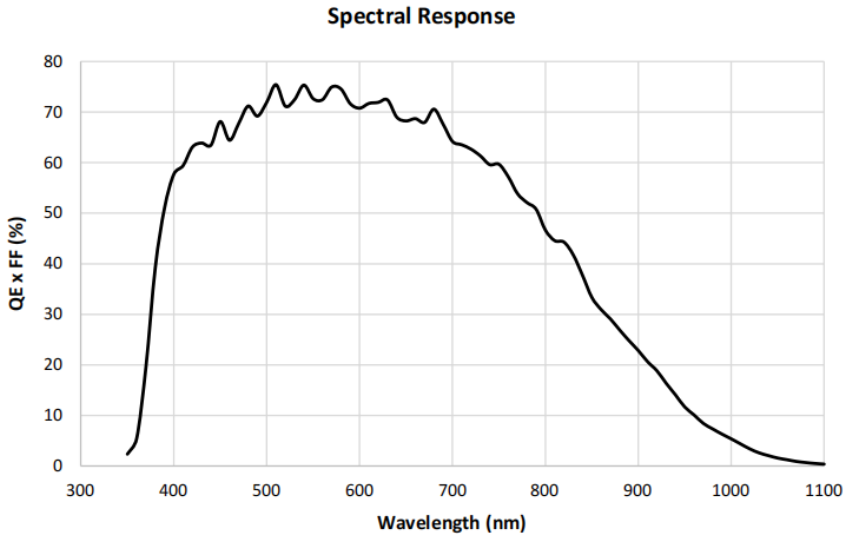


Figure 5-55 SC3405M-ICM spectral response curve

5.40 SC178M-ICM

Table 5-40 SC178M-ICM camera specifications

Parameter \ Model	I3CMOS06300KMA
	6.3M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX178LLJ
Pixel size	2.4 μm×2.4 μm
Sensor size	1/1.8"
Frame rate	58.7fps@3072×2048 59.5fps@1536×1024
Dynamic range	71dB
Signal-to-Noise ratio	40dB
Sensitivity	760mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	17μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2;Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	33mm×33mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

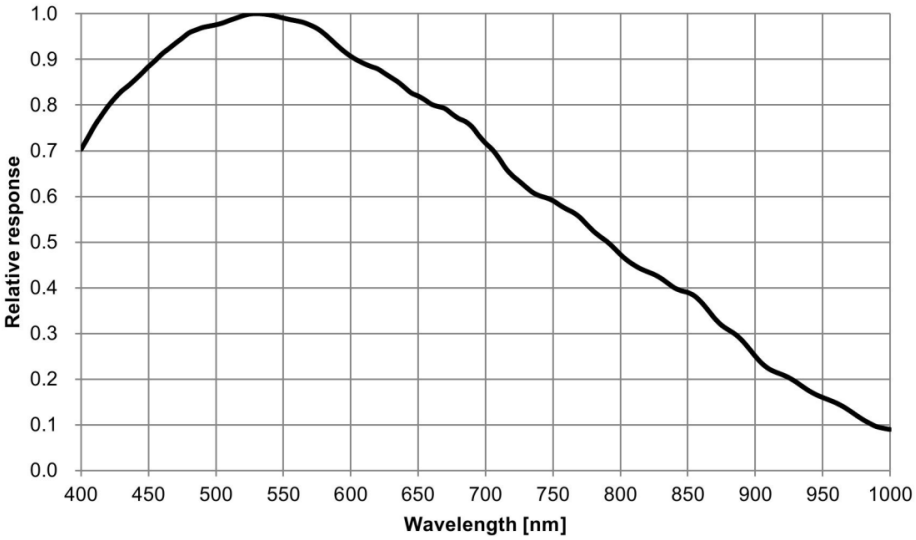


Figure 5-56 SC178M-ICM spectral response curve

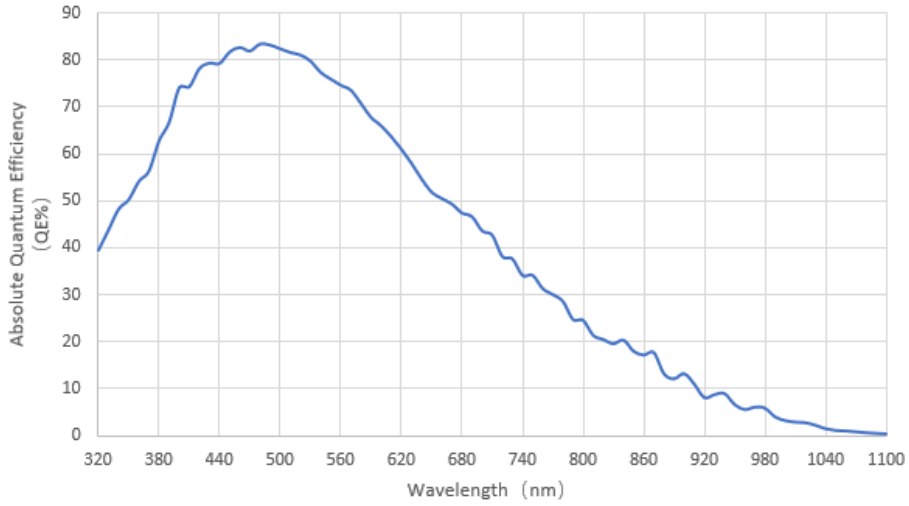


Figure 5-57 SC178M-ICM absolute quantum efficiency

5.41 SC546M-ICM

Table 5-41 SC546M-ICM camera specifications

Parameter \ Model	I3CMOS08000KMA
	8M pixel 2/3 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX546-AAMJ
Pixel size	2.74 μm x 2.74 μm
Sensor size	2/3”
Frame rate	41fps@2840x2840 118fps@1420x1420
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	2649mV
Dark current	0.25mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global Shutter
Binning	Hardware2x2; Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.5W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	33mmx33mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

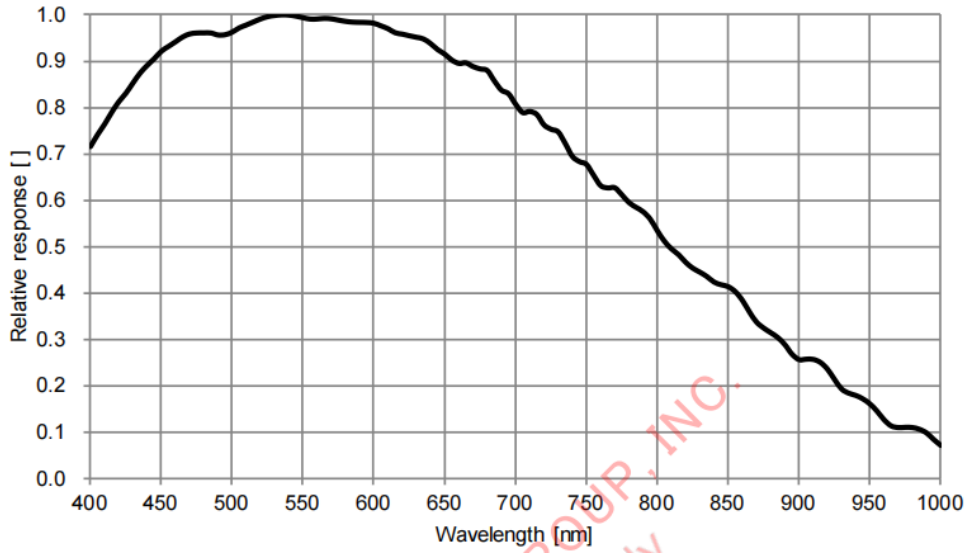


Figure 5-58 SC546M-ICM spectral response curve

5.42 SC9701UV-ICM

Table 5-42 SC9701UV-ICM camera specifications

Parameter \ Model	I3CMOS01300KMA
	1.3M pixel 1 "CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GLUX9701BSI (UV)
Pixel size	9.76 μm x 9.76 μm
Sensor size	1”
Frame rate	30fps@1280 x 1024 30fps@640 x 512
Conversion Gain	TBD
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	$2.57x10^{8}$(e-/((W/m2).s))
Dark current	11e-/s/pix
Gain range	1x-8x
Exposure time	63μs-60sec
Shutter	Rolling Shutter
Binning	Hardware2x2; Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0
Power consumption	<2.4W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android； X86/X64/armhf/armel/arm64
Certification	CE, FCC

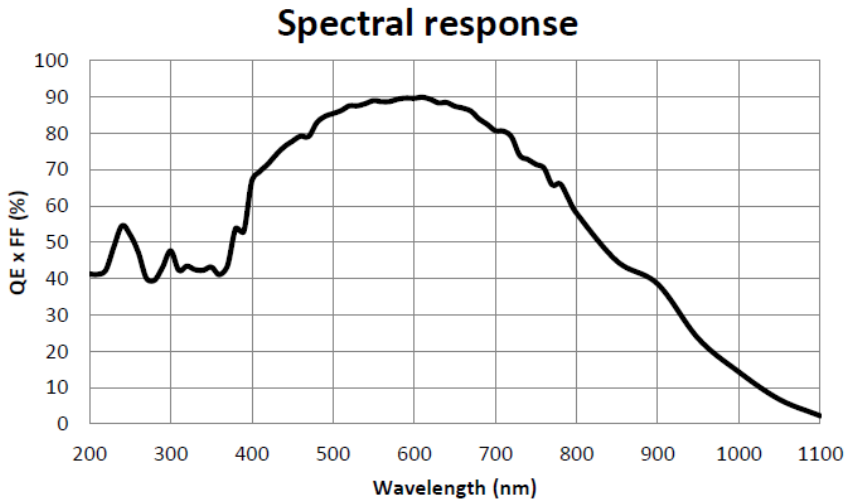


Figure 5-59 SC9701UV-ICM spectral response curve

5.43 SC432M-ICM

Table 5-43 SC432M-ICM camera specifications

Parameter \ Model	I3CMOS01700KMA
	1.7M pixel 1.1 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX432LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1”
Frame rate	98.6fps@1600 x 1100
Conversion Gain	4.97 (e-/ADU)
Readout Noise	4.76 (e-)
Full Well	20.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Peak QE	78%@575nm
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<2.4W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

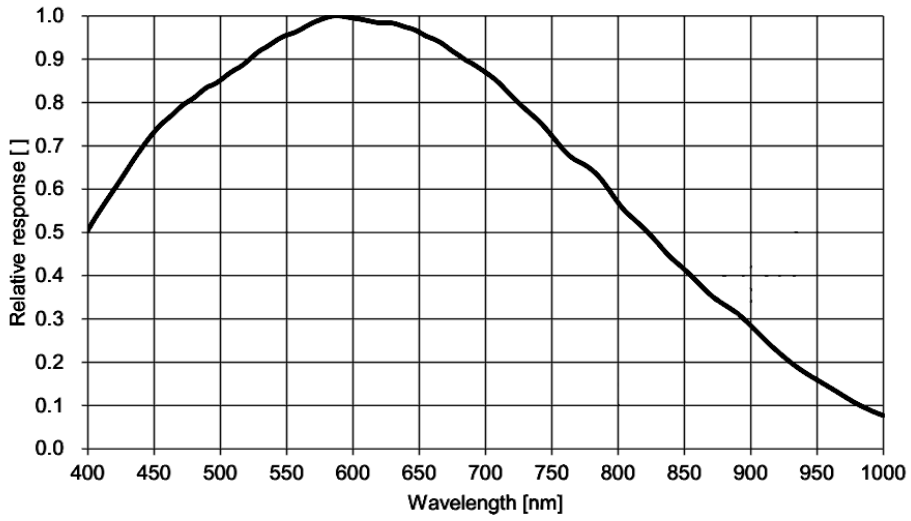


Figure 5-60 SC432M-ICM spectral response curve

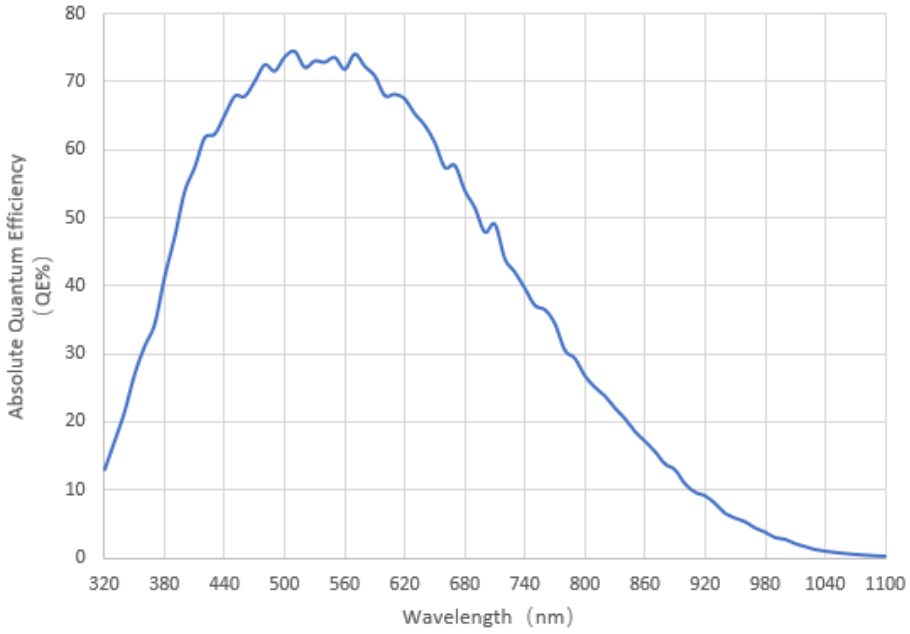


Figure 5-61 SC432M-ICM absolute quantum efficiency

5.44 SC425M-ICM

Table 5-44 SC425M-ICM camera specifications

Parameter \ Model	I3CMOS01700KMB
	1.7M pixels 1.1" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX425LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1"
Frame rate	210fps@1600 x 1100
Conversion Gain	4.97 (e-/ADU)
Readout Noise	4.76 (e-)
Full Well	20.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2×2, 3×3, 4×4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One opto-coupling isolated input, one opto-coupling isolated output, one non-isolated input/output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<2.4W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mm×38mm×33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

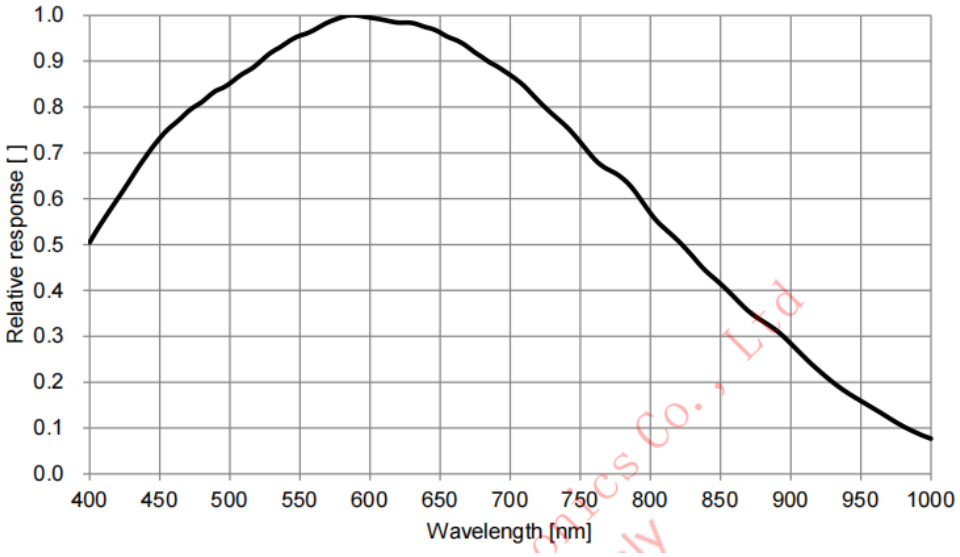


Figure 5-62 SC425M-ICM spectral response curve

5.45 SC585M-ICM

Table 5-45 SC585M-ICM camera specifications

Parameter \ Model	I3CMOS08300KMB
	8.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX585-AAMJ1-C
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.2"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	19120mV
Dark current	0.13mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<2.3W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

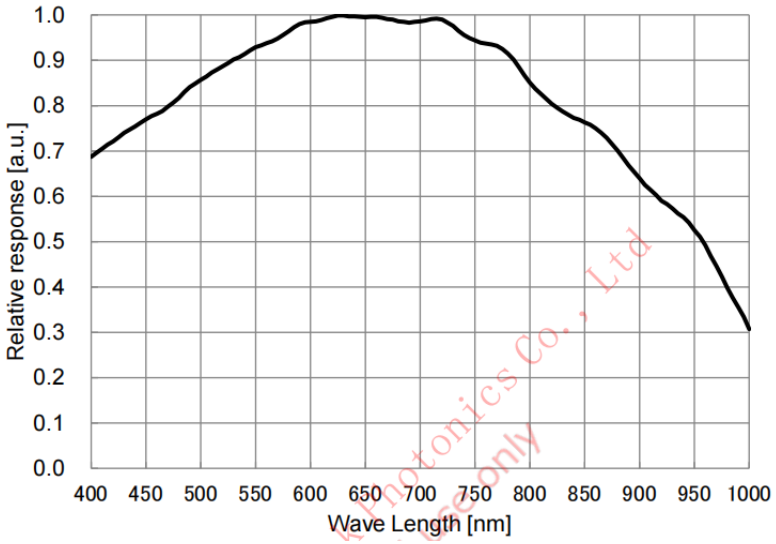


Figure 5-63 SC585M-ICM spectral response curve

5.46 SC430M-ICM

Table 5-46 SC430M-ICM camera specifications

Parameter \ Model	I3CMOS02000KMA
	2.0M pixels 1/1.7" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX430LLJ
Pixel size	4.5 μm x4.5 μm
Sensor size	1/1.7"
Frame rate	132fps@1624×1240
Conversion Gain	TBD
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	3354mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

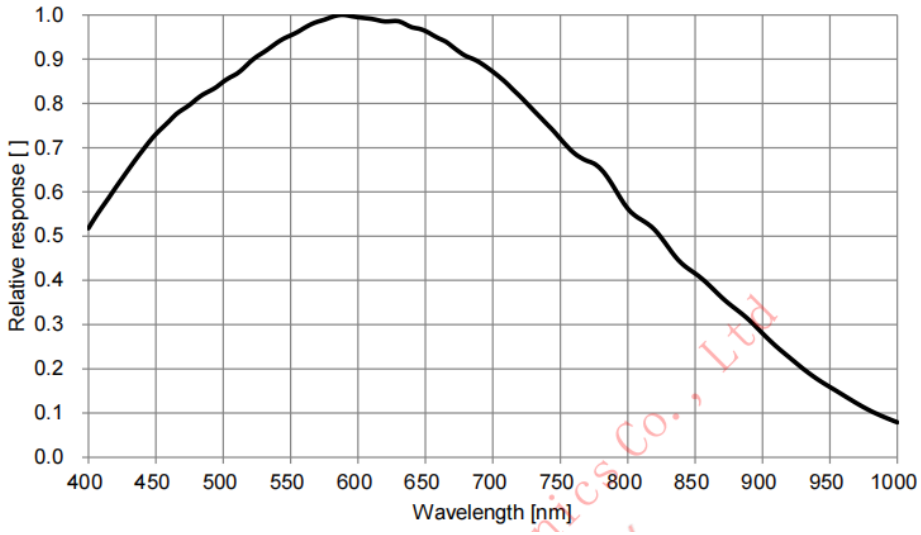


Figure 5-64 SC430M-ICM spectral response curve

5.47 SC421M-ICM

Table 5-47 SC421M-ICM camera specifications

Parameter \ Model	I3CMOS02800KMA
	2.8M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX421LLJ
Pixel size	4.5 μm x4.5 μm
Sensor size	2/3"
Frame rate	121fps@1936 × 1464 425fps@968 × 732
Conversion Gain	2.73 (e-/ADU)
Readout Noise	2.56 (e-)
Full Well	11.2 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Peak QE	78%@575nm
Sensitivity	3354mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

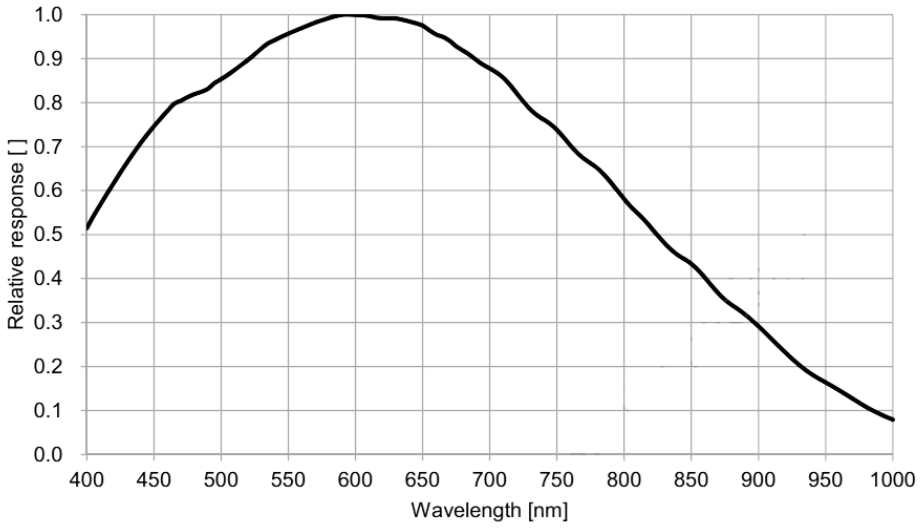


Figure 5-65 SC421M-ICM spectral response curve

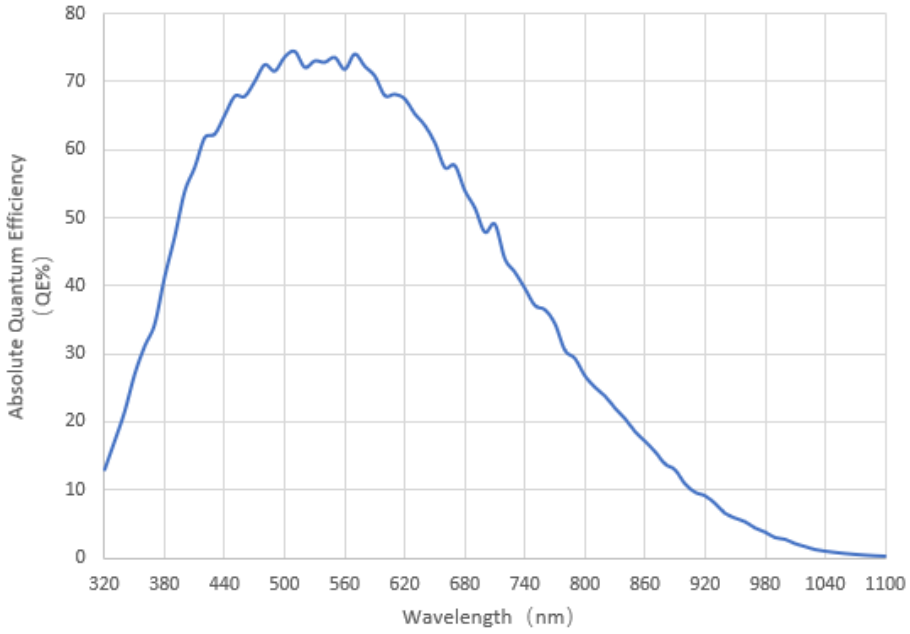


Figure 5-66 SC421M-ICM absolute quantum efficiency

5.48 SC428M-ICM

Table 5-48 SC428M-ICM camera specifications

Parameter \ Model	I3CMOS07100KMA
	7.1M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX428LLJ
Pixel size	4.5 μm x4.5 μm
Sensor size	1.1"
Frame rate	51.3fps@3200 x 2200 133.8fps@1584 x 1100
Conversion Gain	2.77 (e-/ADU)
Readout Noise	2.63 (e-)
Full Well	11.3 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.6dB
Peak QE	78%@575nm
Sensitivity	3354mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

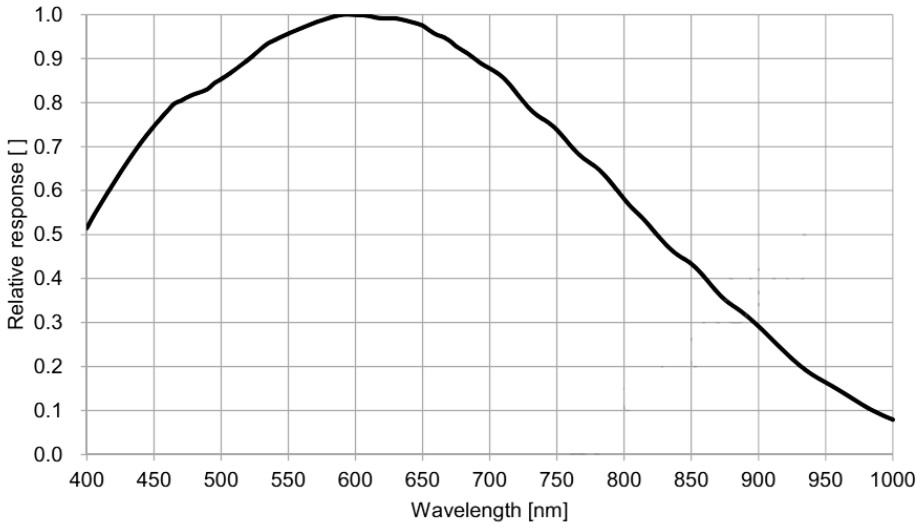


Figure 5-67 SC428M-ICM spectral response curve

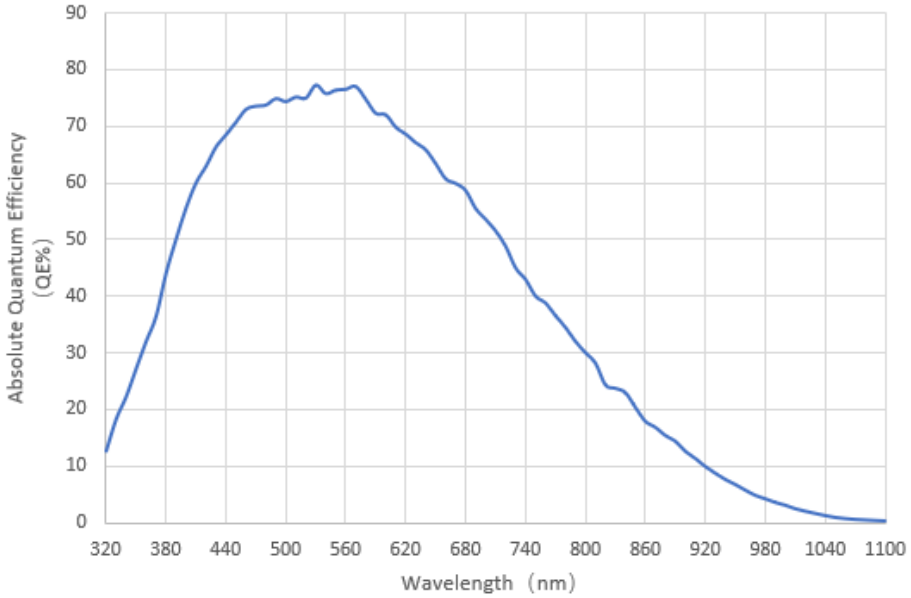


Figure 5-68 SC428M-ICM absolute quantum efficiency

5.49 SC304M-ICM

Table 5-49 SC304M-ICM camera specifications

Parameter \ Model	I3CMOS12300KMA
	12.3M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX304LLR-C
Pixel size	3.45 μm x 3.45 μm
Sensor size	1.1"
Frame rate	23.4fps@4096 x3000 46.3fps@2048 x 1500 46.3fps@1024 x 750
Conversion Gain	2.71 (e-/ADU)
Readout Noise	2.12 (e-)
Full Well	11.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

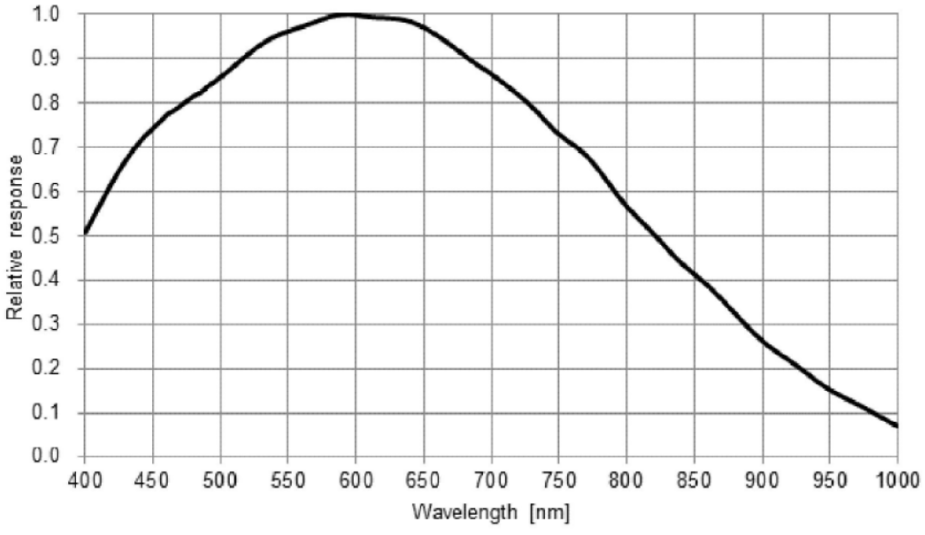


Figure 5-69 SC304M-ICM spectral response curve

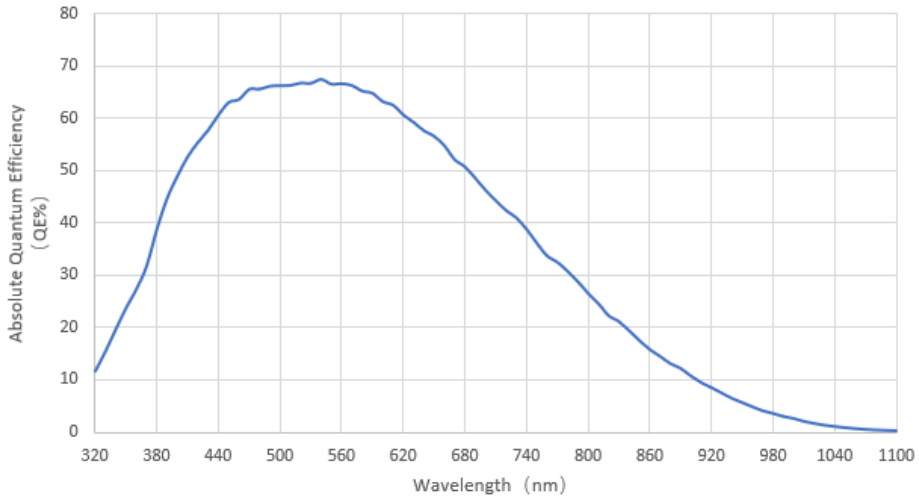


Figure 5-70 SC304M-ICM absolute quantum efficiency

5.50 SC3412M-ICM

Table 5-50 SC3412M-ICM camera specifications

Parameter \ Model	I3CMOS12500KMA
	12.5M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX3412
Pixel size	3.4 μm x 3.4 μm
Sensor size	1.1"
Frame rate	30fps@4096x3072 60fps@2048x1536
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	$2.36x10^7$e-/((W/m2)·s)
Dark current	81.6e-/s
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

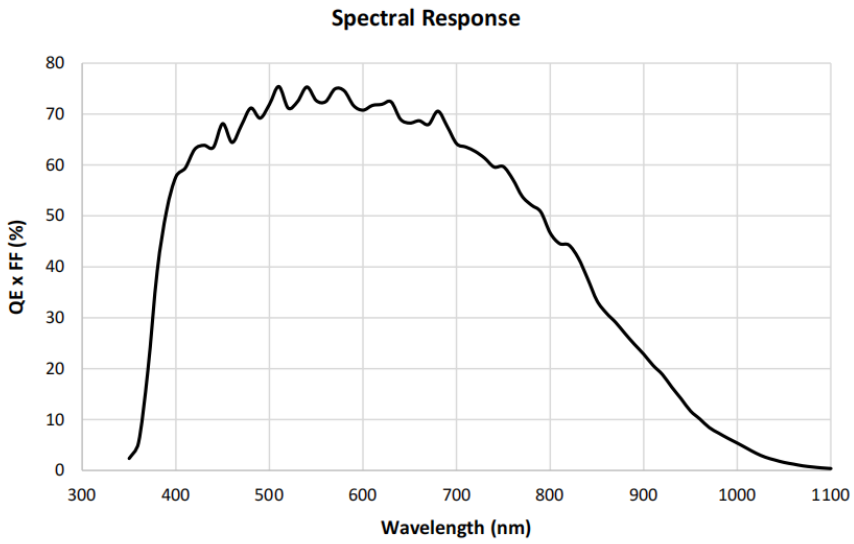


Figure 5-71 SC3412M-ICM spectral response curve

5.51 SC541M-ICM

Table 5-51 SC541M-ICM camera specifications

Parameter \ Model	I3CMOS20400KMA
	20.4M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX541-AAMJ
Pixel size	2.74 μm x 2.74 μm
Sensor size	1.1"
Frame rate	17.5fps@4496×4496 64.4fps@2240×2240 64.4fps@1120×1120
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	2649mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, one non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	<3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	38mmx38mmx33mm
Weight	70g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

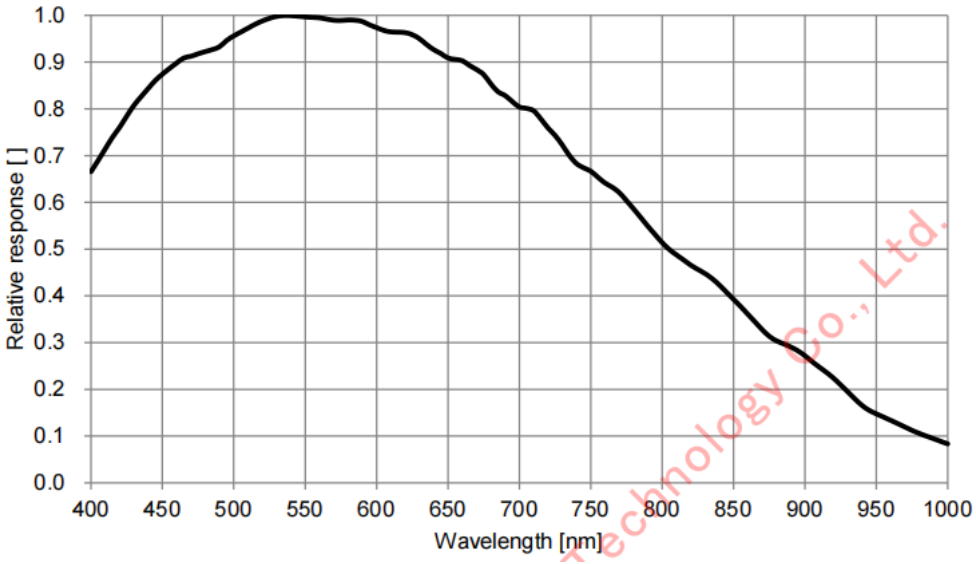


Figure 5-72 SC541M-ICM spectral response curve

6 SCM/SCA Series Technical Specifications (53)

6.1 SCM287-M-TR

Table 6-1 SCM287-M-TR camera specifications

Parameter \ Model	IUA390KMA
	0.39M pixel 1/2.9 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX287LLR
Pixel size	6.9 μm x 6.9 μm
Sensor size	1/2.9”
Frame rate	101.5fps@720 x 540
Conversion Gain	2.73 (e-/ADU)
Readout Noise	0.79 (e-)
Full Well	11.2 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Peak QE	71%@575nm
Sensitivity	7320mV
Dark current	0.76mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.4W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

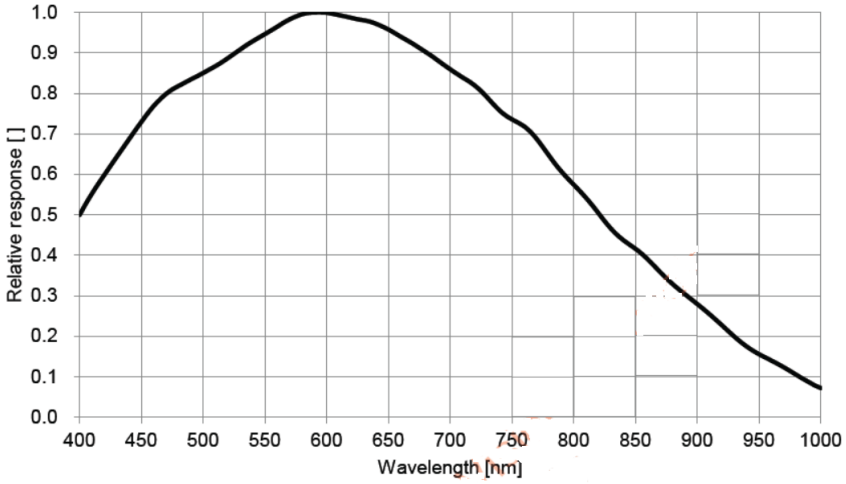


Figure 6-1 SCM287-M-TR spectral response curve

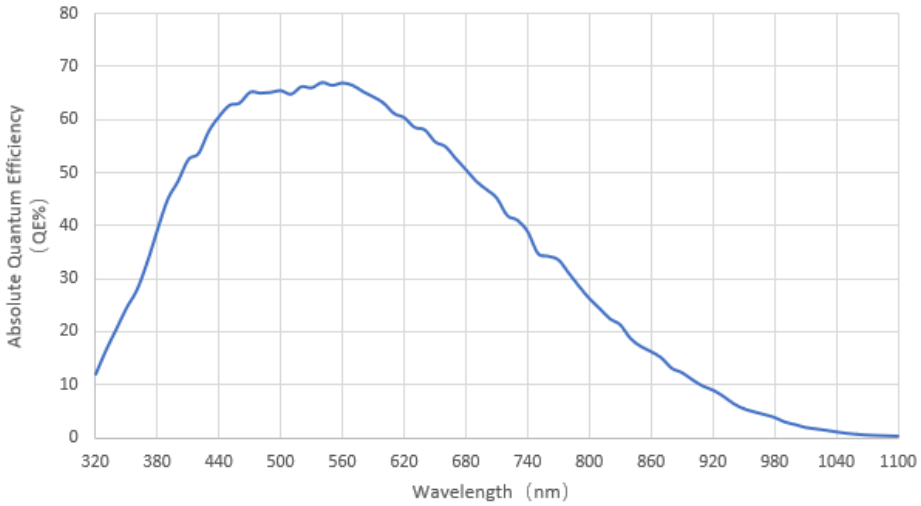


Figure 6-2 SCM287-M-TR absolute quantum efficiency

6.2 SCM426-M-TR

Table 6-2 SCM426-M-TR camera specifications

Parameter \ Model	IUA503KMA
	0.5M pixel 1/1.7 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX426LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1/1.7”
Frame rate	79.8fps@800 x 620
Conversion Gain	4.9 (e-/ADU)
Readout Noise	1.41 (e-)
Full Well	20.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Peak QE	78%@575nm
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.6W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

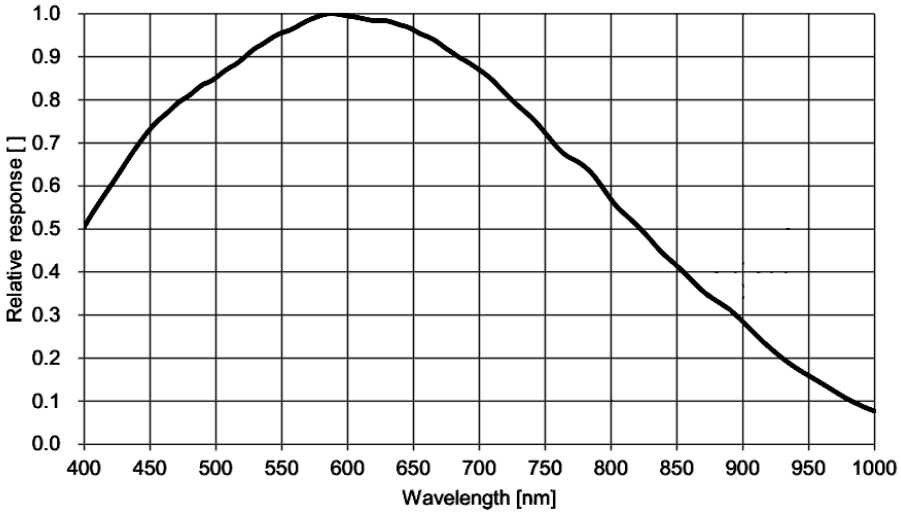


Figure 6-3 SCM426-M-TR spectral response curve

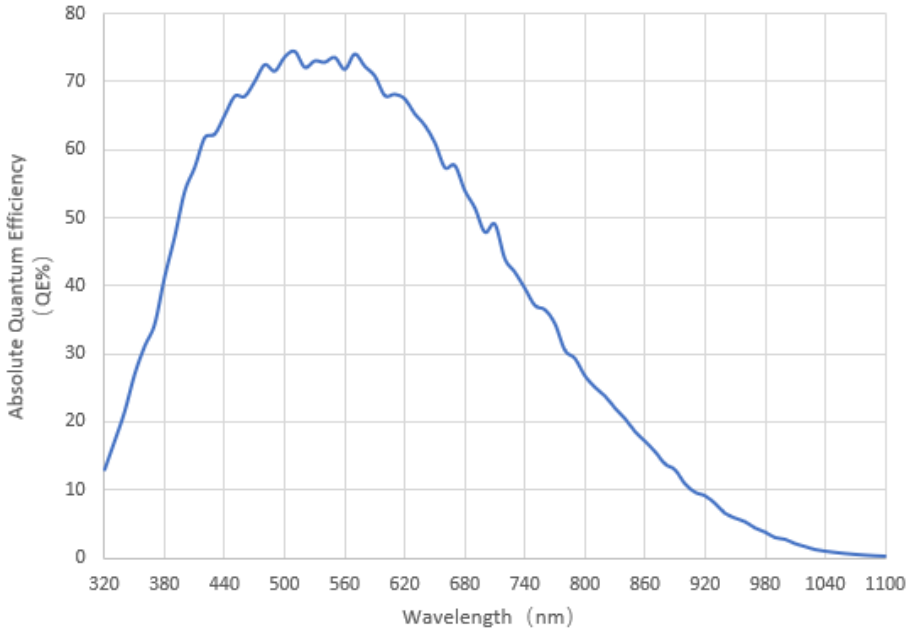


Figure 6-4 SCM426-M-TR absolute quantum efficiency

6.3 SCM433-M-TR

Table 6-3 SCM433-M-TR camera specifications

Parameter \ Model	IUA503KMB
	0.5M pixel 1/1.7 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX433LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1/1.7”
Frame rate	79.8fps@800 x 620
Conversion Gain	4.9 (e-/ADU)
Readout Noise	1.41 (e-)
Full Well	20.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Peak QE	78%@575nm
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<3.0W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

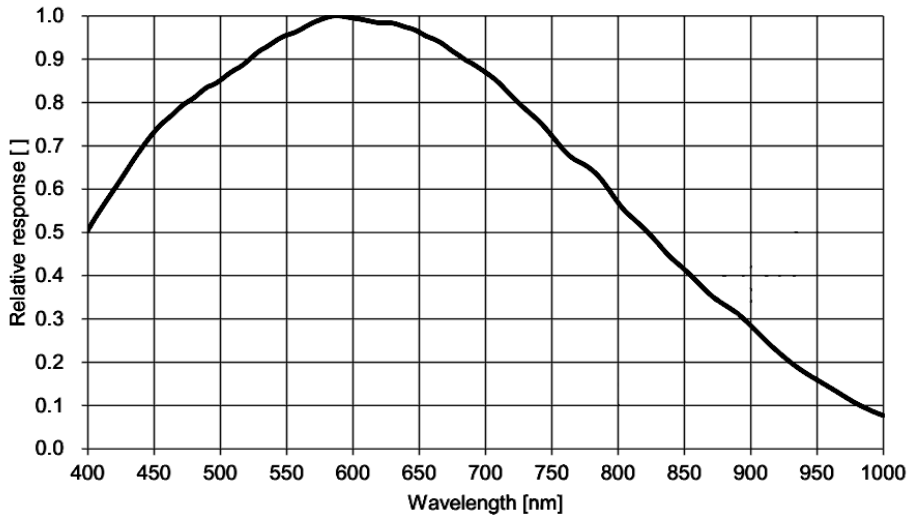


Figure 6-5 SCM433-M-TR spectral response curve

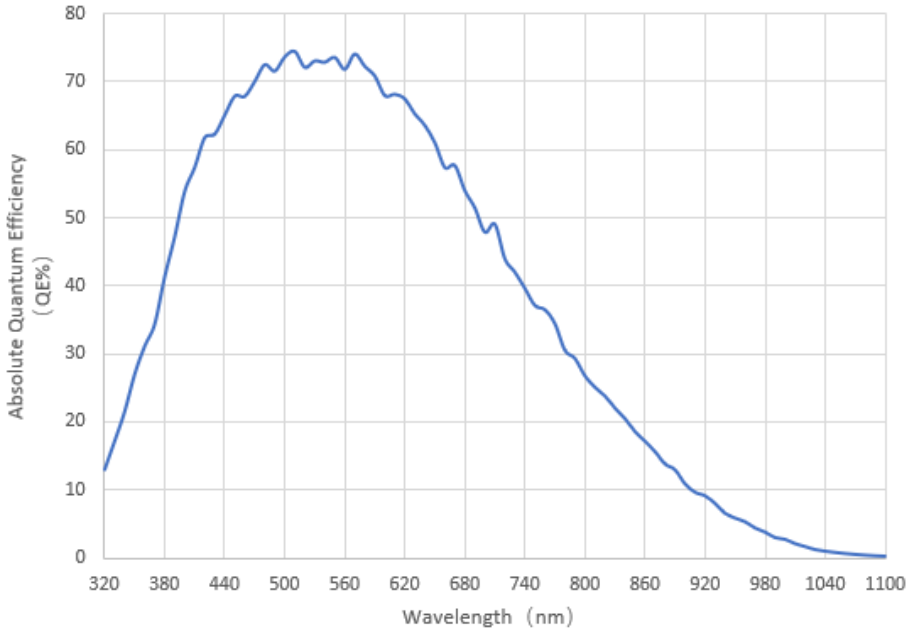


Figure 6-6 SCM433-M-TR absolute quantum efficiency

6.4 SCM273-M-TR

Table 6-4 SCM273-M-TR camera specifications

Parameter \ Model	IUA1500KMA
	1.5M pixels 1/2.9" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX273LLR
Pixel size	3.45 μm × 3.45 μm
Sensor size	1/2.9"
Frame rate	235.5fps@1440 × 1080 523fps@720 × 540
Conversion Gain	2.68 (e-/ADU)
Readout Noise	2.24 (e-)
Full Well	10.96 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.1W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	219g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

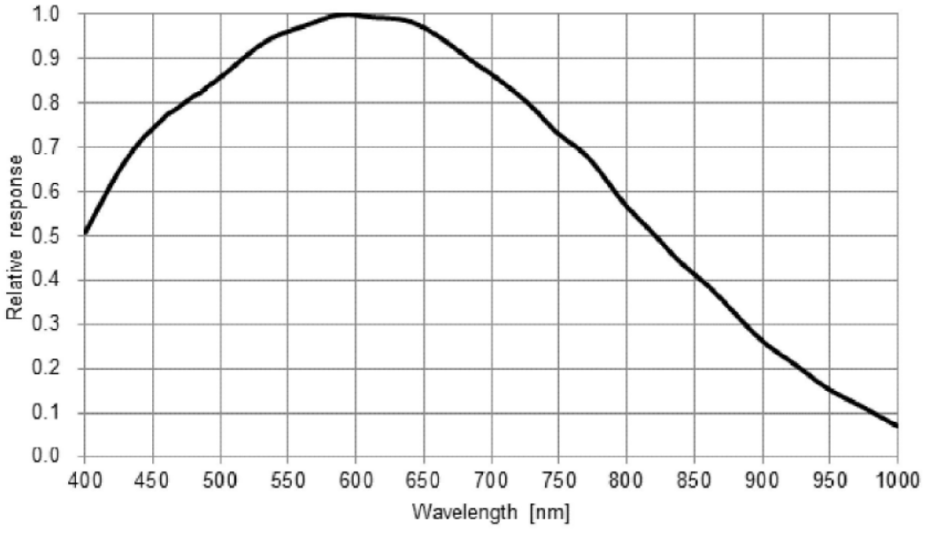


Figure 6-7 SCM273-M-TR spectral response curve

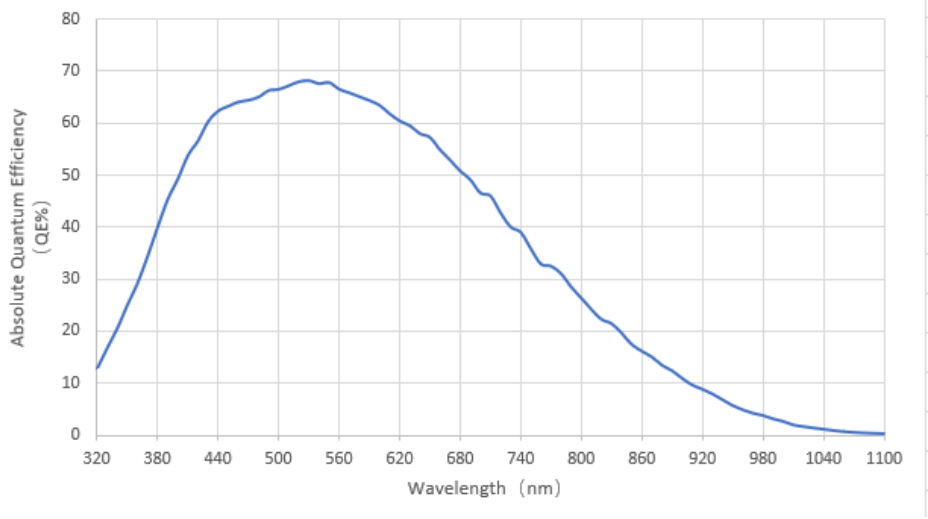


Figure 6-8 SCM273-M-TR absolute quantum efficiency

6.5 SCM273-C-TR

Table 6-5 SCM273-C-TR camera specifications

Parameter \ Model	IUA1500KPA
	1.5M pixels 1/2.9" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX273LQR
Pixel size	3.45 μm × 3.45 μm
Sensor size	1/2.9"
Frame rate	235.5fps@1440 × 1080 523fps@720 × 540
Conversion Gain	2.67 (e-/ADU)
Readout Noise	2.27 (e-)
Full Well	10.94 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.1W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	219g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

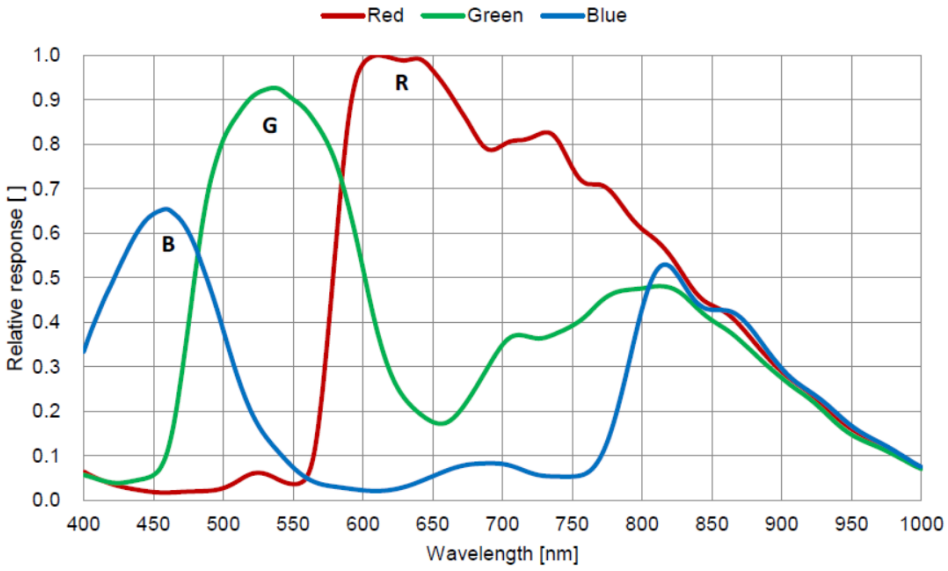


Figure 6-9 SCM273-C-TR spectral response curve

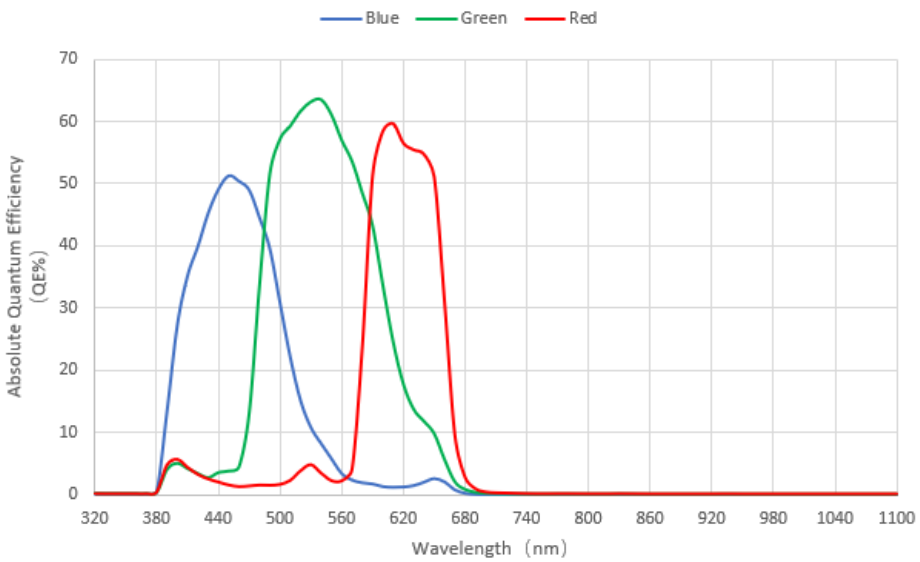


Figure 6-10 SCM273-C-TR absolute quantum efficiency

6.6 SCM432-M-TR

Table 6-6 SCM432-M-TR camera specifications

Parameter \ Model	IUA1700KMA
	1.7M pixel 1.1 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX432LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1”
Frame rate	98.6fps@1600 x 1100
Conversion Gain	4.97 (e-/ADU)
Readout Noise	4.76 (e-)
Full Well	20.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Peak QE	78%@575nm
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.5W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

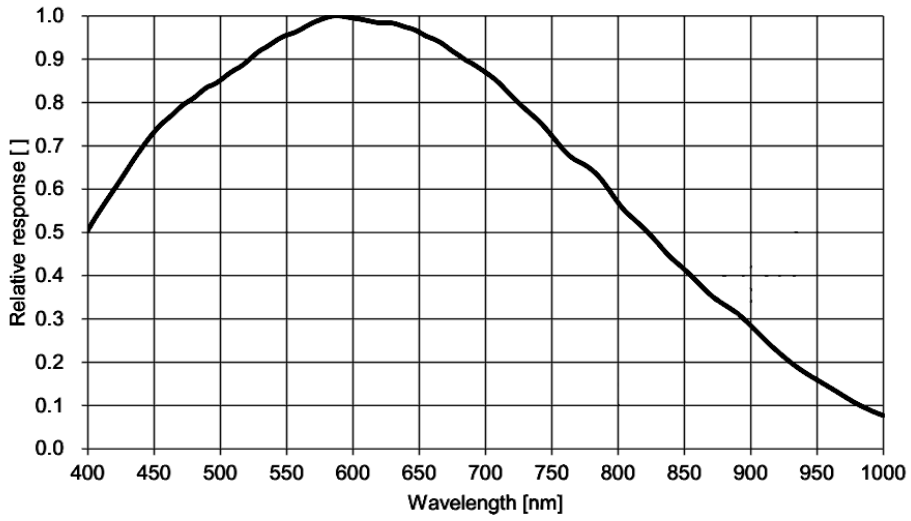


Figure 6-11 SCM432-M-TR spectral response curve

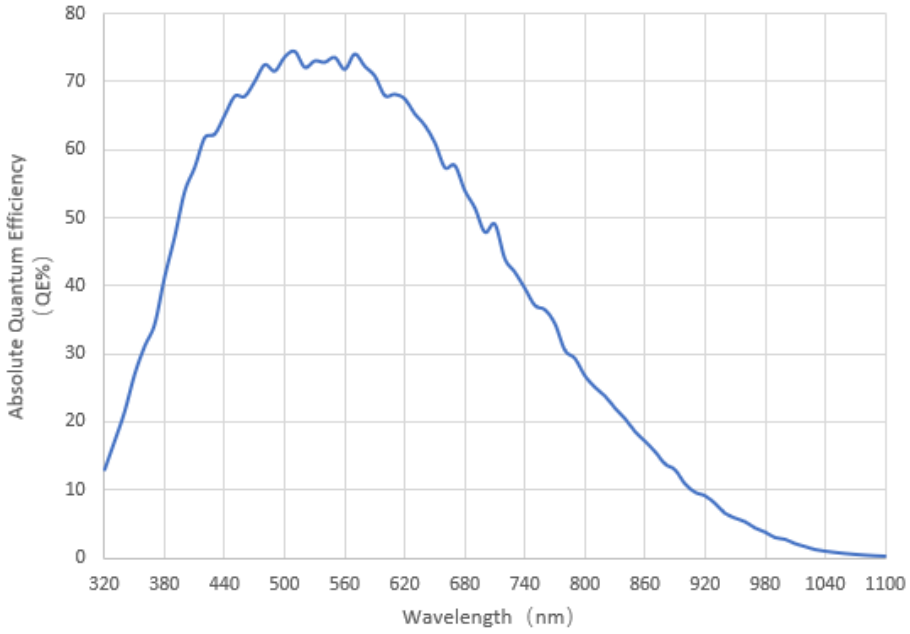


Figure 6-12 SCM432-M-TR absolute quantum efficiency

6.7 SCM432-C-TR

Table 6-7 SCM432-C-TR camera specifications

Parameter \ Model	IUA1700KPA
	1.7M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX432LQJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1"
Frame rate	98.6fps@1600 x 1100
Conversion Gain	4.9 (e-/ADU)
Readout Noise	4.53 (e-)
Full Well	20.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	4910mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.5W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

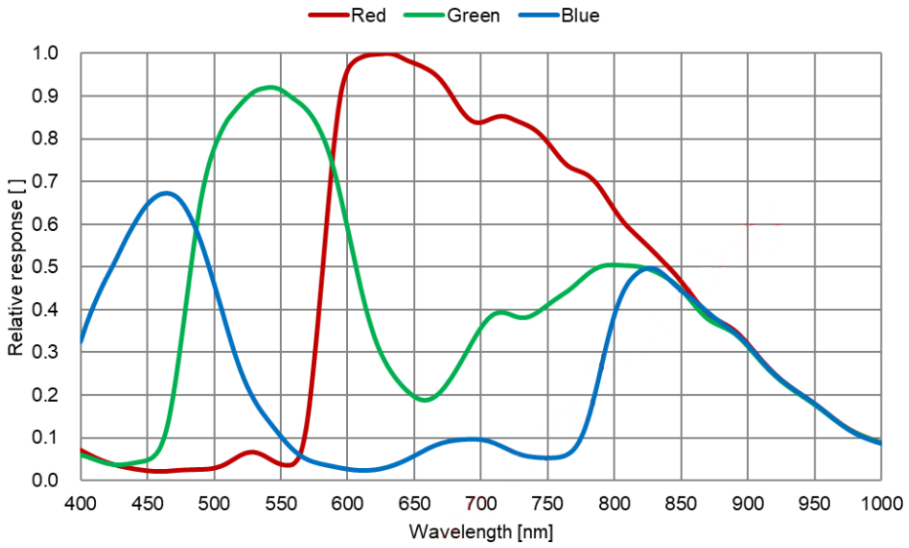


Figure 6-13 SCM432-C-TR spectral response curve

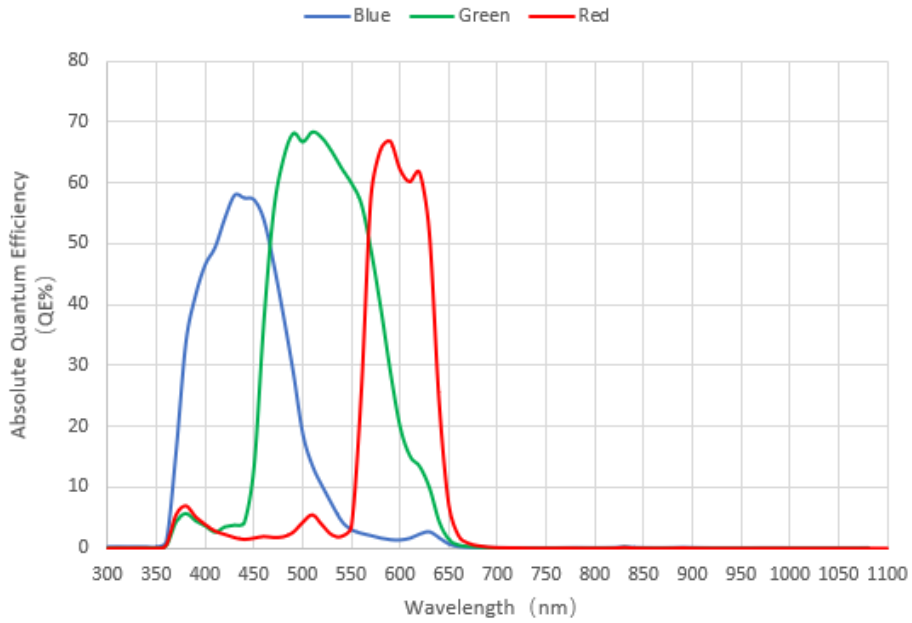


Figure 6-14 SCM432-C-TR absolute quantum efficiency

6.8 SCM425-M-TR

Table 6-8 SCM425-M-TR camera specifications

Parameter \ Model	IUA1700KMB
	1.7M pixel 1.1 "CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX425LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1”
Frame rate	210fps@1600 x 1100
Conversion Gain	4.97 (e-/ADU)
Readout Noise	4.76 (e-)
Full Well	20.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global Shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<2.4W
Temperature	Working temperature -10~50℃; Storage temperature -30~70℃
Humidity	20% - 80% No condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android； X86/X64/armhf/armel/arm64
Certification	CE, FCC

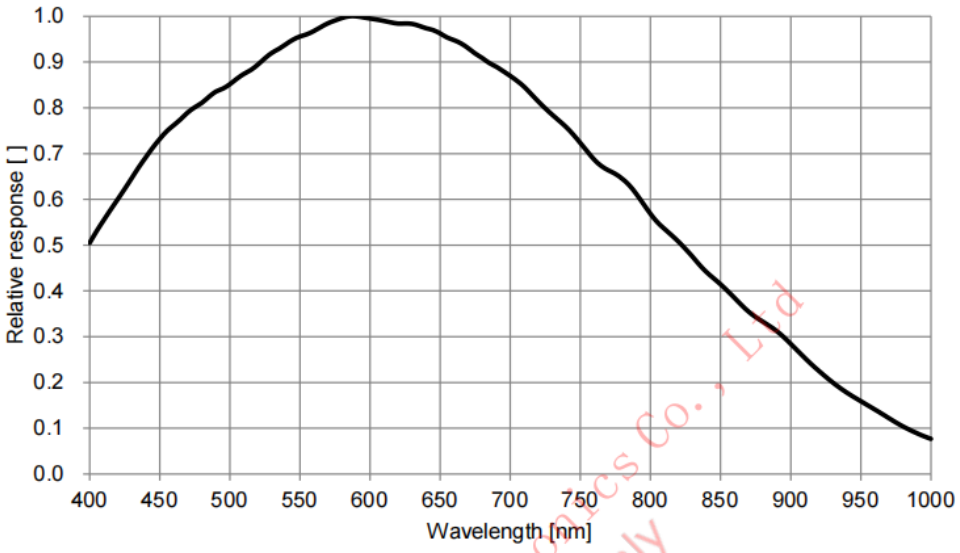


Figure 6-15 SCM425-M-TR spectral response curve

6.9 SCM425-C-TR

Table 6-9 SCM425-C-TR camera specifications

Parameter \ Model	IUA1700KPB
	1.7M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX425LQJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1"
Frame rate	210fps@1600 x 1100
Conversion Gain	4.9 (e-/ADU)
Readout Noise	4.53 (e-)
Full Well	20.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	4910mV
Dark current	0.3mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<2.4W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

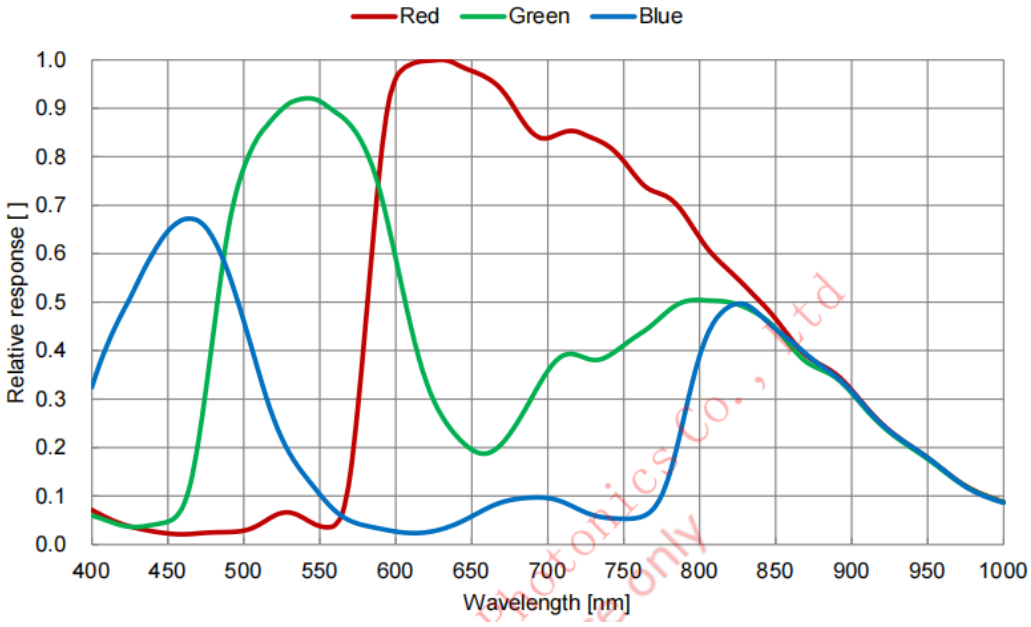


Figure 6-16 SCM425-C-TR spectral response curve

6.10 SCM174-M-TR

Table 6-10 SCM174-M-TR camera specifications

Parameter \ Model	IUA2300KMA
	2.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX174LLJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	164.5fps@1920 x 1200
Conversion Gain	8.33 (e-/ADU)
Readout Noise	7.12 (e-)
Full Well	34.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	45.3dB
Peak QE	78%@575nm
Sensitivity	1650mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.35W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE，FCC

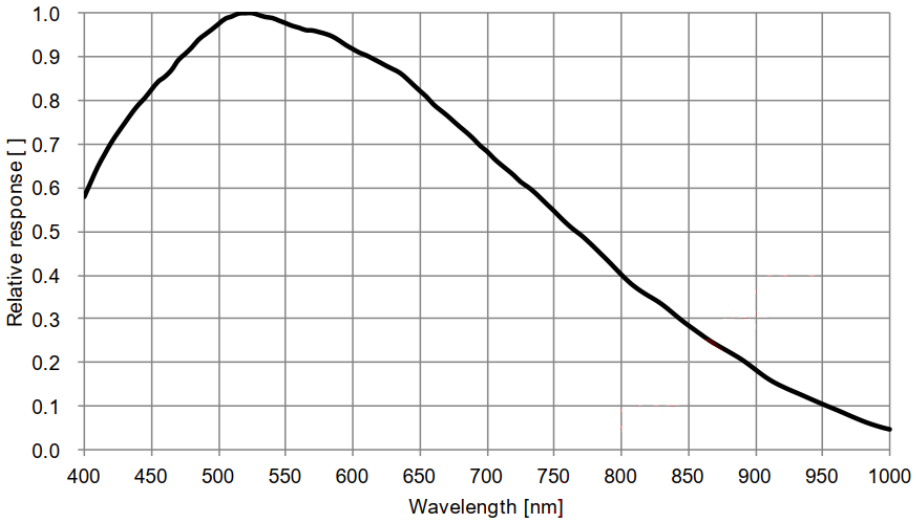


Figure 6-17 SCM174-M-TR spectral response curve

6.11 SCM174-C-TR

Table 6-11 SCM174-C-TR camera specifications

Parameter \ Model	IUA2300KPA
	2.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX174LQJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	164.5fps@1920 x 1200
Conversion Gain	8.37 (e-/ADU)
Readout Noise	7.13 (e-)
Full Well	34.3 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	45.4dB
Sensitivity	1016mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.35W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	217g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

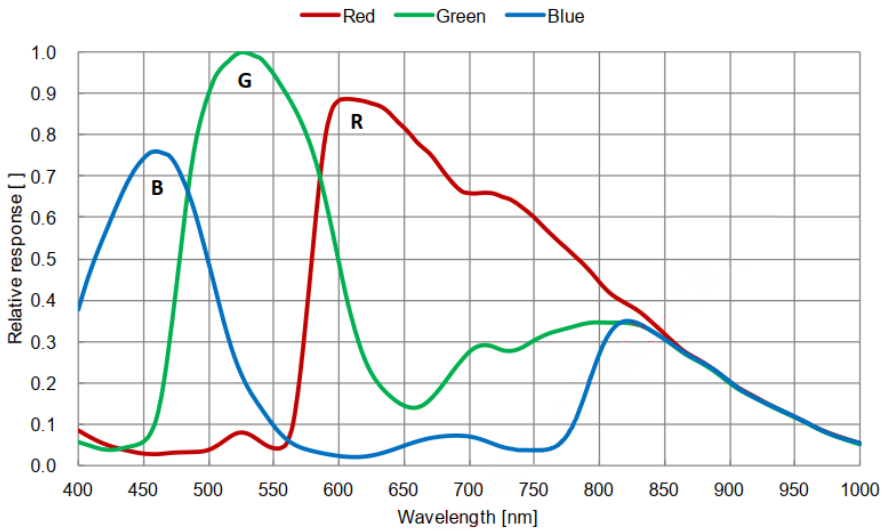


Figure 6-18 SCM174-C-TR spectral response curve

6.12 SCM249-M-TR

Table 6-12 SCM249-M-TR camera specifications

Parameter \ Model	IUA2300KMB
	2.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX249LLJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	30fps@1920 x 1200
Conversion Gain	8.5 (e-/ADU)
Readout Noise	8.21 (e-)
Full Well	34.8 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	45.4dB
Peak QE	78%@575nm
Sensitivity	1650mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	42μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.75W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	217g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

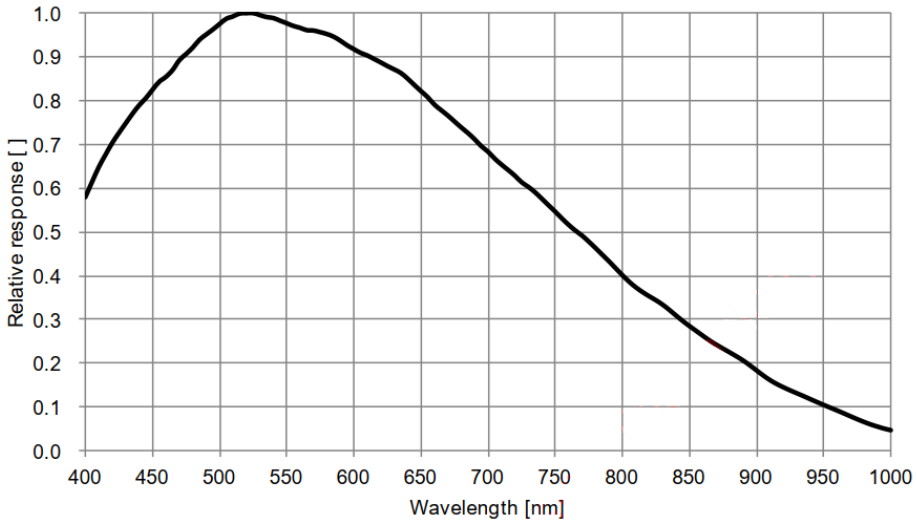


Figure 6-19 SCM249-M-TR spectral response curve

6.13 SCM249-C-TR

Table 6-13 SCM249-C-TR camera specifications

Parameter \ Model	IUA2300KPB
	2.3M pixels 1/1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX249LQJ
Pixel size	5.86 μm x 5.86 μm
Sensor size	1/1.2"
Frame rate	30fps@1920 x 1200
Conversion Gain	8.22 (e-/ADU)
Readout Noise	7.72 (e-)
Full Well	33.7 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	45.3dB
Sensitivity	1016mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	42μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.75W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	217g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

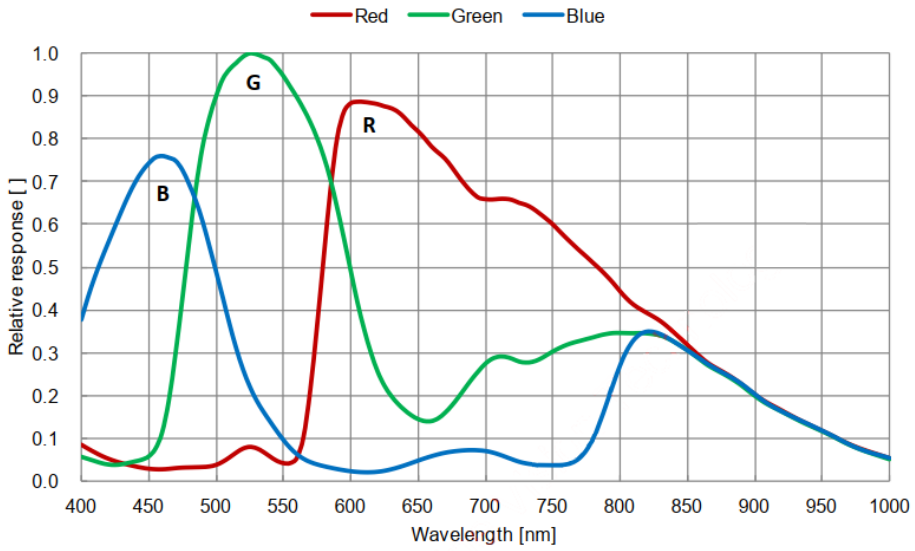


Figure 6-20 SCM249-C-TR spectral response curve

6.14 SCM421-M-TR

Table 6-14 SCM421-M-TR camera specifications

Parameter \ Model	IUA2800KMA
	2.8M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX421LLJ
Pixel size	4.5 μm x4.5 μm
Sensor size	2/3"
Frame rate	121fps@1936 × 1464 425fps@968 × 732
Conversion Gain	2.73 (e-/ADU)
Readout Noise	2.56 (e-)
Full Well	11.2 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Peak QE	78%@575nm
Sensitivity	3354mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.85W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

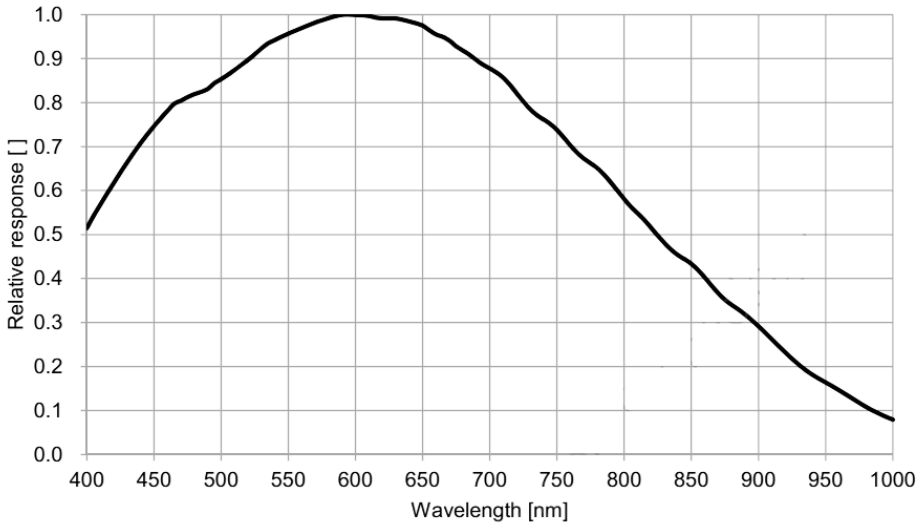


Figure 6-21 SCM421-M-TR spectral response curve

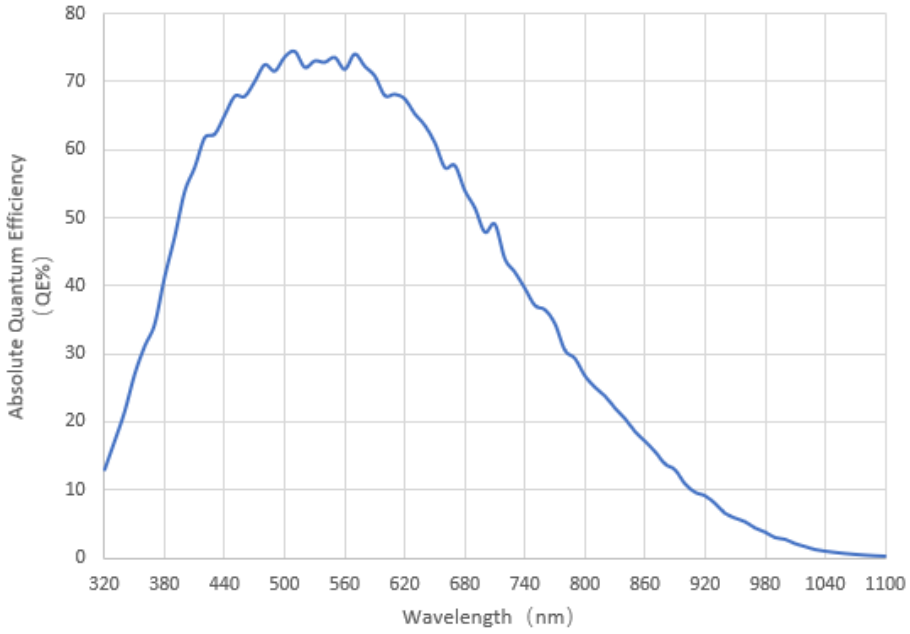


Figure 6-22 SCM421-M-TR absolute quantum efficiency

6.15 SCM421-C-TR

Table 6-15 SCM421-C-TR camera specifications

Parameter \ Model	IUA2800KPA
	2.8M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX421LQJ
Pixel size	4.5 μm x 4.5 μm
Sensor size	2/3"
Frame rate	121fps@1936 × 1464 425fps@968 × 732
Conversion Gain	2.69 (e-/ADU)
Readout Noise	2.55 (e-)
Full Well	11.0 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Sensitivity	2058mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.85W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

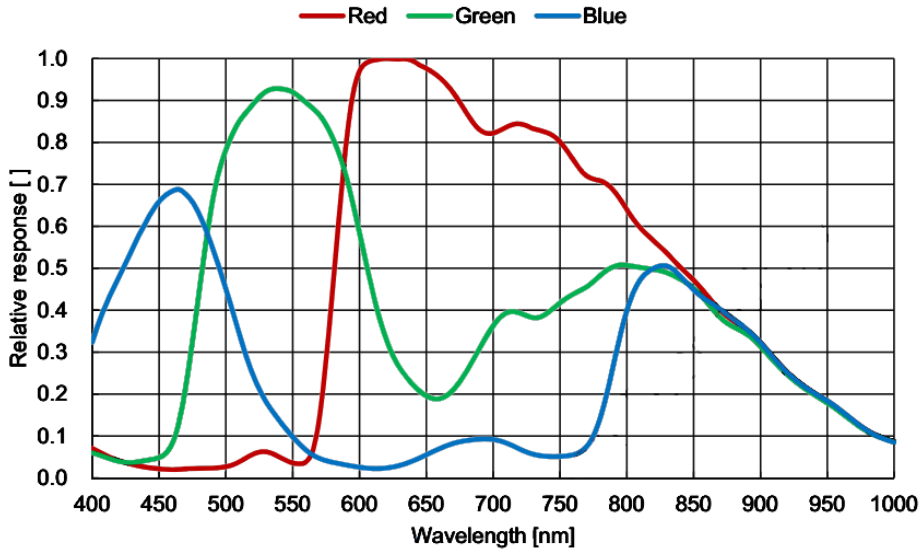


Figure 6-23 SCM421-C-TR spectral response curve

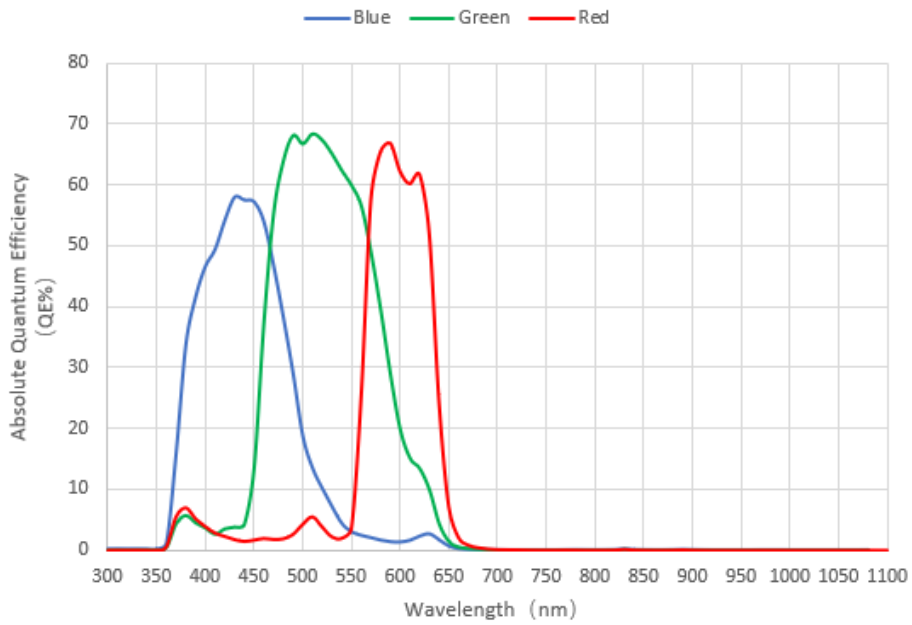


Figure 6-24 SCM421-C-TR absolute quantum efficiency

6.16 SCM264-M-TR

Table 6-16 SCM264-M-TR camera specifications

Parameter \ Model	IUA5000KMA
	5.0M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX264LLR
Pixel size	3.45 μm × 3.45 μm
Sensor size	2/3"
Frame rate	35.6fps@2448 × 2048 87.6fps@1224 × 1024
Conversion Gain	2.71 (e-/ADU)
Readout Noise	2.12 (e-)
Full Well	11.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.05W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	219g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

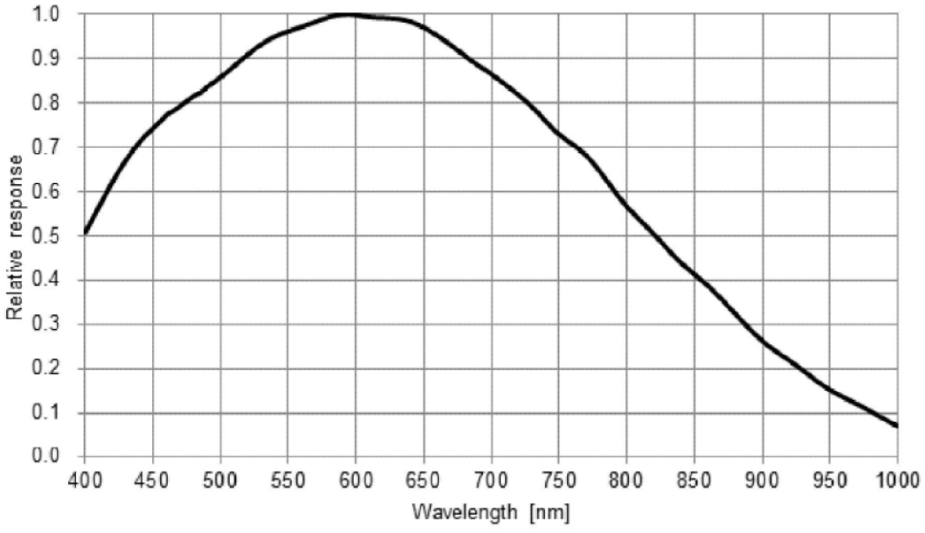


Figure 6-25 SCM264-M-TR spectral response curve

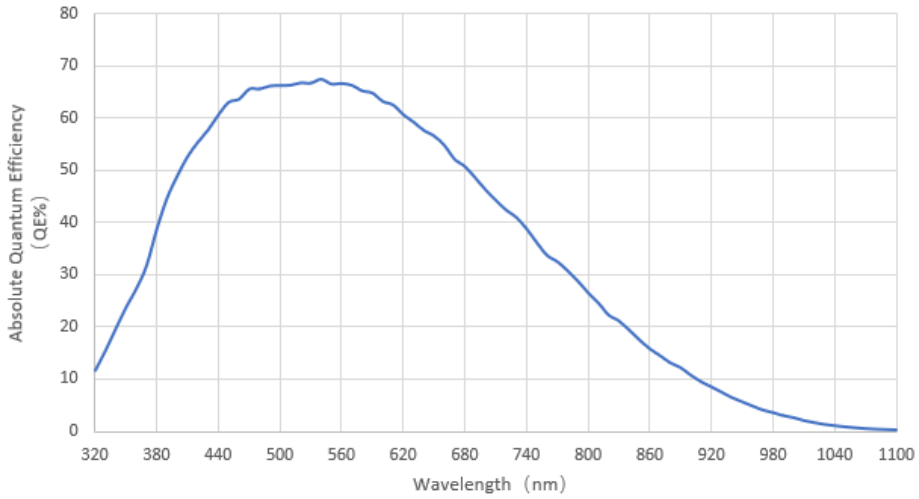


Figure 6-26 SCM264-M-TR absolute quantum efficiency

6.17 SCM264-C-TR

Table 6-17 SCM264-C-TR camera specifications

Parameter \ Model	IUA5000KPA
	5.0M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX264LQR
Pixel size	3.45 μm × 3.45 μm
Sensor size	2/3"
Frame rate	35.6fps@2448 × 2048 87.6fps@1224 × 1024
Conversion Gain	2.68 (e-/ADU)
Readout Noise	2.11 (e-)
Full Well	11.0 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	15us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.05W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	219g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

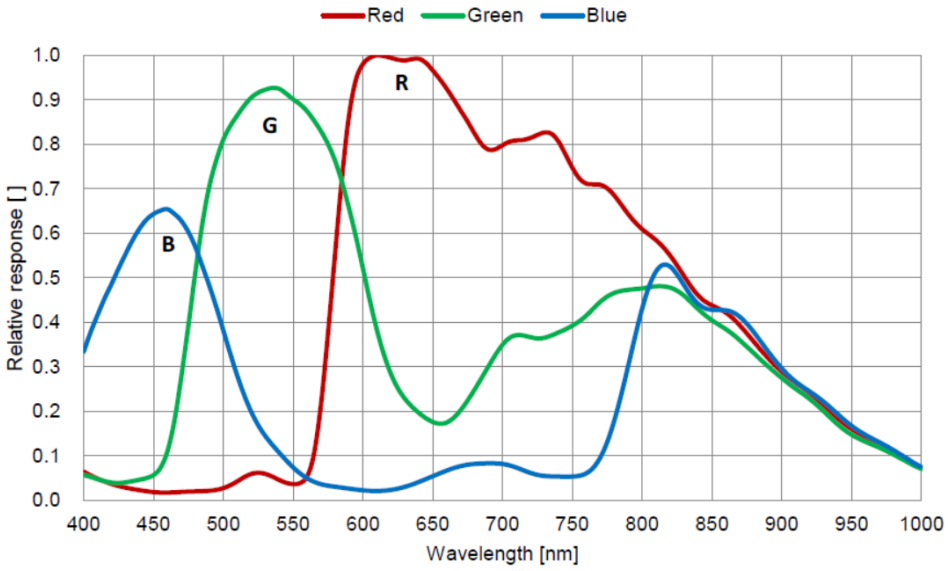


Figure 6-27 SCM264-C-TR spectral response curve

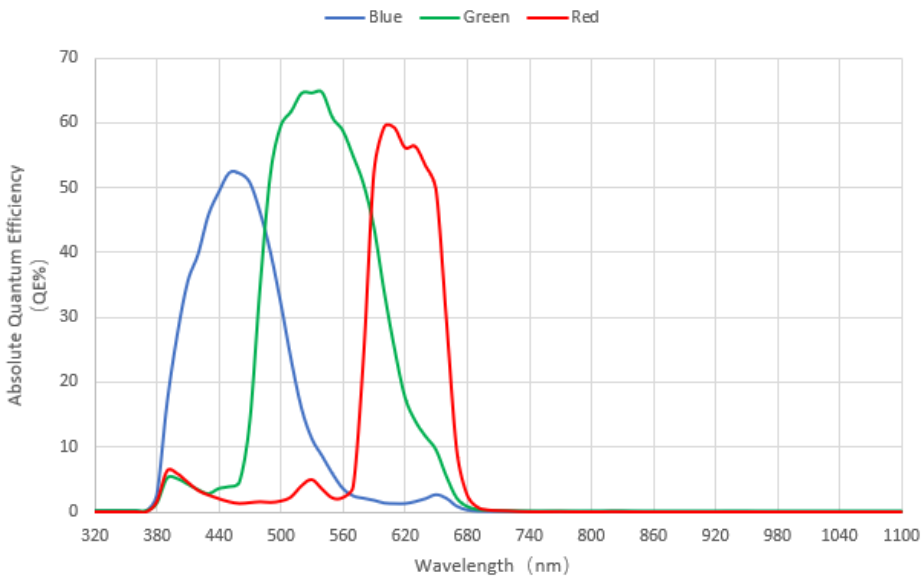


Figure 6-28 SCM264-C-TR absolute quantum efficiency

6.18 SCM547-M-TR

Table 6-18 SCM547-M-TR camera specifications

Parameter \ Model	IUA5100KMA
	5.1M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX547-AAMJ-C
Pixel size	2.74 μm × 2.74 μm
Sensor size	1/1.8"
Frame rate	63fps@2448 × 2048 208.4fps@1224 × 1024
Conversion Gain	2.35 (e-/ADU)
Readout Noise	2.19 (e-)
Full Well	9.6 (ke-)
Dynamic range	72.0dB
Signal-to-Noise ratio	40.0dB
Sensitivity	2252mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.95W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

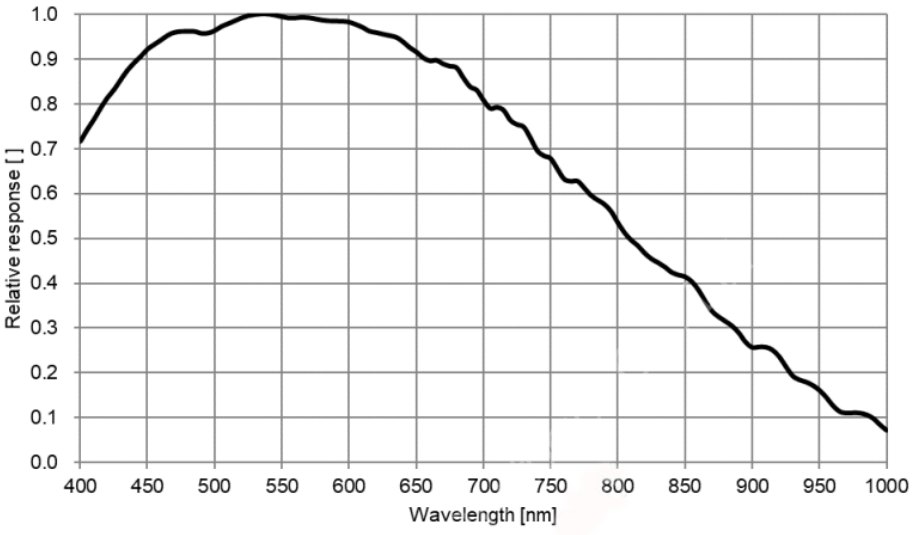


Figure 6-29 SCM547-M-TR spectral response curve

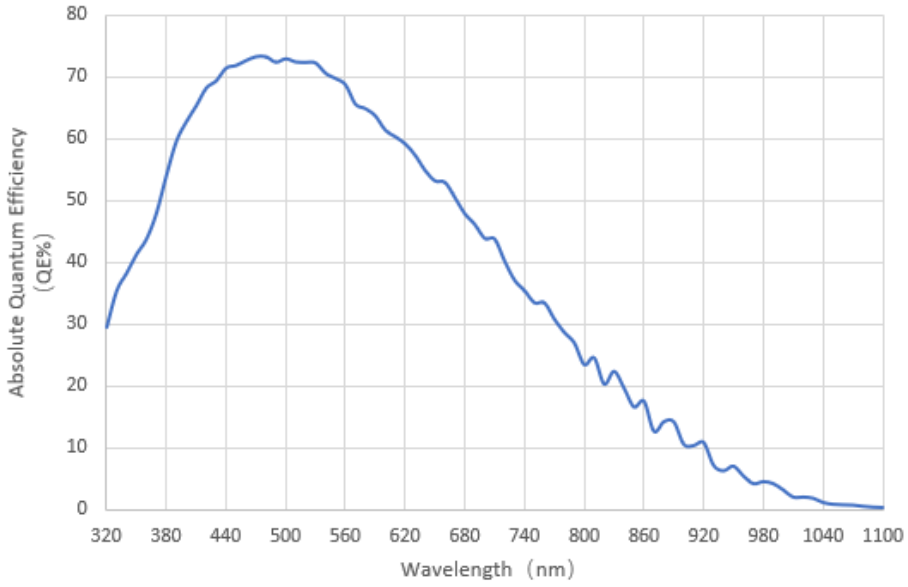


Figure 6-30 SCM547-M-TR absolute quantum efficiency

6.19 SCM547-C-TR

Table 6-19 SCM547-C-TR camera specifications

Parameter \ Model	IUA5100KPA
	5.1M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX547-AAQJ-C
Pixel size	2.74 μm × 2.74 μm
Sensor size	1/1.8"
Frame rate	63fps@2448 × 2048 159fps@1224 × 1024
Conversion Gain	2.44 (e-/ADU)
Readout Noise	2.22 (e-)
Full Well	10.0 (ke-)
Dynamic range	72.0dB
Signal-to-Noise ratio	40.0dB
Sensitivity	1337mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.8W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

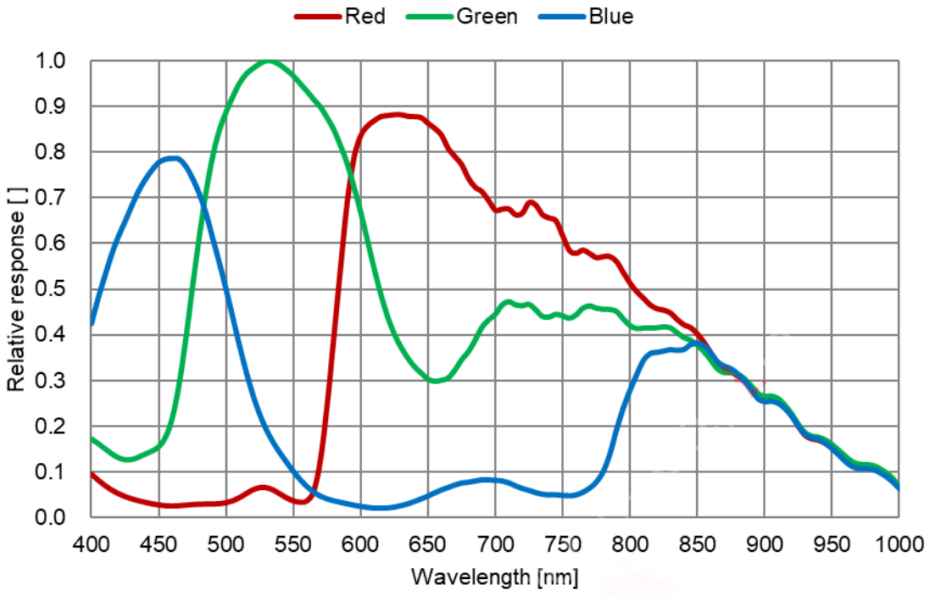


Figure 6-31 SCM547-C-TR spectral response curve

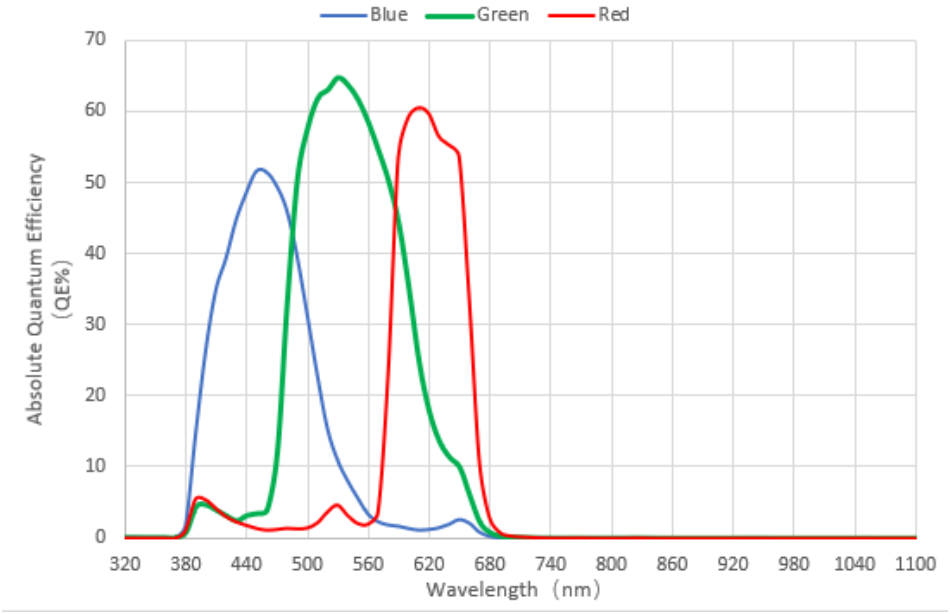


Figure 6-32 SCM547-C-TR absolute quantum efficiency

6.20 SCM178-M-TR

Table 6-20 SCM178-M-TR camera specifications

Parameter \ Model	IUA6300KMA
	6.3M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX178LLJ
Pixel size	2.4 μm x 2.4 μm
Sensor size	1/1.8"
Frame rate	59.9fps@3072 x 2048 59.9fps@1536 x 1024
Conversion Gain	2.54 (e-/ADU)
Readout Noise	2.14 (e-)
Full Well	10.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.2dB
Sensitivity	760mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	17μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.05W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	217g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

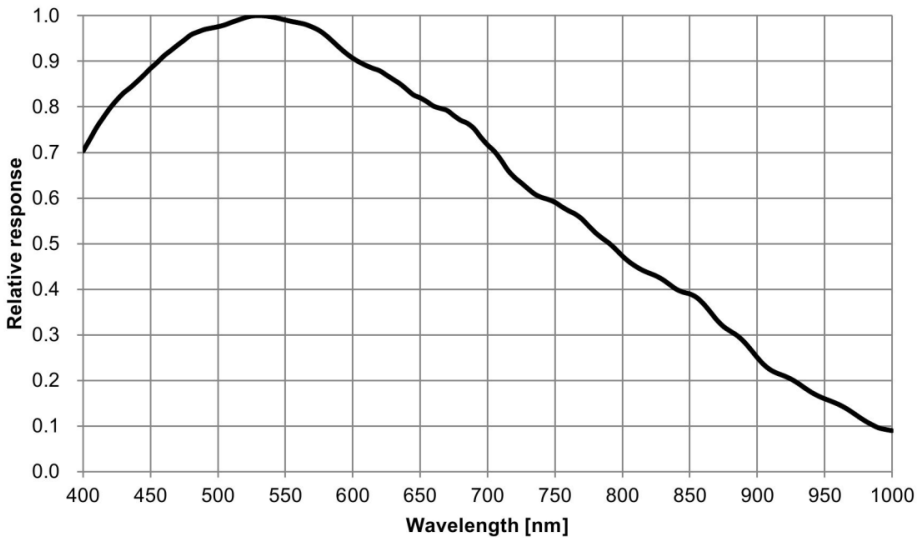


Figure 6-33 SCM178-M-TR spectral response curve

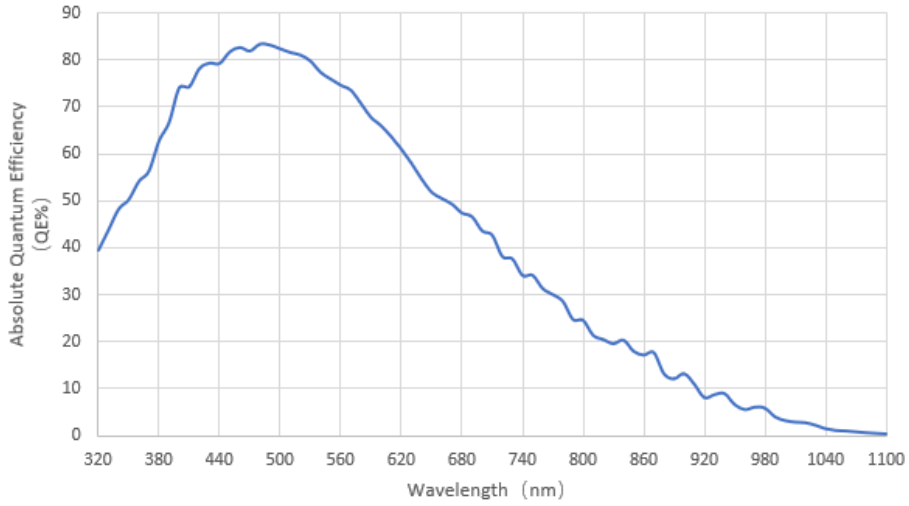


Figure 6-34 SCM178-M-TR absolute quantum efficiency

6.21 SCM178-C-TR

Table 6-21 SCM178-C-TR camera specifications

Parameter \ Model	IUA6300KPA
	6.3M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX178LQJ
Pixel size	2.4 μm x 2.4 μm
Sensor size	1/1.8"
Frame rate	59.8fps@3072 x 2048 59.5fps@1536 x 1024
Conversion Gain	2.64 (e-/ADU)
Readout Noise	2.12 (e-)
Full Well	10.8 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.3dB
Sensitivity	425mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	17μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.05W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	217g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

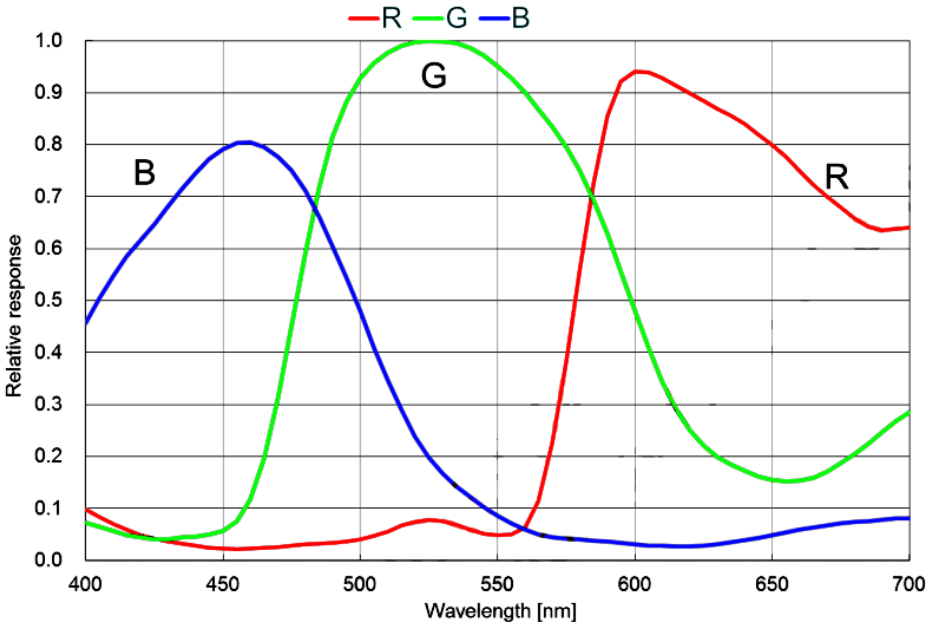


Figure 6-35 SCM178-C-TR spectral response curve

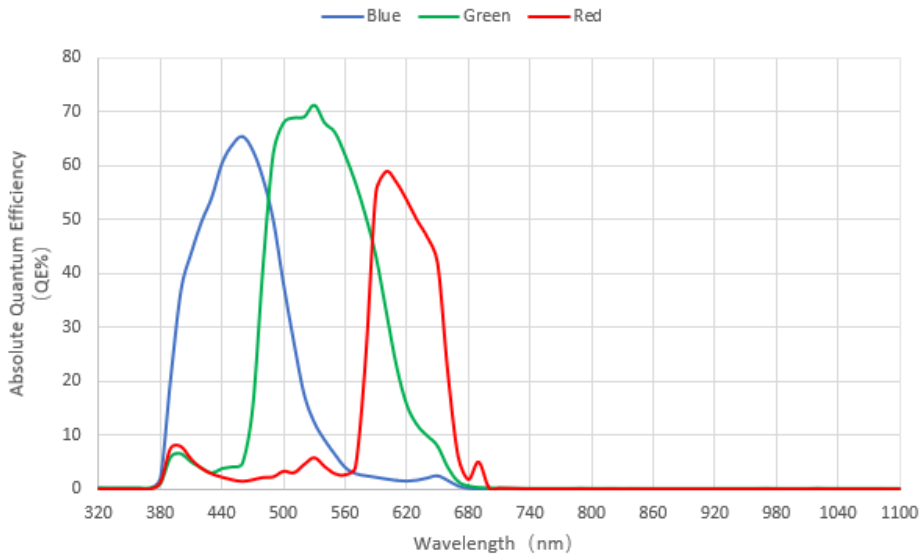


Figure 6-36 SCM178-C-TR absolute quantum efficiency

6.22 SCM428-M-TR

Table 6-22 SCM428-M-TR camera specifications

Parameter \ Model	IUA7100KMA
	7.1M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX428LLJ
Pixel size	4.5 μm x4.5 μm
Sensor size	1.1"
Frame rate	51.3fps@3200 x 2200 133.8fps@1584 x 1100
Conversion Gain	2.77 (e-/ADU)
Readout Noise	2.63 (e-)
Full Well	11.3 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.6dB
Peak QE	78%@575nm
Sensitivity	3354mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.75W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

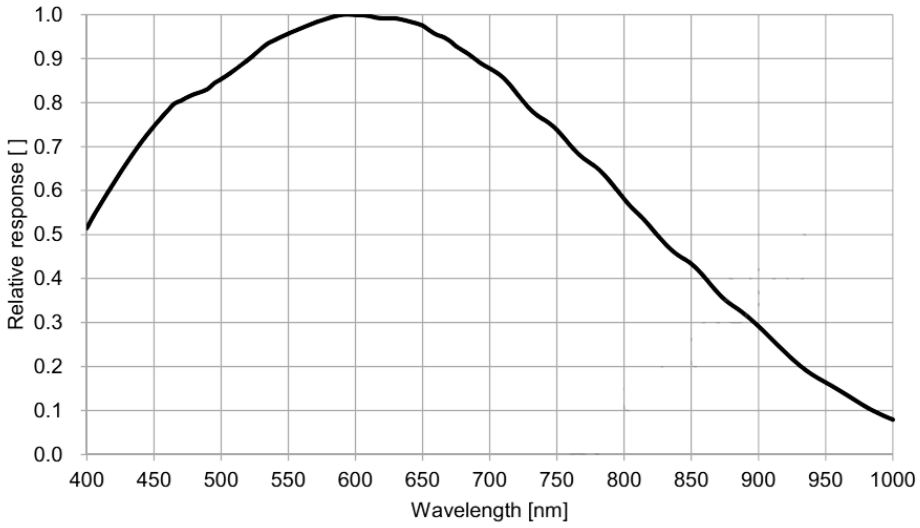


Figure 6-37 SCM428-M-TR spectral response curve

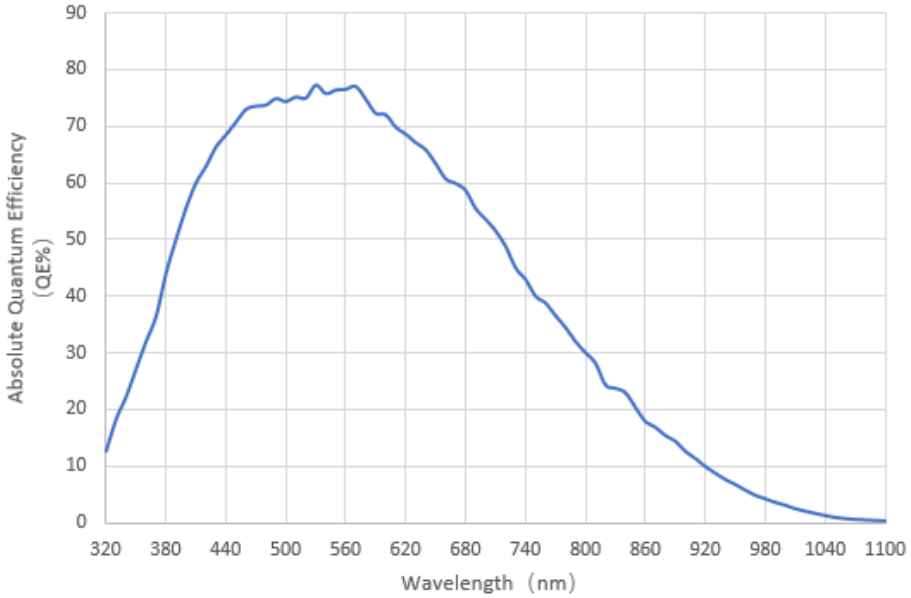


Figure 6-38 SCM428-M-TR absolute quantum efficiency

6.23 SCM428-C-TR

Table 6-23 SCM428-C-TR camera specifications

Parameter \ Model	IUA7100KPA
	7.1M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX428LQJ
Pixel size	4.5 μm x 4.5 μm
Sensor size	1.1"
Frame rate	51.4fps@3200 x 2200 133.8fps@1584 x 1100
Conversion Gain	2.74 (e-/ADU)
Readout Noise	2.54 (e-)
Full Well	11.2 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Sensitivity	2058mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	6μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.75W
Temperature	Working temperature -10~50℃, storage temperature 30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

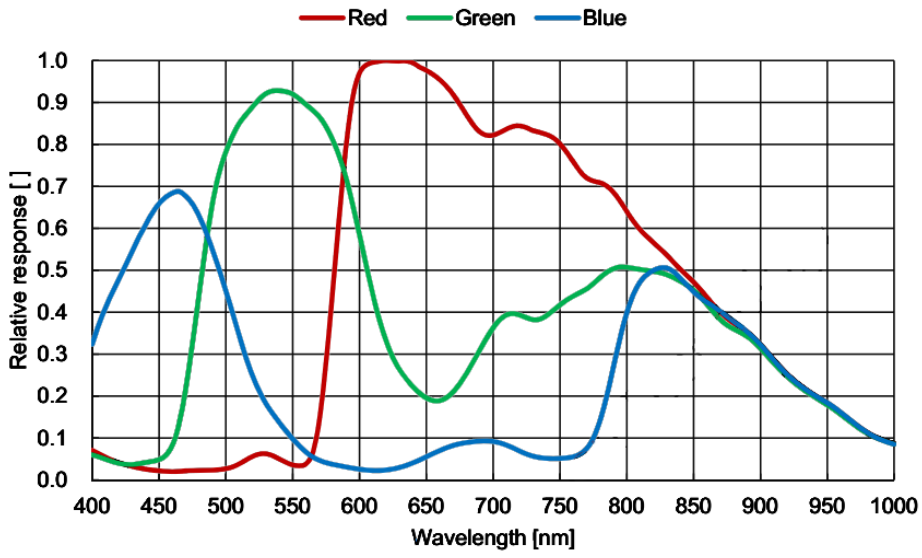


Figure 6-39 SCM428-C-TR spectral response curve

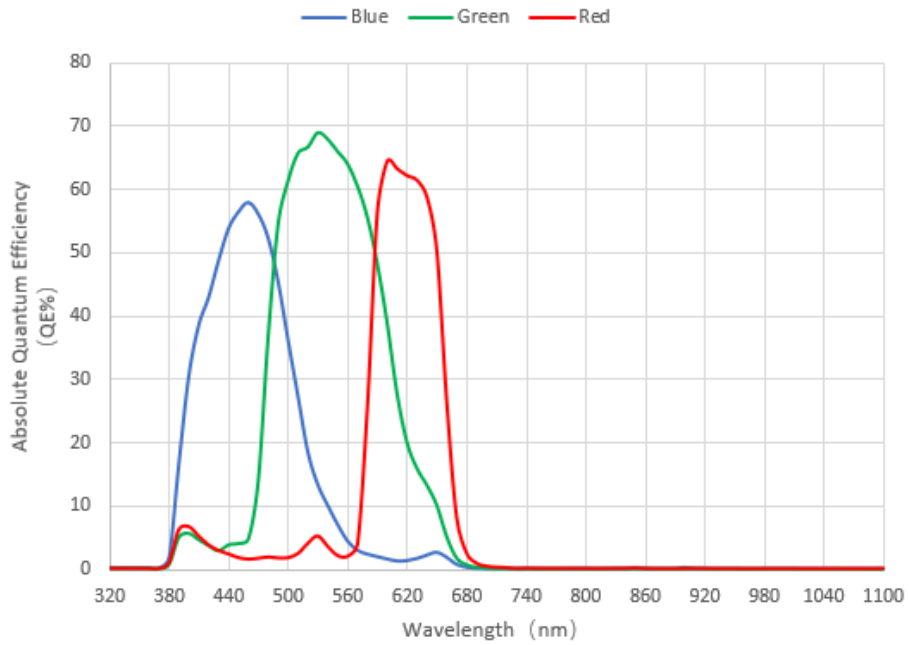


Figure 6-40 SCM428-C-TR absolute quantum efficiency

6.24 SCM485-C-TR

Table 6-24 SCM485-C-TR camera specifications

Parameter \ Model	IUA8300KPA
	8.3M pixels 1/1.2" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX485LQJ-C
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.2"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Conversion Gain	HCG: 1.21 / LCG: 3.28 (e-/ADU)
Readout Noise	HCG: 1.15 / LCG: 3.0 (e-)
Full Well	HCG: 4.97 / LCG: 13.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	HCG: 37.0 / LCG: 41.3 (dB)
Sensitivity	2188mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.65W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

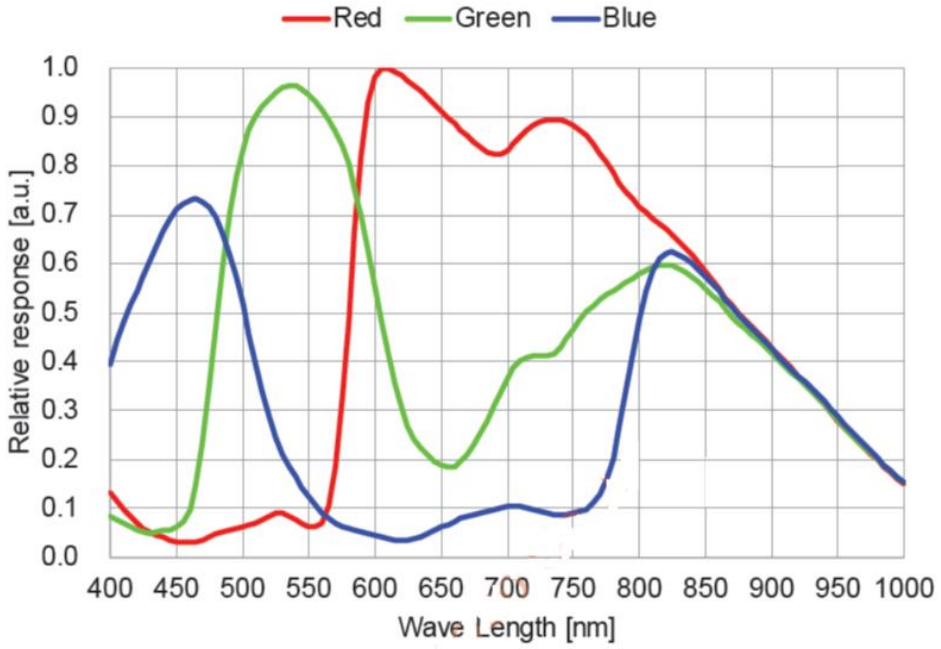


Figure 6-41 SCM485-C-TR spectral response curve

6.25 SCM582-M-TR

Table 6-25 SCM585-M-TR camera specifications

Parameter \ Model	IUA8300KMB
	8.3M pixels 1/1.2" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX585-AAMJ1-C
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.2"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Conversion Gain	TBD
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	19120mV
Dark current	0.13mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<2.3W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

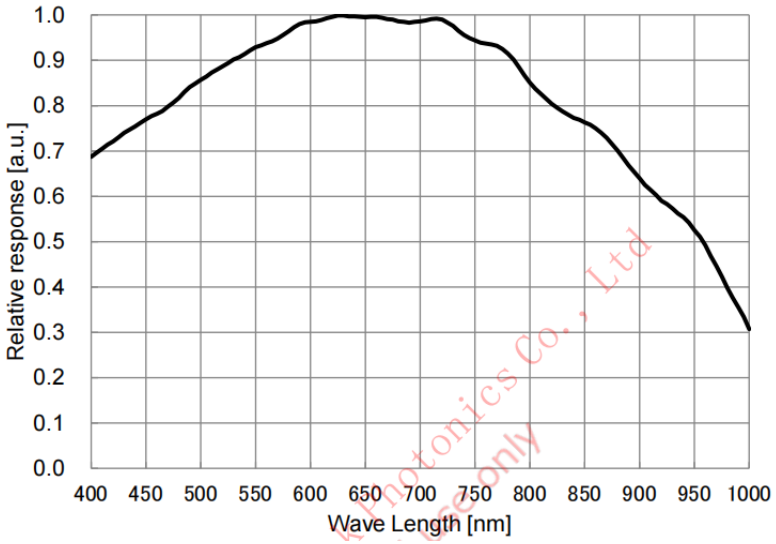


Figure 6-42 SCM585-M-TR spectral response curve

6.26 SCM585-C-TR

Table 6-26 SCM585-C-TR camera specifications

Parameter \ Model	IUA8300KPB
	8.3M pixels 1/1.2" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX585-AAQJ1-C
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.2"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Conversion Gain	HCG: 1.01 / LCG: 9.29 (e-/ADU)
Readout Noise	HCG: 0.37 / LCG: 2.68 (e-)
Full Well	HCG: 4.12 / LCG: 38.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	HCG: 36.2 / LCG: 45.8 (dB)
Sensitivity	5970mV
Dark current	0.13mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<2.3W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

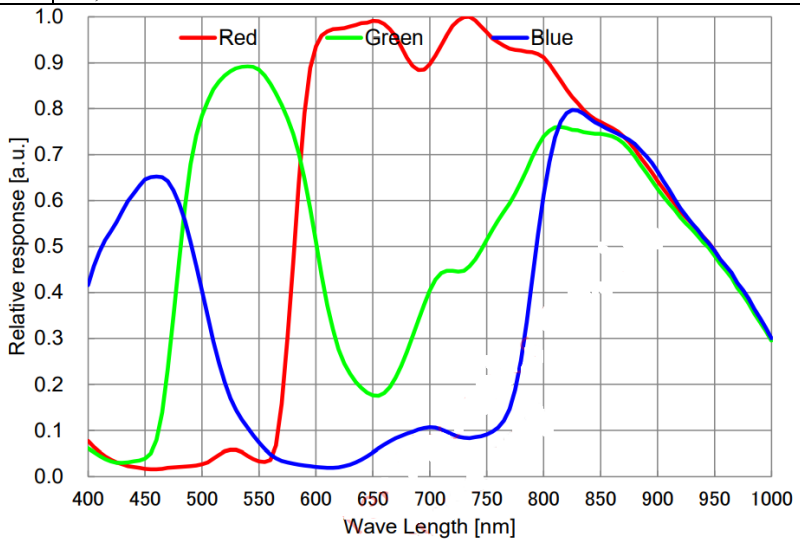


Figure 6-43 SCM585-C-TR spectral response curve

6.27 SCM678-M-TR

Table 6-27 SCM678-M-TR camera specifications

Parameter \ Model	IUA8300KME
	8.3M pixels 1/1.8" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX678-AAMR1-C
Pixel size	2.0 μm x 2.0 μm
Sensor size	1/1.8"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Conversion Gain	HCG: 0.65 / LCG: 2.87 (e-/ADU)
Readout Noise	HCG: 1.16 / LCG: 4.17 (e-)
Full Well	HCG: 2.67/ LCG: 11.76 (ke-)
Dynamic range	HCG: 67.08 / LCG: 68.76 (dB)
Signal-to-Noise ratio	HCG: 34.27 / LCG: 40.7 (dB)
Sensitivity	11288mV
Dark current	0.15mV
Gain range	1-50 倍
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.75W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

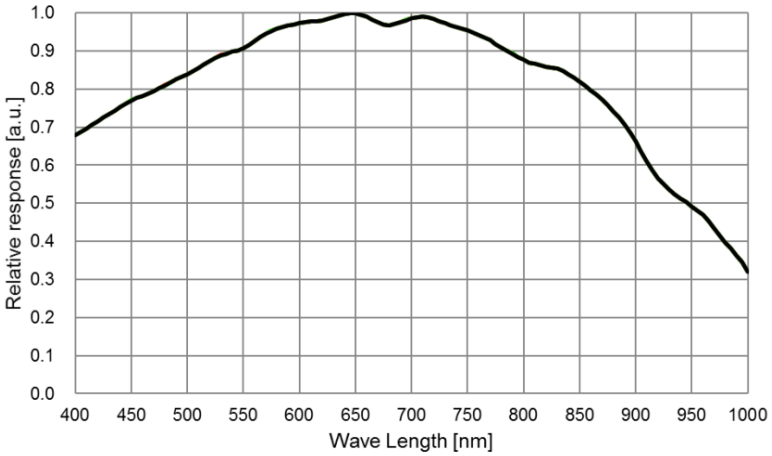


Figure 6-44 SCM678-M-TR spectral response curve

6.28 SCM678-C-TR

Table 6-28 SCM678-C-TR camera specifications

Parameter \ Model	IUA8300KPE
	8.3M pixels 1/1.8" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX678-AAQR1-C
Pixel size	2.0 μm x 2.0 μm
Sensor size	1/1.8"
Frame rate	45fps@3840 x2160 70fps@1920 x 1080
Conversion Gain	HCG: 0.65 / LCG: 2.87 (e-/ADU)
Readout Noise	HCG: 1.16 / LCG: 4.17 (e-)
Full Well	HCG: 2.67/ LCG: 11.76 (ke-)
Dynamic range	HCG: 67.08 / LCG: 68.76 (dB)
Signal-to-Noise ratio	HCG: 34.27 / LCG: 40.7 (dB)
Sensitivity	3541mV
Dark current	0.15mV
Gain range	1-50 倍
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.75W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

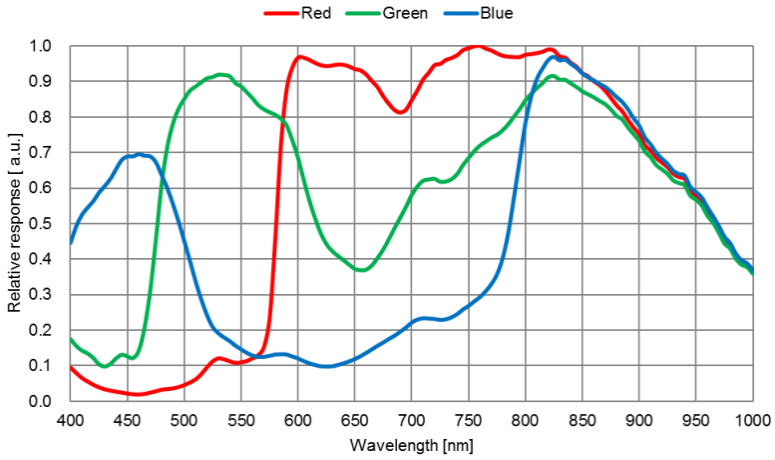


Figure 6-45 SCM678-C-TR spectral response curve

6.29 SCM294-C-TR

Table 6-29 SCM294-C-TR camera specifications

Parameter \ Model	IUA10300KPA
	10.3M pixels 4/3" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX294CJK
Pixel size	2.315 μm x 2.315 μm
Sensor size	4/3"
Frame rate	30.0@4128x2808 38.5 @4096x2160 59.8@2048x1080 87.2@1360x720
Conversion Gain	TBD
Readout Noise	TBD
Full Well	TBD
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	419mv
Dark current	0.12mV
Gain range	1x-50x
Exposure time	150μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4; Hardware 2x2
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.8W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

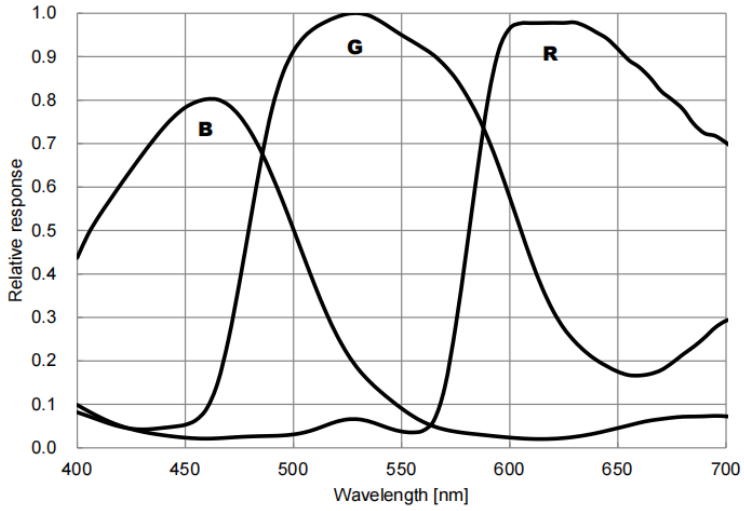


Figure 6-46 SCM294-C-TR spectral response curve

6.30 SCM676-C-TR

Table 6-30 SCM676-C-TR camera specifications

Parameter \ Model	IUA12000KPA
	12.0M pixels 1/1.6" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX676-AACR1-C
Pixel size	2.0 μm x 2.0 μm
Sensor size	1/1.6"
Frame rate	27fps@3536 x3536 60fps@1768 x 1768
Conversion Gain	HCG: 1.07 / LCG: 2.86(e-/ADU)
Readout Noise	HCG: 1.48 / LCG: 3.82(e-)
Full Well	HCG: 4.4 / LCG: 11.7(ke-)
Dynamic range	HCG: 69.24 / LCG: 69.8(dB)
Signal-to-Noise ratio	HCG: 36.4 / LCG: 40.7(dB)
Sensitivity	3637mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.2W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

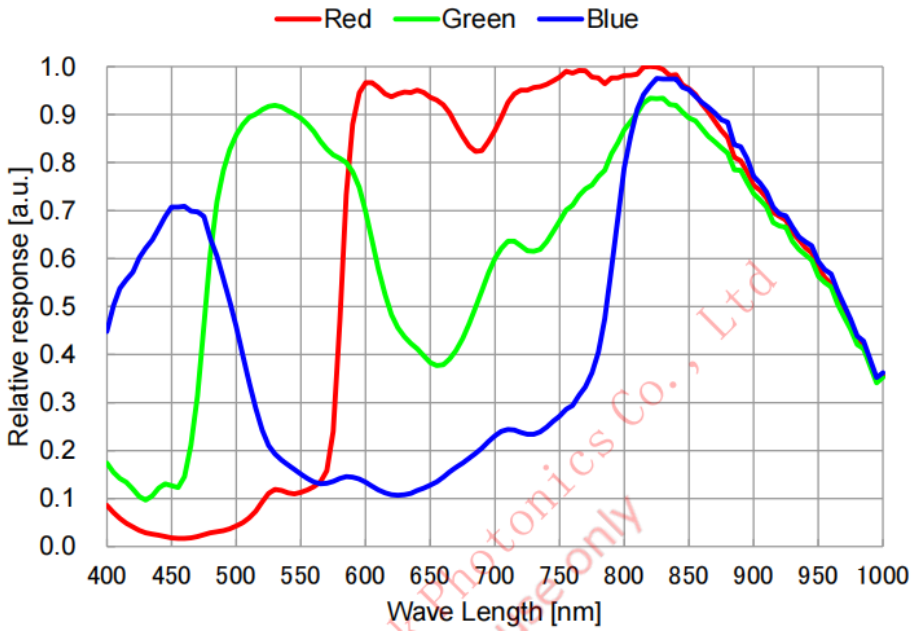


Figure 6-47 SCM676-C-TR spectral response curve

6.31 SCM545-M-TR

Table 6-31 SCM545-M-TR camera specifications

Parameter \ Model	IUA12300KMA
	12.3M pixels 1/1.1" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX545-AAMJ-C
Pixel size	2.74 μm x 2.74 μm
Sensor size	1/1.1"
Frame rate	28.2fps@4096 x3000 100.9fps@2048 x 1500 100.9fps@1024 x 750
Conversion Gain	2.35 (e-/ADU)
Readout Noise	2.19 (e-)
Full Well	9.6 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40 (dB)
Sensitivity	2252mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.5W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

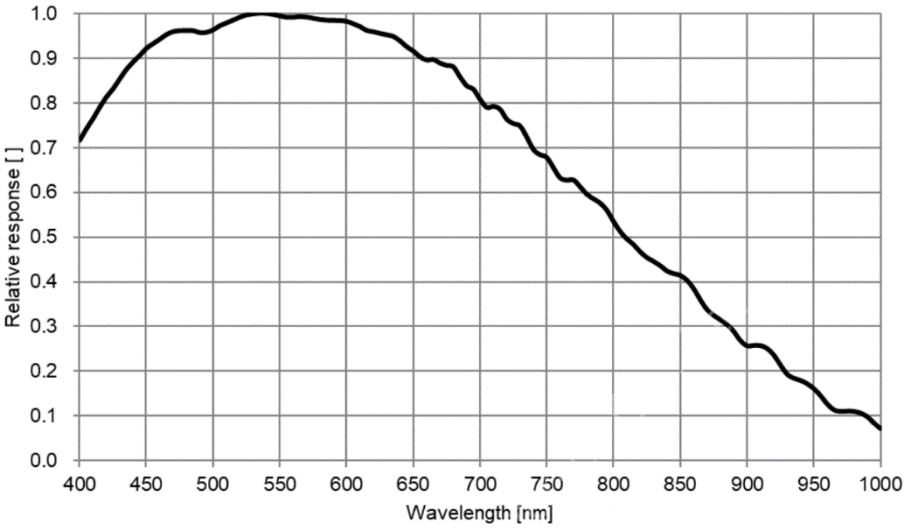


Figure 6-48 SCM545-M-TR spectral response curve

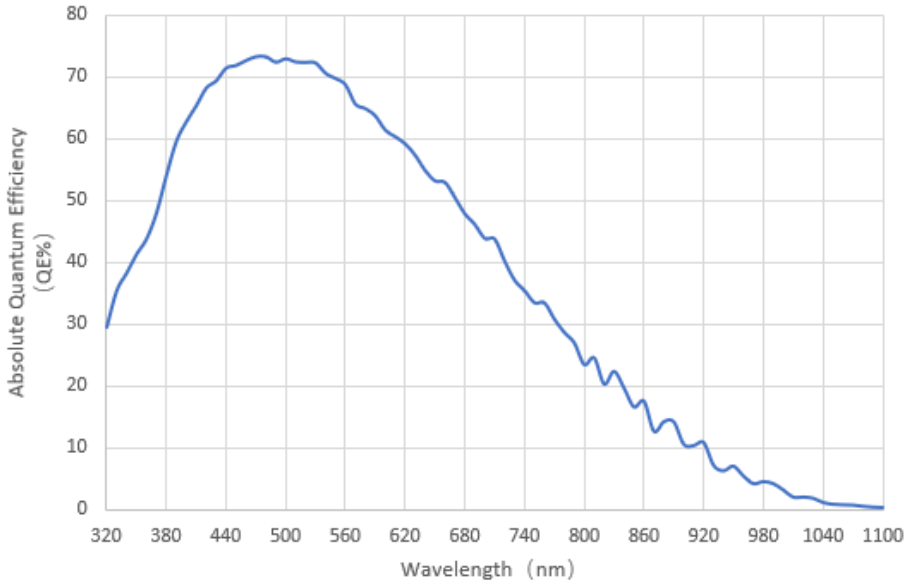


Figure 6-49 SCM545-M-TR absolute quantum efficiency

6.32 SCM545-C-TR

Table 6-32 SCM545-C-TR camera specifications

Parameter \ Model	IUA12300KPA
	12.3M pixels 1/1.1" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX545-AAQJ-C
Pixel size	2.74 μm x 2.74 μm
Sensor size	1/1.1"
Frame rate	28.2fps@4096 x 3000 100.9fps@2048 x 1500 100.9fps@1024 x 750
Conversion Gain	2.44 (e-/ADU)
Readout Noise	2.22 (e-)
Full Well	10.0 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40 (dB)
Sensitivity	1337mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.8W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

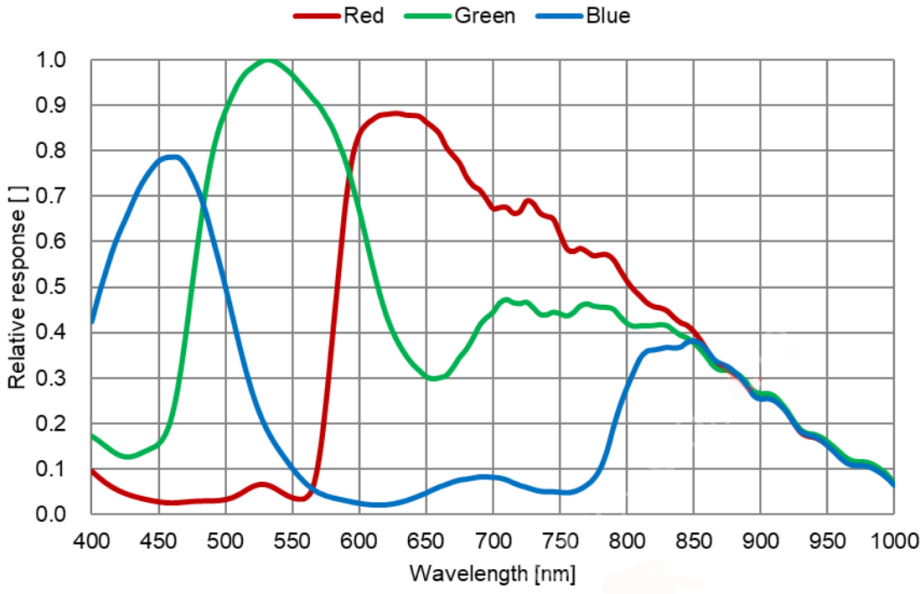


Figure 6-50 SCM545-C-TR spectral response curve

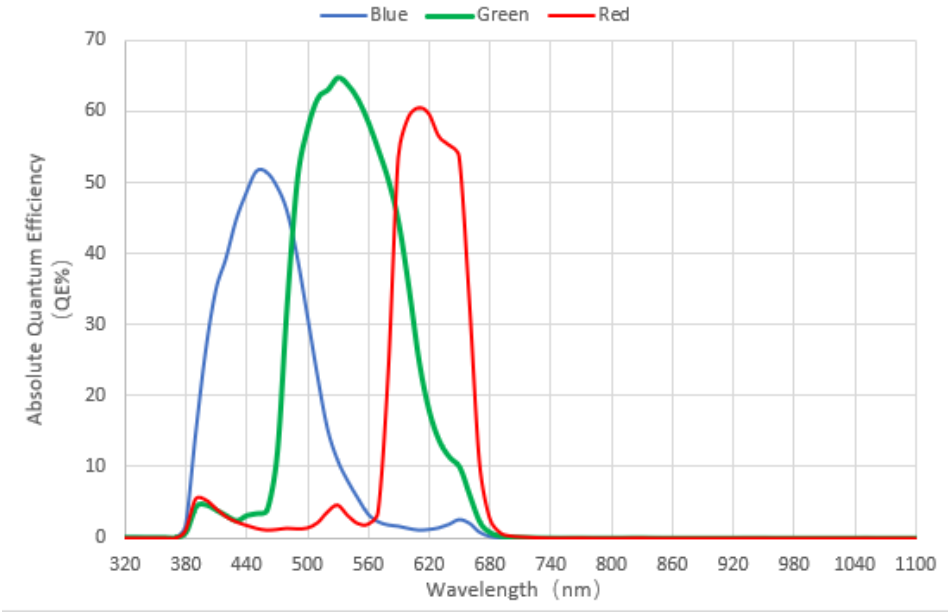


Figure 6-51 SCM545-C-TR absolute quantum efficiency

6.33 SCM304-M-TR

Table 6-33 SCM304-M-TR camera specifications

Parameter \ Model	IUA12300KMB
	12.3M pixels 1.1" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX304LLR-C
Pixel size	3.45 μm x 3.45 μm
Sensor size	1.1"
Frame rate	23.4fps@4096 x3000 46.3fps@2048 x 1500 46.3fps@1024 x 750
Conversion Gain	2.71 (e-/ADU)
Readout Noise	2.12 (e-)
Full Well	11.1 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.5dB
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.25W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

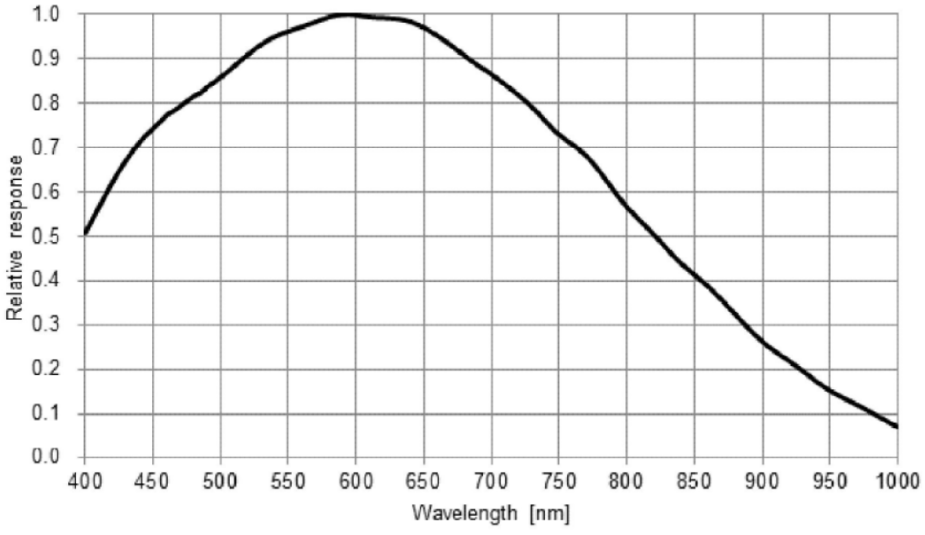


Figure 6-52 SCM304-M-TR spectral response curve

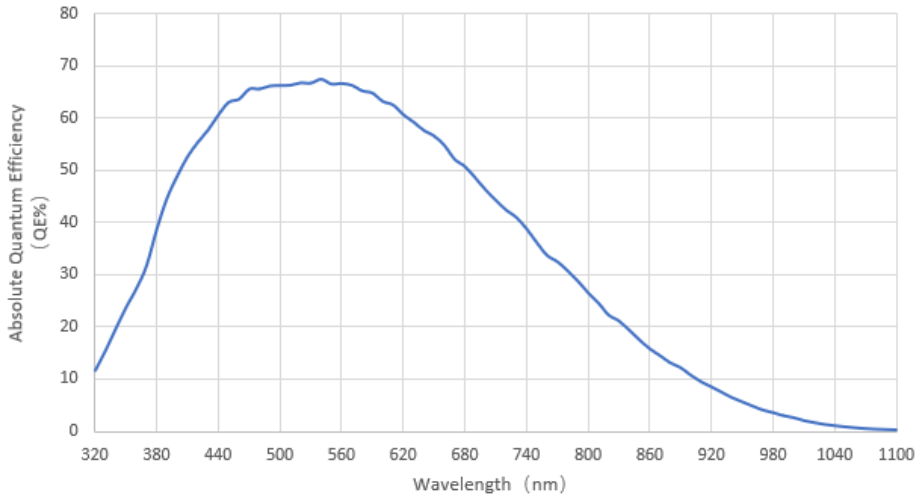


Figure 6-53 SCM304-M-TR absolute quantum efficiency

6.34 SCM304-C-TR

Table 6-34 SCM304-C-TR camera specifications

Parameter \ Model	IUA12300KPB
	12.3M pixels 1.1" CMOS USB3.0industrial camera
Camera	
Sensor model	Sony IMX304LQR-C
Pixel size	3.45 μm x 3.45 μm
Sensor size	1.1"
Frame rate	23.4fps@4096 x 3000 46.3fps@2048 x 1500 46.3fps@1024 x 750
Conversion Gain	2.68 (e-/ADU)
Readout Noise	2.11 (e-)
Full Well	11.0 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.8W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

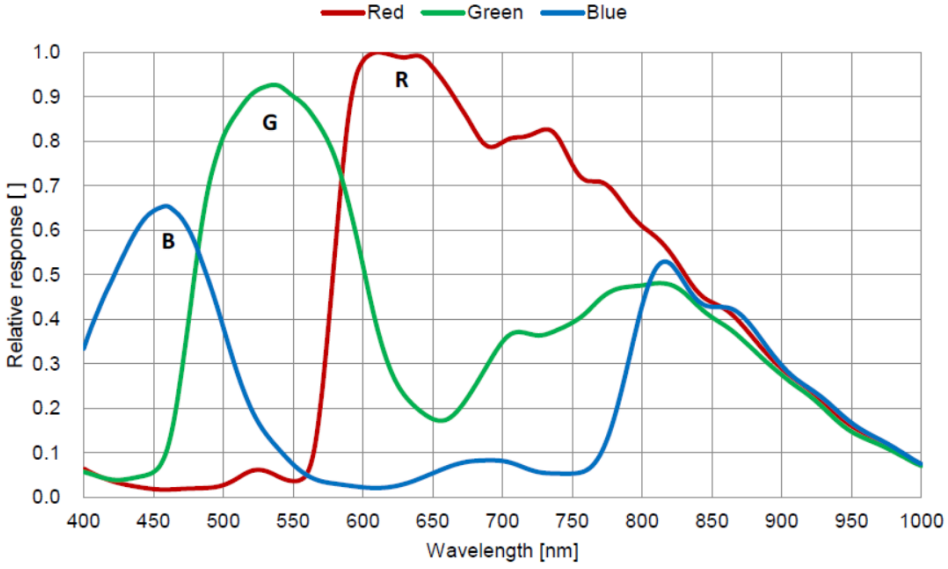


Figure 6-54 SCM304-C-TR spectral response curve

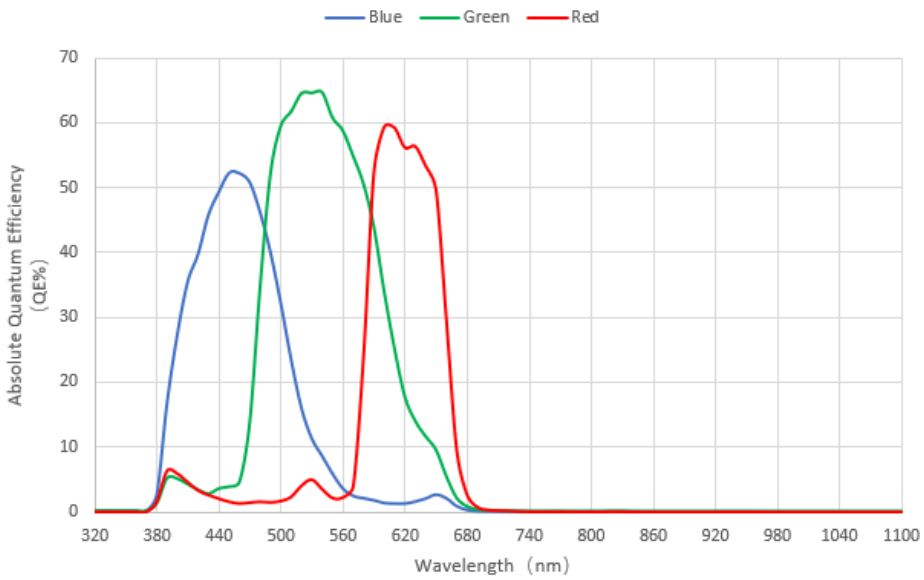


Figure 6-55 SCM304-C-TR absolute quantum efficiency

6.35 SCM183-M-TR

Table 6-35 SCM183-M-TR camera specifications

Parameter \ Model	IUA20000KMA
	20.0M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX183CLK
Pixel size	2.4 μm x 2.4 μm
Sensor size	1"
Frame rate	19.0fps@5440 x 3684 49.9fps@2736 x 1824 59.5fps@1824 x 1216
Conversion Gain	3.78 (e-/ADU)
Readout Noise	3.25 (e-)
Full Well	15.5 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	41.9dB
Sensitivity	777mV
Dark current	0.2mV
Gain range	1x-50x
Exposure time	53μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2, 3x3; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	3.0W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

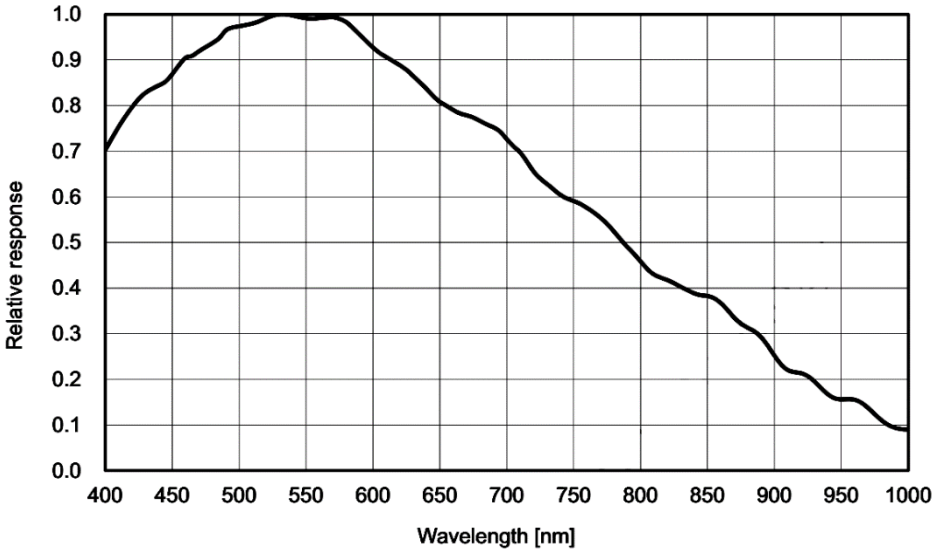


Figure 6-56 SCM183-M-TR spectral response curve

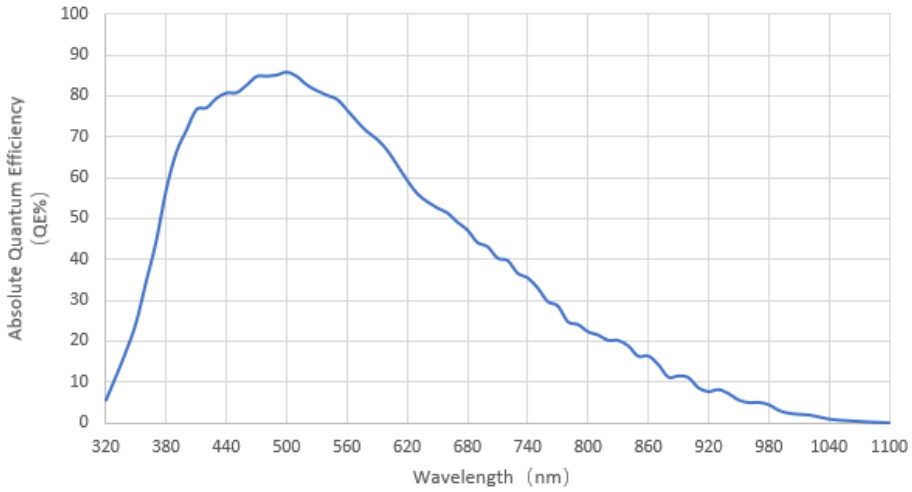


Figure 6-57 SCM183-M-TR absolute quantum efficiency

6.36 SCM183-C-TR

Table 6-36 SCM183-C-TR camera specifications

Parameter \ Model	IUA20000KPA
	20.0M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX183CQK
Pixel size	2.4 μm x 2.4 μm
Sensor size	1"
Frame rate	19.0fps@5440 x 3684 48.8fps@2736 x 1824 59.4fps@1824 x 1216
Conversion Gain	3.73 (e-/ADU)
Readout Noise	3.14 (e-)
Full Well	15.3 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	41.8dB
Sensitivity	462mV
Dark current	0.2mV
Gain range	1x-50x
Exposure time	53μs-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2, 3x3; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

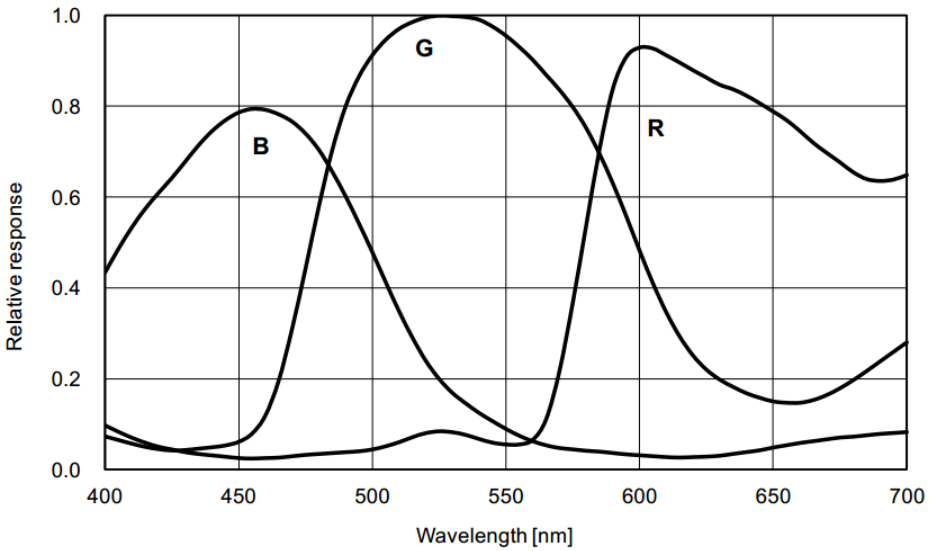


Figure 6-58 SCM183-C-TR spectral response curve

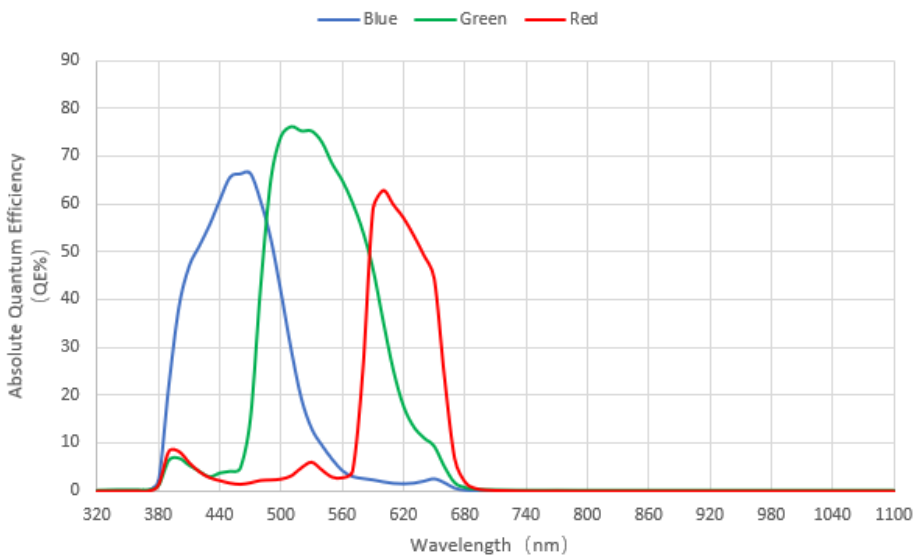


Figure 6-59 SCM183-C-TR absolute quantum efficiency

6.37 SCM541-M-TR

Table 6-37 SCM541-M-TR camera specifications

Parameter \ Model	IUA20400KMA
	20.4M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX541-AAMJ-C
Pixel size	2.74 μm x2.74 μm
Sensor size	1.1"
Frame rate	17.5fps@4496 × 4496 64.4fps@2240 × 2240 64.4fps@1120 × 1120
Conversion Gain	2.35 (e-/ADU)
Readout Noise	2.19 (e-)
Full Well	9.6 (ke-)
Dynamic range	72.0dB
Signal-to-Noise ratio	40.0dB
Peak QE	86%@520nm
Sensitivity	2649mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.6W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

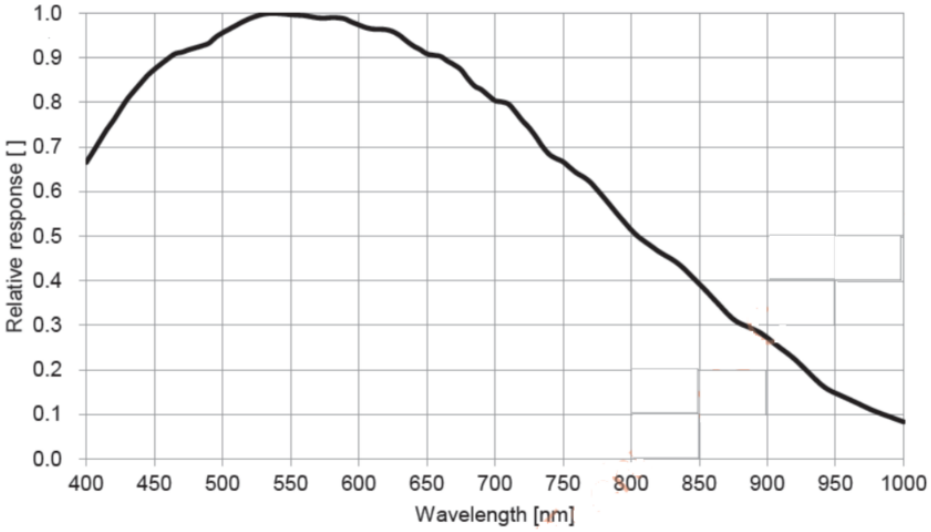


Figure 6-60 SCM541-M-TR spectral response curve

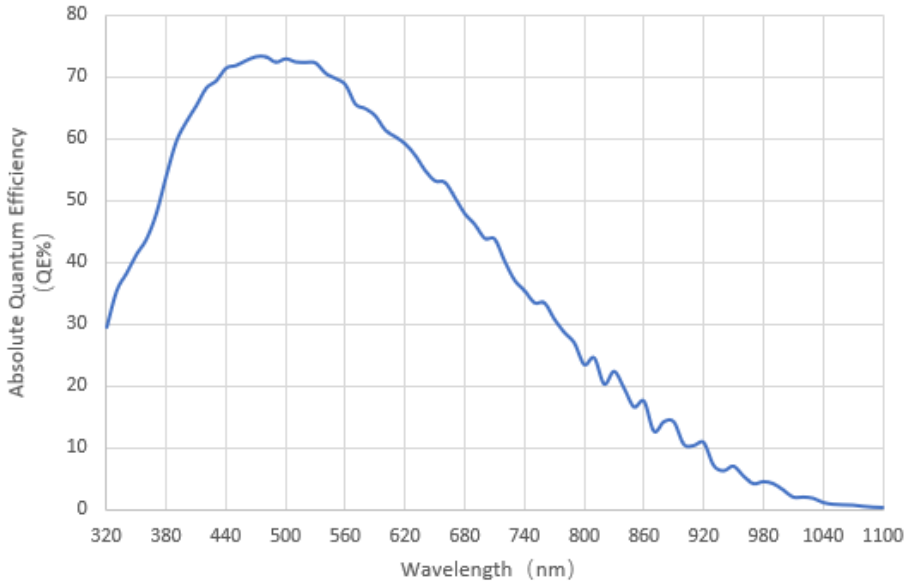


Figure 6-61 SCM541-M-TR absolute quantum efficiency

6.38 SCM541-C-TR

Table 6-38 SCM541-C-TR camera specifications

Parameter \ Model	IUA20400KPA
	20.4M pixels 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX541-AAQJ-C
Pixel size	2.74 μm x2.74 μm
Sensor size	1.1"
Frame rate	17.5fps@4496 × 4496 64.4fps@2240 × 2240 64.4fps@1120 × 1120
Conversion Gain	2.44 (e-/ADU)
Readout Noise	2.22 (e-)
Full Well	10.0 (ke-)
Dynamic range	72.0dB
Signal-to-Noise ratio	40.0dB
Sensitivity	1574mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.6W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

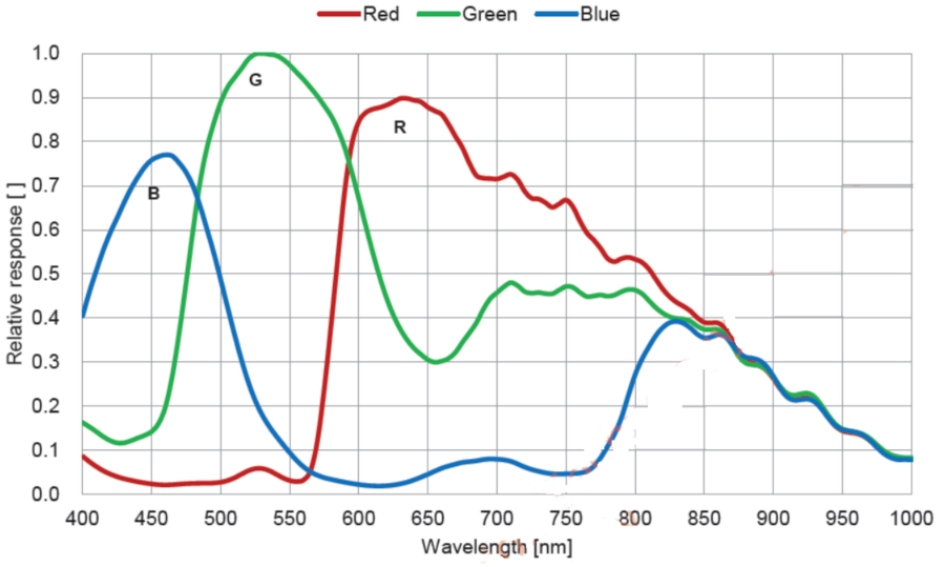


Figure 6-62 SCM541-C-TR spectral response curve

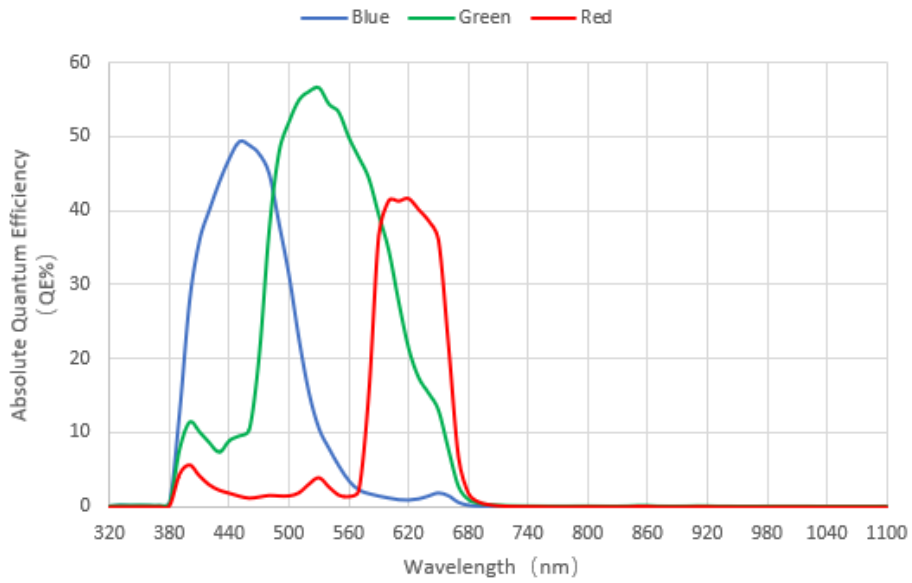


Figure 6-63 SCM541-C-TR absolute quantum efficiency

6.39 SCM540-M-TR

Table 6-39 SCM540-M-TR camera specifications

Parameter \ Model	IUA24500KMA
	24.5M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX540-AAMJ-C
Pixel size	2.74 μm x2.74 μm
Sensor size	1.2"
Frame rate	14.7fps@5320×4600 54.3fps@2660×2300
Conversion Gain	2.35 (e-/ADU)
Readout Noise	2.19 (e-)
Full Well	9.6 (ke-)
Dynamic range	72.0dB
Signal-to-Noise ratio	40.0dB
Peak QE	2649mV
Sensitivity	0.15mV
Dark current	1-50 倍
Gain range	30μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.65W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

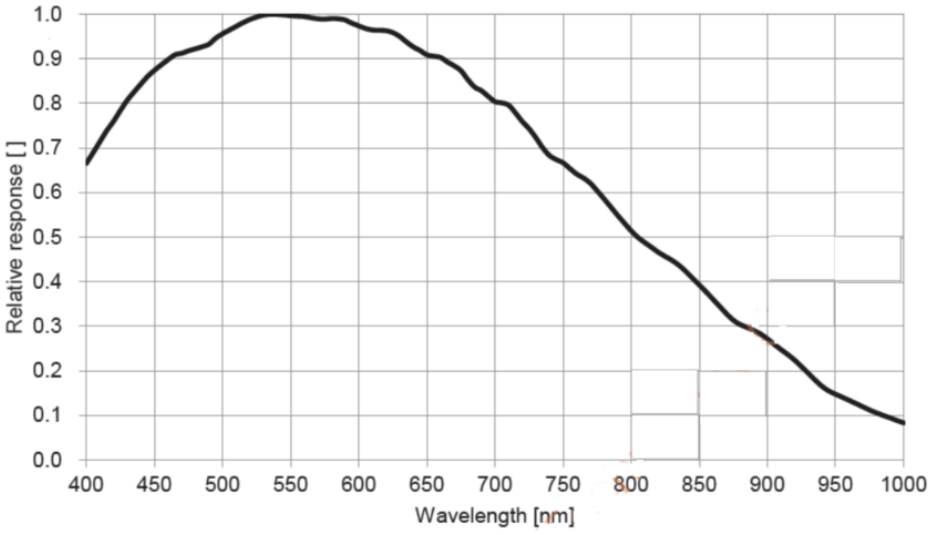


Figure 6-64 SCM540-M-TR spectral response curve

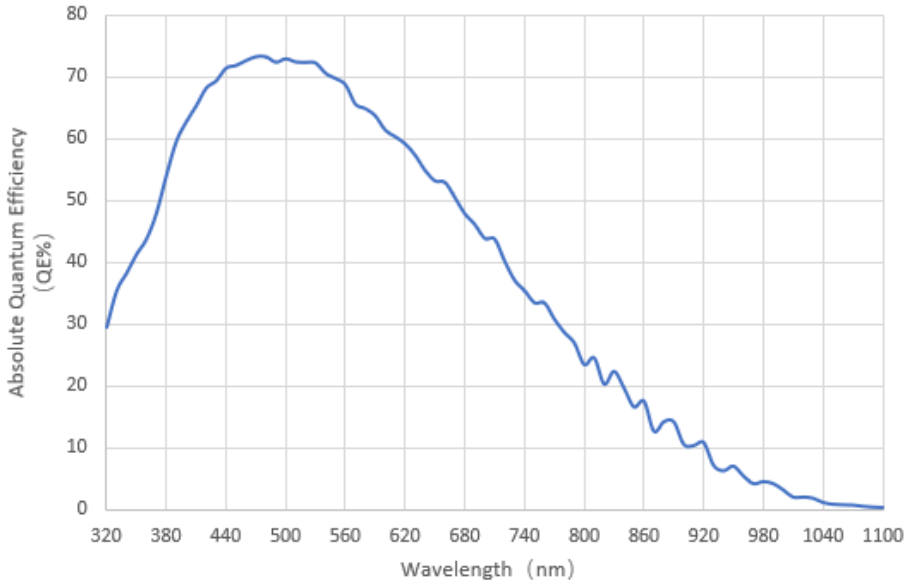


Figure 6-65 SCM540-M-TR absolute quantum efficiency

6.40 SCM540-C-TR

Table 6-40 SCM540-C-TR camera specifications

Parameter \ Model	IUA24500KPA
	24.5M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX540-AAQJ-C
Pixel size	2.74 μm x2.74 μm
Sensor size	1.2"
Frame rate	14.7fps@5320×4600 54.3fps@2660×2300
Conversion Gain	2.44 (e-/ADU)
Readout Noise	2.22 (e-)
Full Well	10.0 (ke-)
Dynamic range	72.0dB
Signal-to-Noise ratio	40.0dB
Sensitivity	1574mV
Dark current	0.15mV
Gain range	1-50 倍
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.65W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

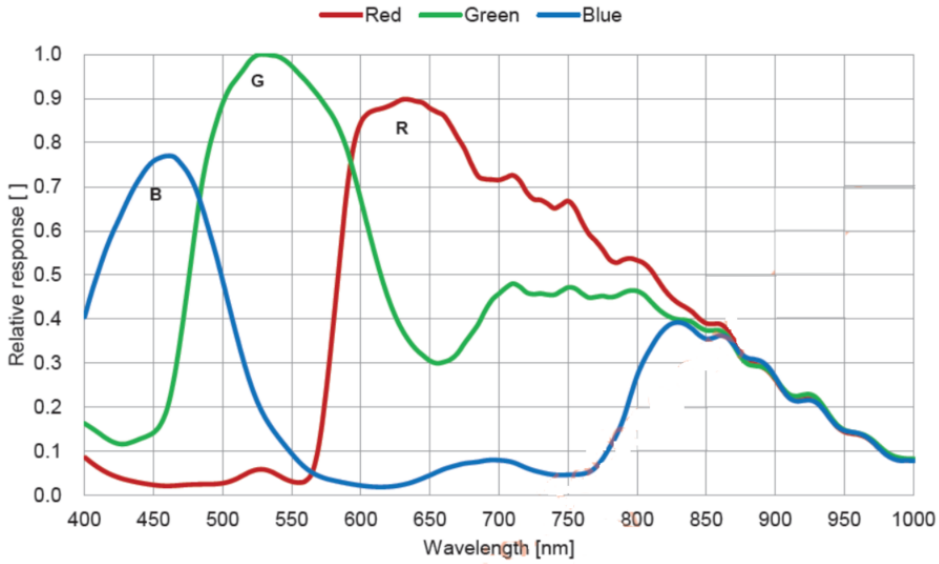


Figure 6-66 SCM540-C-TR spectral response curve

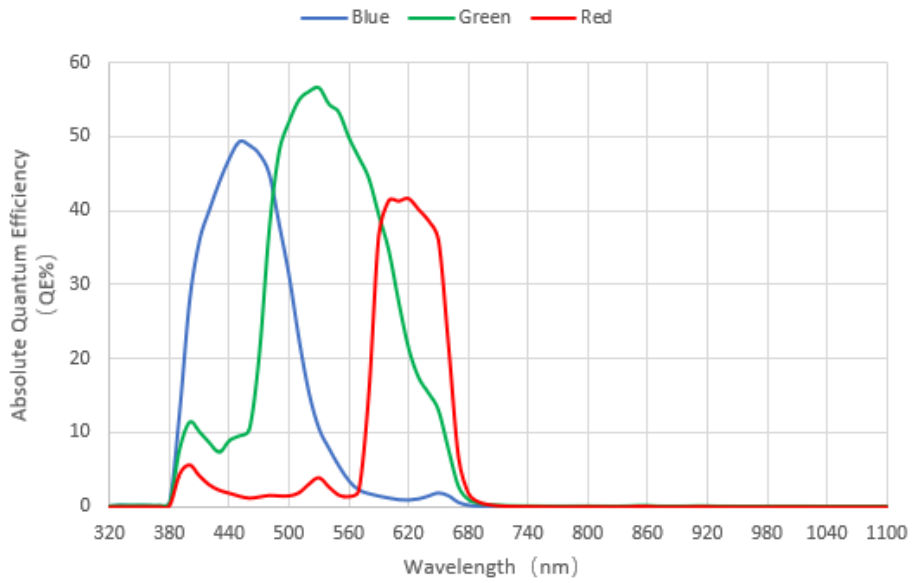


Figure 6-67 SCM540-C-TR absolute quantum efficiency

6.41 SCM0505-M-TR

Table 6-41 SCM0505-M-TR camera specifications

Parameter \ Model	IUA25000KMA
	25.0M 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	GMAX0505
Pixel size	2.5 μm x 2.5 μm
Sensor size	1.1"
Frame rate	13@5120x5120 27@2560x2560 54@1280x1280
Conversion Gain	1.37 (e-/ADU)
Readout Noise	2.9 (e-)
Full Well	5.59(ke-)
Dynamic range	65.7dB
Signal-to-Noise ratio	37.5dB
Peak QE	65.5%@500nm
Dark current	2.4 e-/pixel/s @ 25 room temperature
Gain range	1x-5x
Exposure time	0.15ms-15sec
Shutter	Global shutter
Binning	Hardware 2x2, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data format	8bit / 12bit
General specification	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.5W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

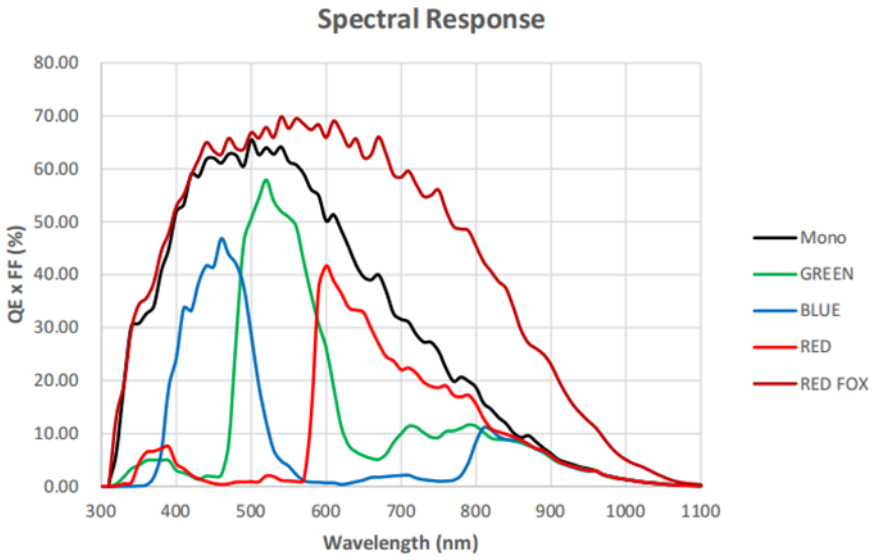


Figure 6-68 SCM0505-M-TR spectral response curve

6.42 SCM0505-C-TR

Table 6-42 SCM0505-C-TR camera specifications

Parameter \ Model	IUA25000KPA
	25.0M 1.1" CMOS USB3.0 industrial camera
Camera	
Sensor model	GMAX0505
Pixel size	2.5 μm x 2.5 μm
Sensor size	1.1"
Frame rate	13@5120x5120 27@2560x2560 54@1280x1280
Conversion Gain	1.37 (e-/ADU)
Readout Noise	2.9 (e-)
Full Well	5.59(ke-)
Dynamic range	65.7dB
Signal-to-Noise ratio	37.5dB
Peak QE	58%@520nm
Dark current	2.4 e-/pixel/s @ 25 room temperature
Gain range	1x-5x
Exposure time	15us-15sec
Shutter	Global shutter
Binning	Hardware 2x2, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data format	8bit / 12bit
General specification	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.5W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

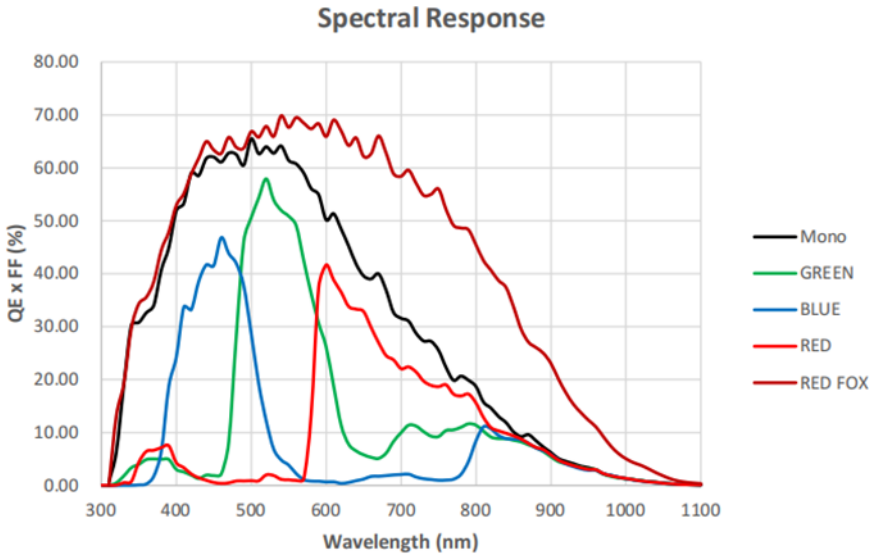


Figure 6-69 SCM0505-C-TR spectral response curve

6.43 SCM492M-TR

Table 6-43 SCM492-M-TR camera specifications

Parameter \ Model	IUA45000KMA
	45.0M 1.4" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX492LLJ-C
Pixel size	2.315 μm x 2.315μm
Sensor size	1.4"
Frame rate	8.1@8176x5616(3:2) 30.0@4080x2808(3:2) 8.1@7408x5556(4:3) 33.0@3696x2778(4:3) 10.4@8176x4320(17:9) 34.7@4096x2160(17:9) 62.5@2048x1080(17:9) 86.5@1360x720(17:9)
Conversion Gain	3.59 (e-/ADU)
Readout Noise	2.70 (e-)
Full Well	14.7 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	41.7dB
Sensitivity	176mV
Dark current	0.03mV
Gain range	1x-50x
Exposure time	100us-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2, 3x3, 4x4; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.05W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

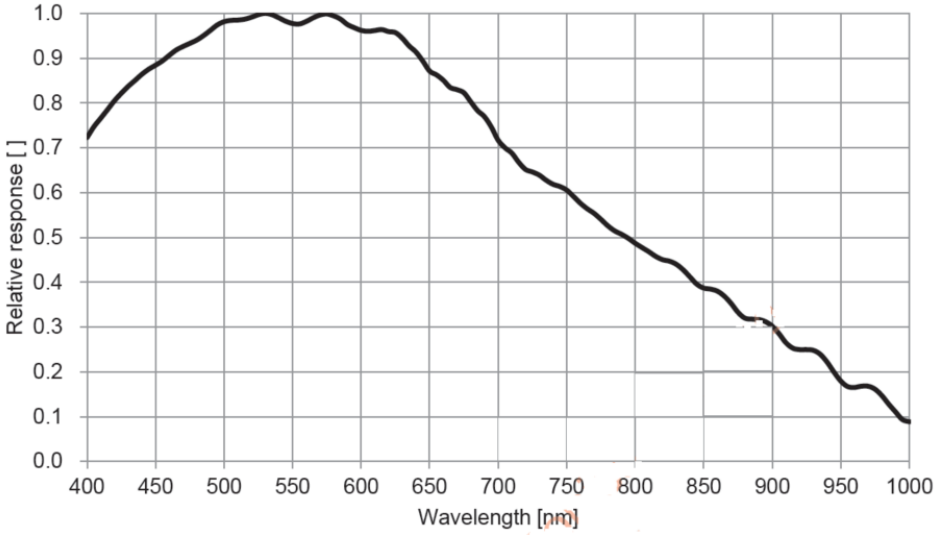


Figure 6-70 SCM492-M-TR spectral response curve

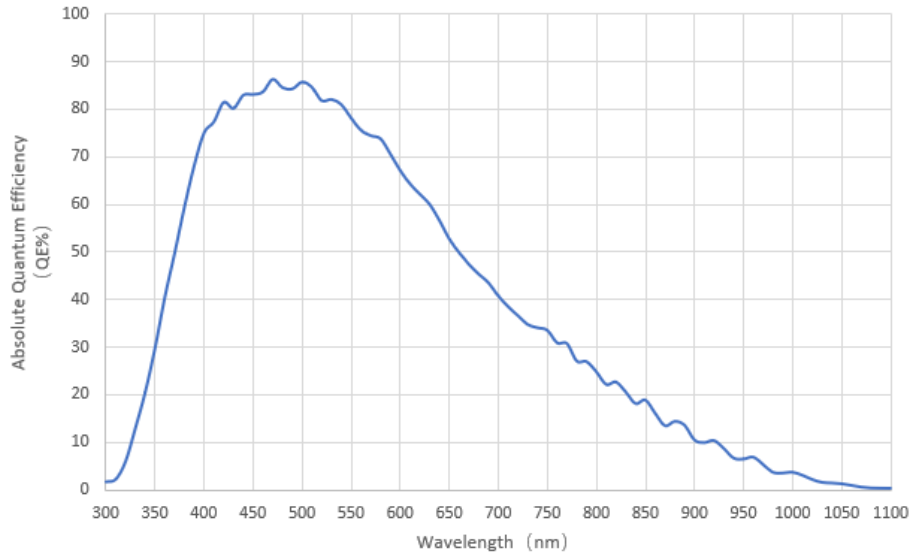


Figure 6-71 SCM492-M-TR absolute quantum efficiency

6.44 SCM492-C-TR

Table 6-44 SCM492-C-TR camera specifications

Parameter \ Model	IUA45000KPB
	45M pixels 1.4" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX492LQJ-C
Pixel size	2.315 μm x 2.315μm
Sensor size	1.4"
Frame rate	8.1@8176x5616 8.1@7408x5556 10.4@8176x4320
Conversion Gain	3.59 (e-/ADU)
Readout Noise	2.70 (e-)
Full Well	14.7 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	41.7dB
Sensitivity	107mV
Dark current	0.03mV
Gain range	1x-50x
Exposure time	100μs-15sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4; Hardware 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.05W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	214g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

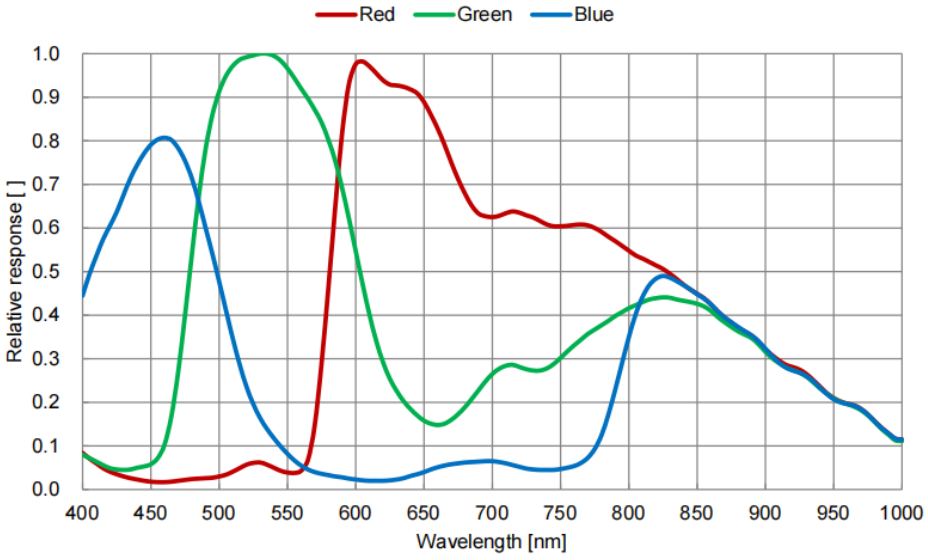


Figure 6-72 SCM492-C-TR spectral response curve

6.45 SCM462-NIR-TR

Table 6-45 SCM462-NIR-TR camera specifications

Parameter \ Model	IUA2100KPA
	2.1M pixels 1/2.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX462LQR
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/2.8"
Frame rate	120.3fps@1920 x 1080
Conversion Gain	HCG: 4.71 / LCG: 12.29 (e-/ADU)
Readout Noise	HCG: 3.49 / LCG: 12.35 (e-)
Full Well	HCG: 19.3 / LCG: 50.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	HCG: 42.8 / LCG: 47.0 (dB)
Sensitivity	2376mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	11μs-15sec
Shutter	Rolling shutter
Binning	Software2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<1.9W
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

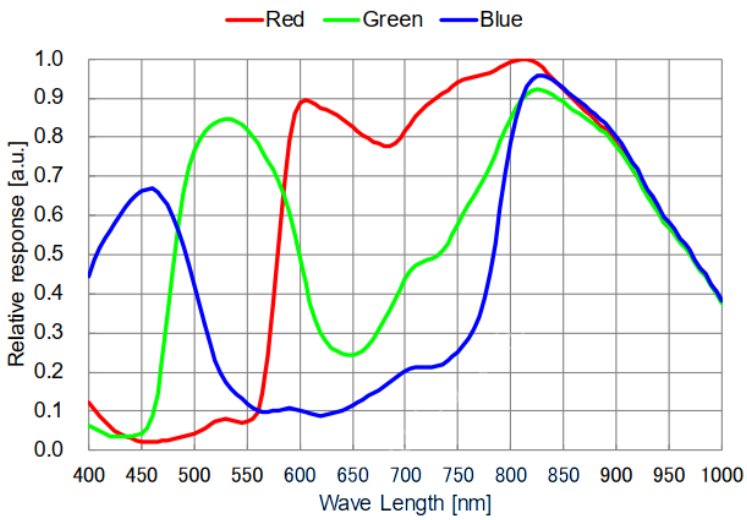


Figure 6-73 SCM462-NIR-TR spectral response curve

6.46 SCM464-NIR-TR

Table 6-46 SCM464-NIR-TR camera specifications

Parameter \ Model	IUA4100KPA
	4.1M pixels 1/1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX464LQR
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/1.8"
Frame rate	90fps@2688 x 1520
Conversion Gain	HCG: 4.71 / LCG: 12.29 (e-/ADU)
Readout Noise	HCG: 3.49 / LCG: 12.35 (e-)
Full Well	HCG: 19.3 / LCG: 50.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	HCG: 42.8 / LCG: 47.0 (dB)
Sensitivity	2376mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	11μs-15sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.9W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	228g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

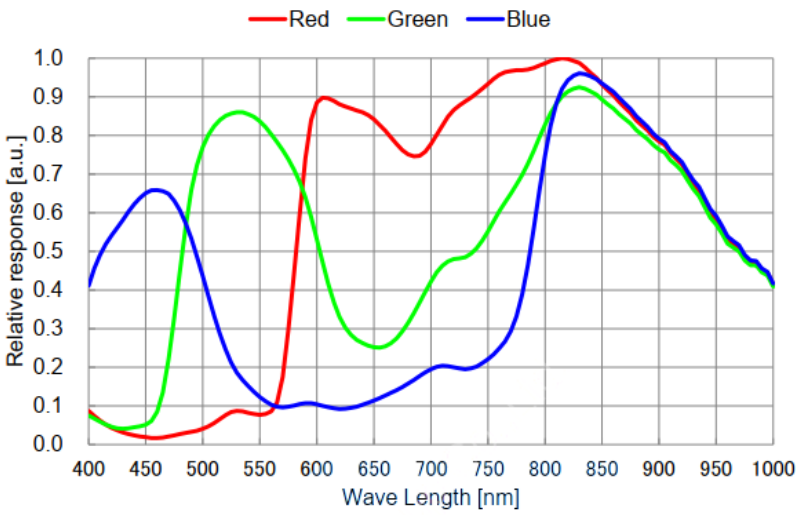


Figure 6-74 SCM464-NIR-TR spectral response curve

6.47 SCA1605-UV-TR (GPixel UV)

Table 6-47 SCA1605-UV-TR camera specifications

Parameter \ Model	IUA500KMA
	0.5M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GLUX1605BSI (UV)
Pixel size	16 μm x 16 μm
Sensor size	1"
Frame rate	60fps@800 x 600 60fps@400 x 300
Conversion Gain	HCG(16x): 0.016 / LCG(1.5x): 0.83 / HDR: 0.71 (e-/ADU)
Readout Noise	HCG(16x): 1.96 / LCG(1.5x): 24.06 / HDR: 2.71 (e-)
Full Well	HCG(16x): 1.02 / LCG(1.5x): 53.31 / HDR: 46.60 (ke-)
Dynamic range	HCG(16x): 54.29 / LCG(1.5x): 66.91 / HDR: 84.72 (dB)
Signal-to-Noise ratio	HCG(16x): 30.08 / LCG(1.5x): 47.27 / HDR: 46.68 (dB)
Sensitivity	$6.4x10^8$(e-/((W/m2).s))
Peak QE	91%@550nm
Dark current	50(e-/s/pix)
Gain range	1x-8x
Exposure time	27μs-60sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.15W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	270g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

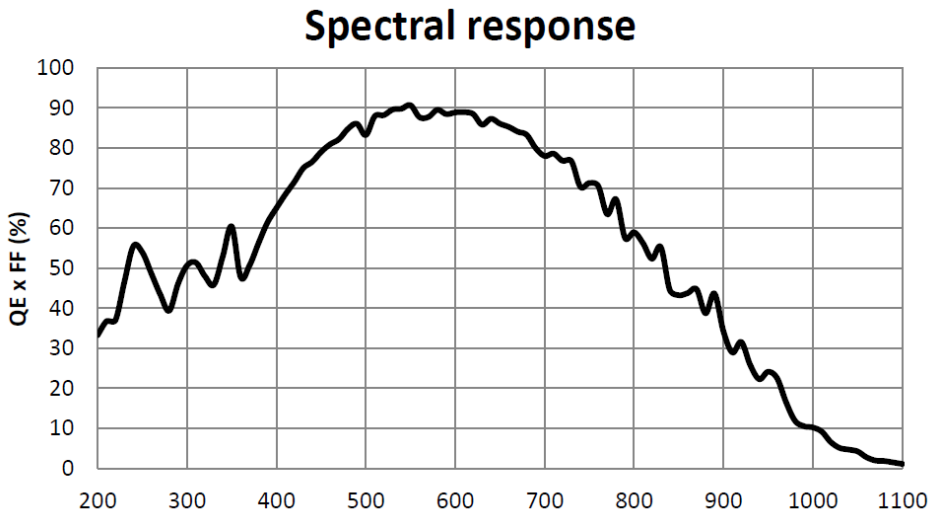


Figure 6-75 SCA1605-UV-TR spectral response curve

6.48 SCA9701-UV-TR (GPixel UV)

Table 6-48 SCA9701-UV-TR camera specifications

Parameter \ Model	IUA1300KMA
	1.3M pixels 1" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GLUX9701BSI (UV)
Pixel size	9.76 μm x 9.76 μm
Sensor size	1"
Frame rate	30fps@1280 x 1024 30fps@640 x 512
Conversion Gain	HCG(16x): 0.26 / LCG(1.5x): 12.98 / HDR: 0.32 (e-/ADU)
Readout Noise	HCG(16x): 1.5 / LCG(1.5x): 22.36 / HDR: 1.83 (e-)
Full Well	HCG(16x): 1.05 / LCG(1.5x): 51.88 / HDR: 21.03 (ke-)
Dynamic range	HCG(16x): 56.9 / LCG(1.5x): 67.3 / HDR: 81.2 (dB)
Signal-to-Noise ratio	HCG(16x): 30.2 / LCG(1.5x): 47.2 / HDR: 43.2 (dB)
Peak QE	$2.57x10^8$(e-/((W/m2).s))
Sensitivity	89%@610nm
Dark current	40e-/s/pix
Gain range	1x-8x
Exposure time	63μs-60sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	1.2W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	270g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC, RoHS

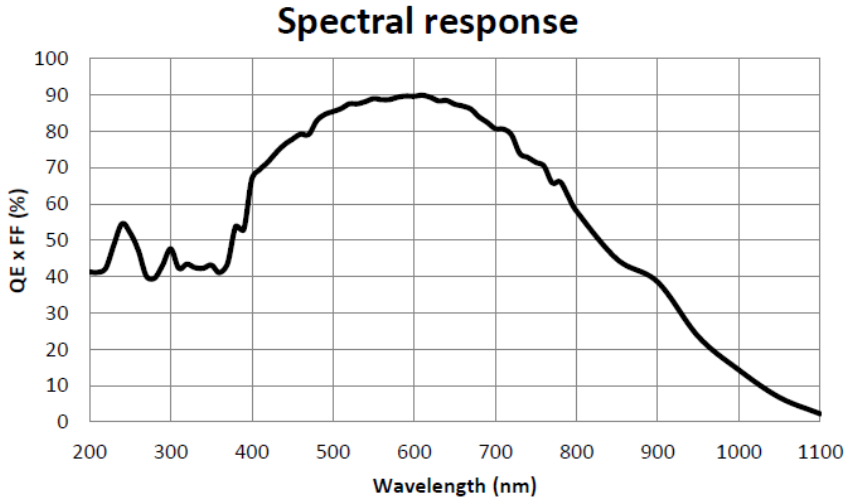


Figure 6-76 SCA9701-UV-TR spectral response curve

6.49 SCA2020-Me-TR (GPixel NIR)

Table 6-49 IUA4200KMA camera specifications

Parameter \ Model	IUA4200KMA
	4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE2020e (NIR)
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	45fps@2048 x 2048 45fps@1024 x 1024
Conversion Gain	HCG: 0.83 / LCG: 5.23 / HDR: 0.70 (e-/ADU)
Readout Noise	HCG: 6.19 / LCG: 37.48 / HDR: 2.80 (e-)
Full Well	HCG: 13.5 / LCG: 85.7 / HDR: 46.0 (ke-)
Dynamic range	HCG: 66.5 / LCG: 67.0 / HDR: 84.0 (dB)
Signal-to-Noise ratio	HCG: 41.3 / LCG: 49.3 / HDR: 46.6 (dB)
Peak QE	$8.1x10^7$(e-/((W/m2).s))
Sensitivity	73%@595nm
Dark current	13e-/s/pix
Gain range	1x-8x
Exposure time	21μs-60sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	3.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	270g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC, RoHS

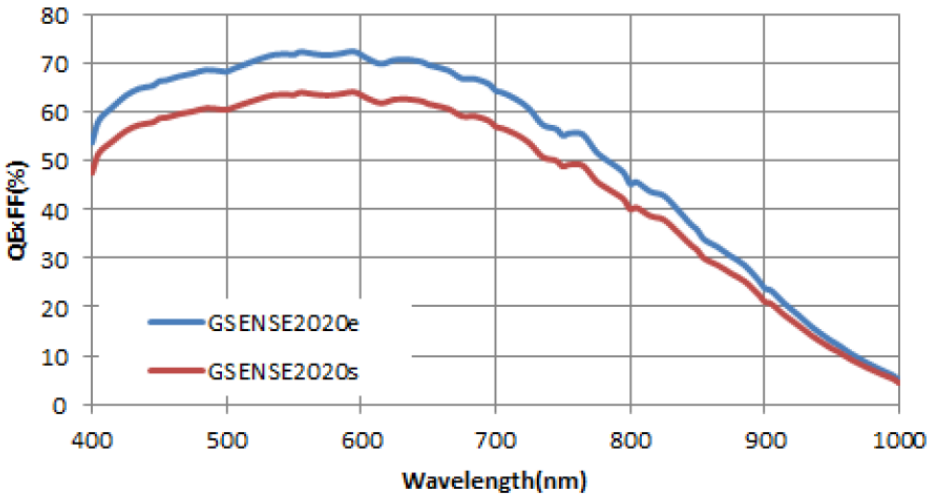


Figure 6-77 SCA2020-Me-TR spectral response curve

6.50 SCA2020-Ms-TR (GPixel NIR)

Table 6-50 SCA2020-Ms-TR camera specifications

Parameter \ Model	IUA4200KPA
	4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE2020s (NIR)
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	45fps@2048 x 2048 45fps@1024 x 1024
Conversion Gain	HCG: 5.60 / LCG: 16.16 (e-/ADU)
Readout Noise	HCG: 11.12 / LCG: 51.29 (e-)
Full Well	HCG: 22.60 / LCG: 62.89 (ke-)
Dynamic range	HCG: 66.2 / LCG: 61.8 (dB)
Signal-to-Noise ratio	HCG: 43.5 / LCG: 48 (dB)
Peak QE	$8.1x10^7$(e-/((W/m2).s))
Sensitivity	64%@595nm
Dark current	13e-/s/pix
Gain range	1x-21x
Exposure time	50μs-3600sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<2.3W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	270g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC, RoHS

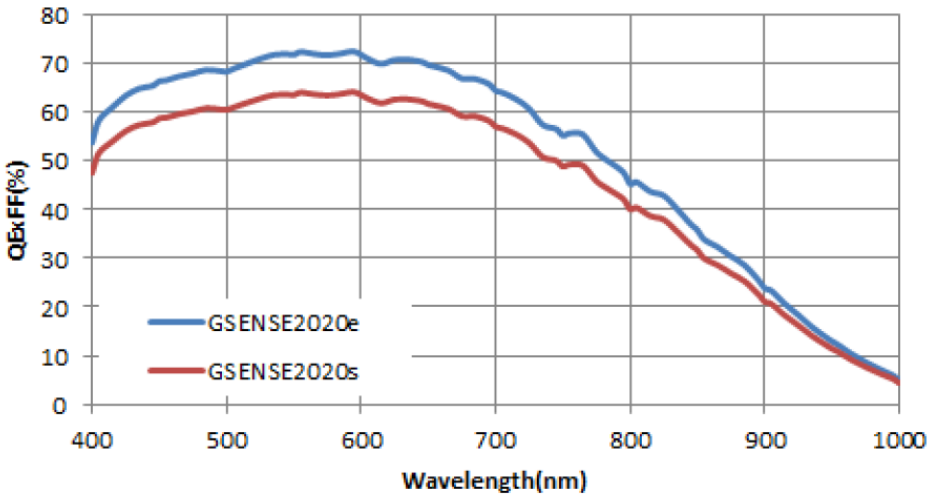


Figure 6-78 SCA2020-Ms-TR spectral response curve

6.51 SCA2020-UV-TR (GPixel UV)

Table 6-51 SCA2020-UV-TR camera specifications

Parameter \ Model	IUA4200KMB
	4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE2020BSI -H (UV)
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	32fps@2048 x 2048 32fps@1024 x 1024
Conversion Gain	HCG: 2.69 / LCG: 15.49 / HDR:0.55 (e-/ADU)
Readout Noise	HCG:5.4 / LCG:21.02 / HDR:2.89 (e-)
Full Well	HCG: 12.1 / LCG: 46.4 / HDR:35.8 (ke-)
Dynamic range	HCG: 66.8 / LCG: 66.7 / HDR: 81.6 (dB)
Signal-to-Noise ratio	HCG: 40.8 / LCG: 46.7 / HDR: 45.5 (dB)
Peak QE	$1.1x10^{8}$(e-/((W/m2).s))
Sensitivity	93.7%@550nm
Dark current	80e-/s/pix
Gain range	1x-8x
Exposure time	12μs-60sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	<2.3W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	270g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

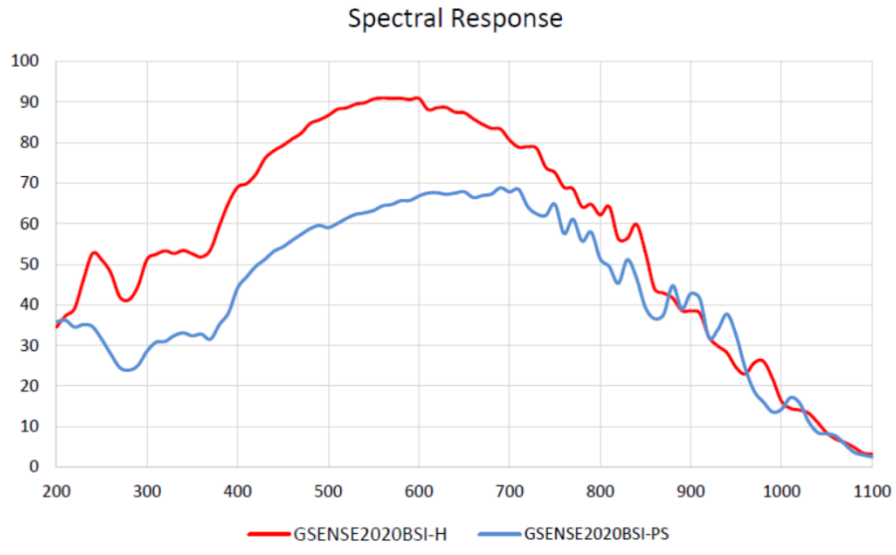


Figure 6-79 SCA2020-UV-TR spectral response curve

6.52 SCA400-UV-TR (GPixel UV)

Table 6-52 SCA400-UV-TR camera specifications

Parameter \ Model	IUA4200KME
	4.2M pixels 2.0" CMOS USB3.0 industrial camera
Camera	
Sensor model	GPixel GSENSE400BSI (UV)
Pixel size	11 μm x 11 μm
Sensor size	2.0"
Frame rate	37fps@2048 x 2048 37fps@1024 x 1024
Conversion Gain	HCG: 2.33 / LCG: 19.93 (e-/ADU)
Readout Noise	HCG: 3.57 / LCG: 31.26 (e-)
Full Well	HCG: 46.4 / LCG: 35.8 (ke-)
Dynamic range	HCG: 68.3 / LCG: 68.1 (dB)
Signal-to-Noise ratio	HCG: 39.8 / LCG: 49.1 (dB)
Sensitivity	$3.25x10^8$(e-/((W/m2).s))
Dark current	345e-/s/pix
Gain range	1x-8x
Exposure time	21μs-60sec
Shutter	Rolling shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.25W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	270g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC, RoHS

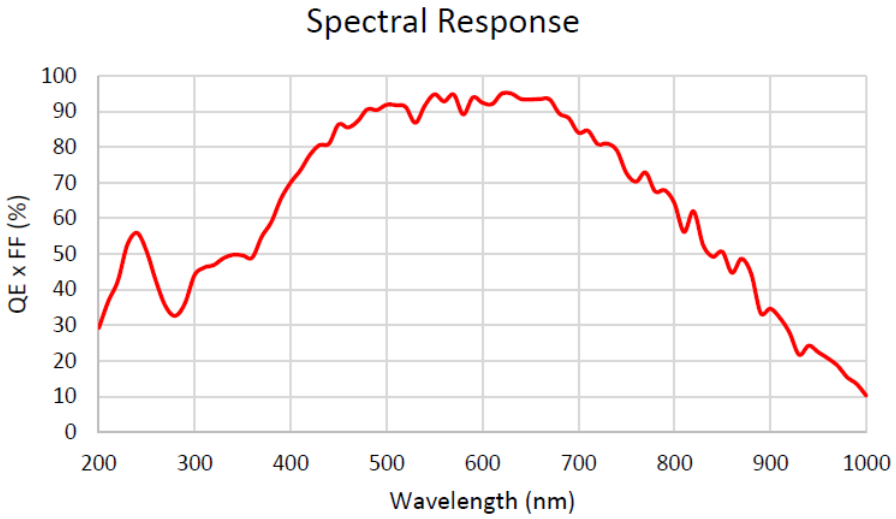


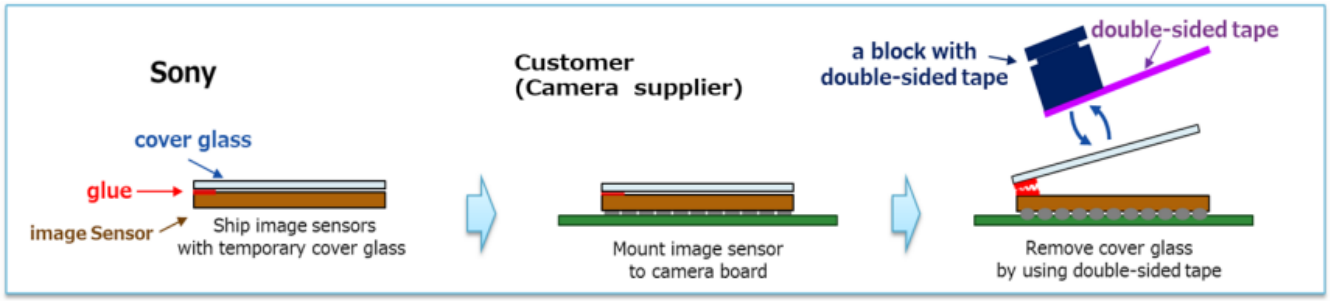
Figure 6-80 SCA400-UV-TR spectral response curve

6.53 SCM487-UV-TR (Sony GS-UV)

Table 6-53 SCM487-UV-TR camera specifications

Parameter \ Model	IUA8000KMA
	8.0M pixels 2/3" CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX487-AAMJ-C
Pixel size	2.74 μm x2.74 μm
Sensor size	2/3"
Frame rate	45fps@2840 × 2840 198fps@1420 × 1420
Conversion Gain	2.42 (e-/ADU)
Readout Noise	2.66 (e-)
Full Well	9.9 (ke-)
Dynamic range	71.2dB
Signal-to-Noise ratio	40.0dB
Sensitivity	145mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	30μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ DC12V
Power consumption	2.35W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	68mmx68mmx28.1mm
Weight	227g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

The SCM487-UV-TR is available in RG (Removing Glass) versions, as shown in the figure below.



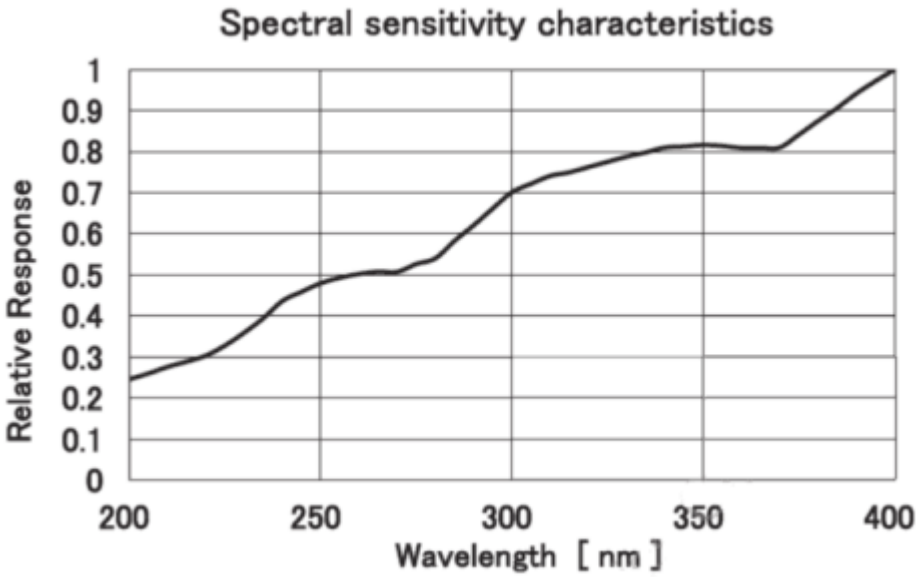


Figure 6-81 SCM487-UV-TR spectral response curve

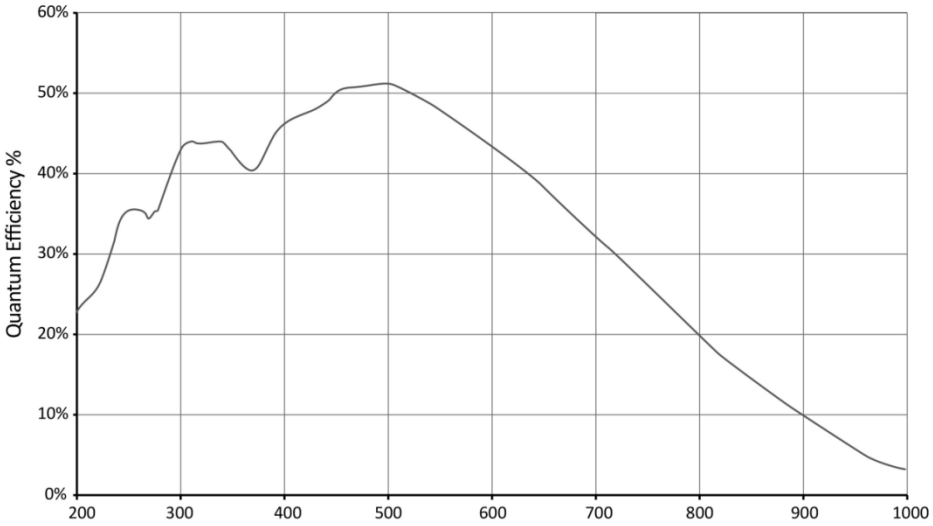


Figure 6-82 SCM487-UV-TR absolute quantum efficiency

7 IUB Series Technical Specifications(End of life, not recommended,3)

7.1 xxxxKMA

Table 7-1 xxxKMA camera specifications

Parameter \ Model	IUB4200KMA
	4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GSENSE2020e
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	45fps@2048 x 2046 45fps@1024 x 1022
Dynamic range	66.6dB (LG), 59.5dB (HG), 87.5dB (HDR)
Signal-to-Noise ratio	46dB (LG), 32dB (HG)
Sensitivity	$8.11x10^7$(e-/((W/m2)·s)
Dark current	7e-/s/pix
Gain range	1x-22x
Exposure time	150us-60sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ 12V Power adapter
Power consumption	<3.7W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	118mmx68mmx23.2mm
Weight	633g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

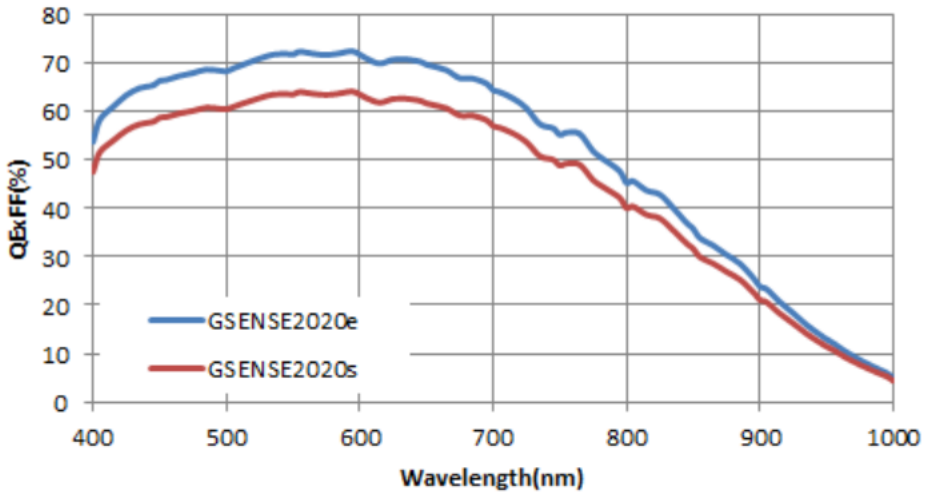


Figure 7-1 xxx4200KMA spectral response curve

7.2 IUB4200KMB

Table 7-2 IUB4200KMB camera specifications

Parameter \ Model	IUB4200KMB
	4.2M pixels 1.2" CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GSENSE2020BSI (UV)
Pixel size	6.5 μm x 6.5 μm
Sensor size	1.2"
Frame rate	43.6fps@2048 x 2046 43.6fps@1024 x 1022
Dynamic range	67.5dB (LG), 61dB (HG), 90.7dB (HDR)
Signal-to-Noise ratio	47dB (LG), 32dB (HG)
Sensitivity	$1.1x10^8$e-/((W/m2)·s)
Dark current	80e-/s/pix
Gain range	1x-50x
Exposure time	150us-60sec
Shutter	Rolling shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit / HDR16
General Specifications	
Power supply	Power with USB3.0/ 12V Power adapter
Power consumption	<3.7W
Temperature	Working temperature -10~50℃, storage temperature30~70℃
Humidity	20%-80%, no condensation
Size	118mmx68mmx23.2mm
Weight	633g
Lens mount	C-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

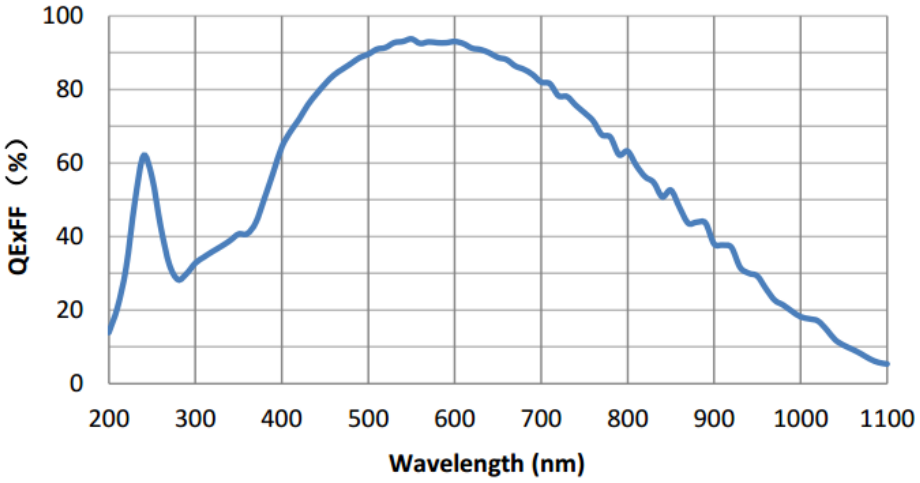


Figure 7-2 IUB4200KMB spectral response curve

7.3 IUB43000KMA

Table 7-3 IUB43000KMA camera specifications

Parameter \ Model	IUB43000KMA
	43.0M pixels 1.7" (APS-C) CMOS USB3.0 industrial camera
Camera	
Sensor model	Gpixel GMAX0806
Pixel size	2.8 μm x 2.8 μm
Sensor size	1.7"(APS-C)
Frame rate	8.5fps@7904x5432
Dynamic range	66dB (2G), 63dB (6G)
Signal-to-Noise ratio	38.5dB (2G), 34dB (6G)
Sensitivity	$1.19x10^7$(e-/((W/m2)·s)
Dark current	1e-/s/pix
Gain range	1x-6x
Exposure time	15us-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0/ 12V Power adapter
Power consumption	<5.0W
Temperature	Working temperature -10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	118mmx68mmx23.2mm
Weight	633g
Lens mount	M42 Interface
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

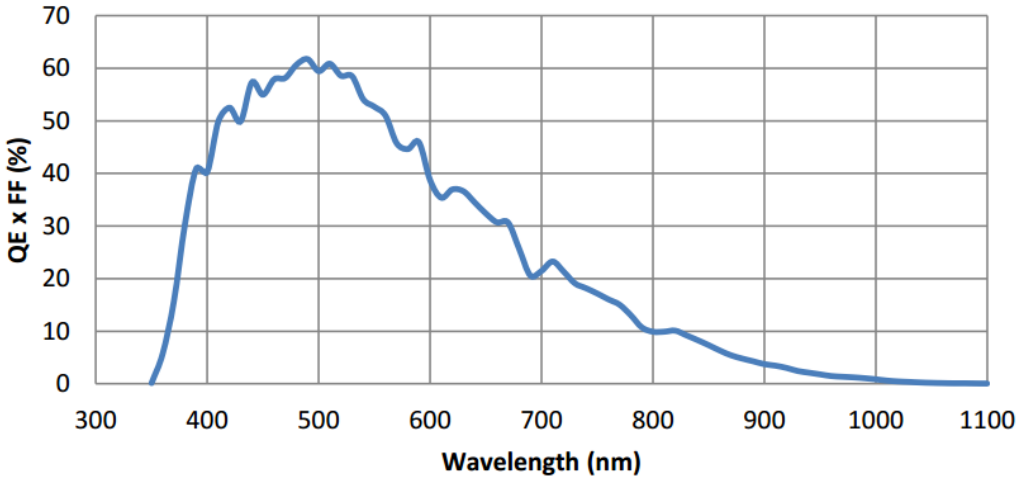


Figure 7-3 IUB43000KMA spectral response curve

8 SCC Series Technical Specifications (20)

8.1 SCC425-M-CL480

Table 8-1 IUC1700KMA-CL480 camera specifications

Parameter \ Model	IUC1700KMA-CL480
	1.7M pixels 1.1" CMOS CameraLink industrial camera
Camera	
Sensor model	Sony IMX425LLJ
Pixel size	9.0 μm x 9.0 μm
Sensor size	1.1"
Frame rate	302fps@1600 x 1100
Conversion Gain	4.97 (e-/ADU)
Readout Noise	4.76 (e-)
Full Well	20.4 (ke-)
Dynamic range	72dB
Signal-to-Noise ratio	43dB
Sensitivity	8100mV
Dark current	0.3mV
Gain range	1-50 倍
Exposure time	6us-15sec
Shutter	Global shutter
Binning	Software 2x2，3x3，4x4
Data interface	CameraLink
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	12V Power adapter
Power consumption	<5W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	88mmx88mmx21.2mm
Weight	540g
Lens mount	M42 Interface
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

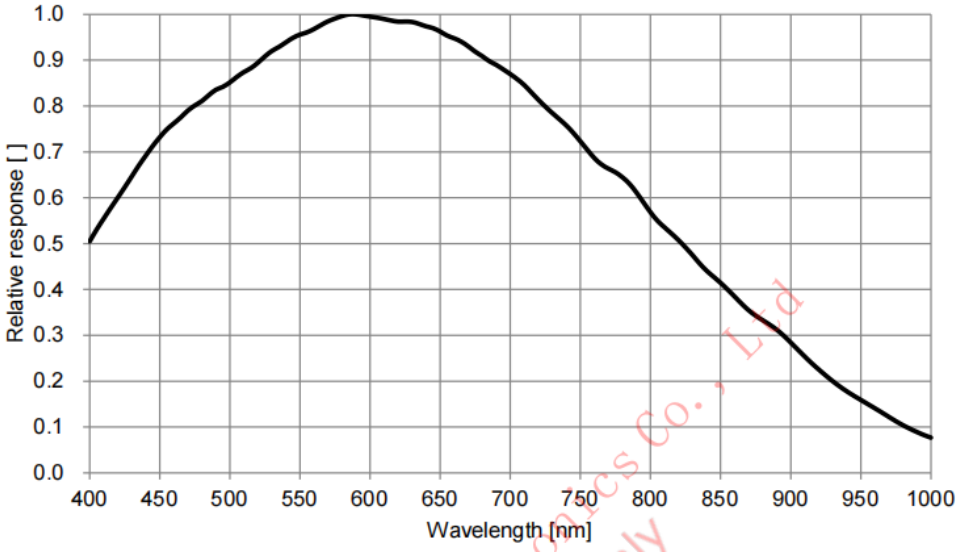


Figure 8-1 SCC425-M-CL480 spectral response curve

8.2 SCC410-C-TR

Table 8-2 SCC410-C-TR camera specifications

Parameter \ Model	IUC24000KPA
	24.0M pixels 2.7" (Full Frame) CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX410CQK-C
Pixel size	5.94 μm x 5.94 μm
Sensor size	2.7"(Full Frame)
Frame rate	15.3fps@6064x4040(14bit) 41fps@3024x2012 114fps@2016x1342
Conversion Gain	1.2e-(HCG) 6.19e-(LCG)
Readout Noise	0.58e-(HCG) 4.56e-(LCG)
Full Well	19653.77e-(HCG) 101464.01e-(LCG)
Dynamic range	84dB (HCG) 84dB (LCG)
Signal-to-Noise ratio	42.93dB(HCG) 50.06dB(LCG)
Sensitivity	572.8mv
Dark current	0.037mv
Gain range	1-50 倍
Exposure time	150us-15sec
Shutter	Rolling shutter
Binning	Hardware 2x2，3x3；Software 2x2，3x3，4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 14bit
General Specifications	
Power supply	12V Power adapter
Power consumption	<5.0W
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	88mmx88mmx21.2mm
Weight	540g
Lens mount	M42 Interface
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

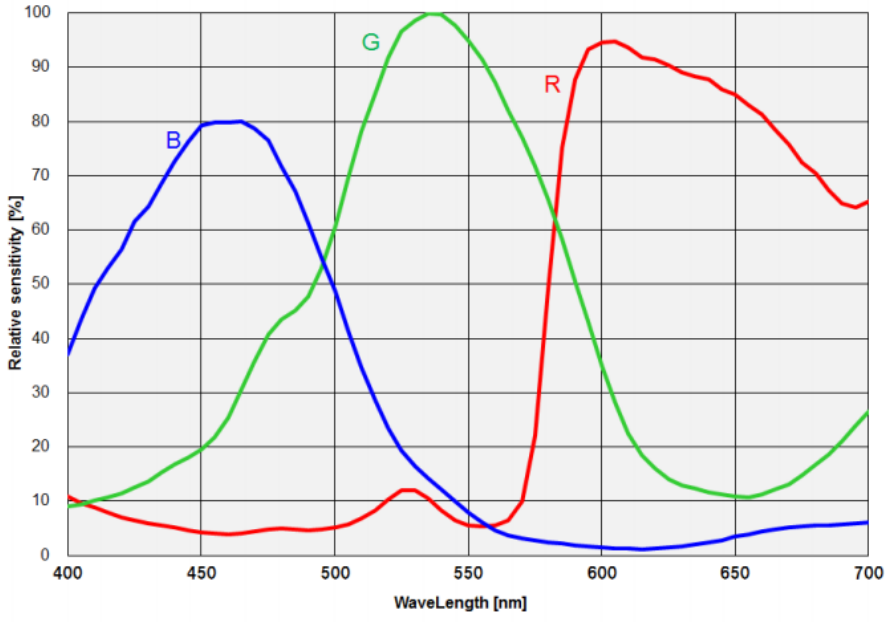


Figure 8-2 SCC410-C-TR spectral response curve

8.3 SCC571-M-TR/-10G

Table 8-3 SCC571-M-TR/-10G camera specifications

Parameter \ Model	IUC26000KMA / IUC26000KMA-AFU	IUC26000KMA-10G / IUC26000KMA-AF10G
	26.0M pixels 1.8" (APS-C) CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX571BLR-J	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	1.8" (APS-C)	
Frame rate	14fps@6224 x 4168(16bit) 37fps@3104 x 2084 110fps@2064 x 1388	45fps@6224x4168(16bit) 37fps@3104x2084 110fps@2064x1388
Conversion Gain	0.26e-(HCG) 0.78e-(LCG)	
Readout Noise	1.03e-(HCG) 2.4e-(LCG)	
Full Well	17022.88e-(HCG) 51129.19e-(LCG)	
Dynamic range	84.42dB (HCG) 86.58dB (LCG)	
Signal-to-Noise ratio	42.31dB(HCG) 47.09dB(LCG)	
Sensitivity	870.9mv	
Dark current	0.07mv	
Gain range	1x-50x	
Exposure time	150us-15sec	
Shutter	Rolling shutter	
Binning	Hardware 2x2, 3x3; Software 2x2, 3x3, 4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 16bit	
General Specifications		
Power supply	12V Power adapter	
Power consumption	4.15W	TBD
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	88mmx88mmx36.3mm	88mmx88mmx51.3mm
Weight	540g	
Lens mount	M42 Interface	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

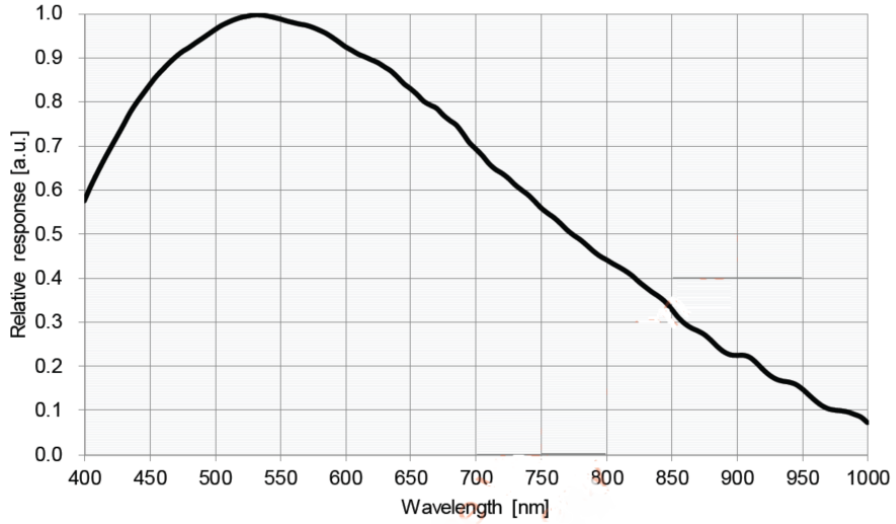


Figure 8-3 SCC571-M-TR/-10G spectral response curve

8.4 SCC571-C-TR/-10G

Table 8-4 SCC571-C-TR/-10G camera specifications

Parameter \ Model	IUC26000KPA / IUC26000KPA-AFU	IUC26000KPA-10G / IUC26000KPA-AF10G
	26.0M pixels 1.8" (APS-C) CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX571BQR-C	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	1.8" (APS-C)	
Frame rate	14fps@6224 x 4168(16bit) 37fps@3104 x 2084 110fps@2064 x 1388	45fps@6224x4168(16bit) 37fps@3104x2084 110fps@2064x1388
Conversion Gain	0.26e-(HCG) 0.78e-(LCG)	
Readout Noise	1.03e-(HCG) 2.4e-(LCG)	
Full Well	17022.88e-(HCG) 51129.19e-(LCG)	
Dynamic range	84.42dB (HCG) 86.58dB (LCG)	
Signal-to-Noise ratio	42.31dB(HCG) 47.09dB(LCG)	
Sensitivity	484.5mv	
Dark current	0.07mv	
Gain range	1x-50x	
Exposure time	150us-15sec	
Shutter	Rolling shutter	
Binning	Hardware 2x2，3x3；Software 2x2，3x3，4x4	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 16bit	
General Specifications		
Power supply	12V Power adapter	
Power consumption	4.15W	TBD
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	88mmx88mmx36.3mm	88mmx88mmx51.3mm
Weight	540g	
Lens mount	M42 Interface	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

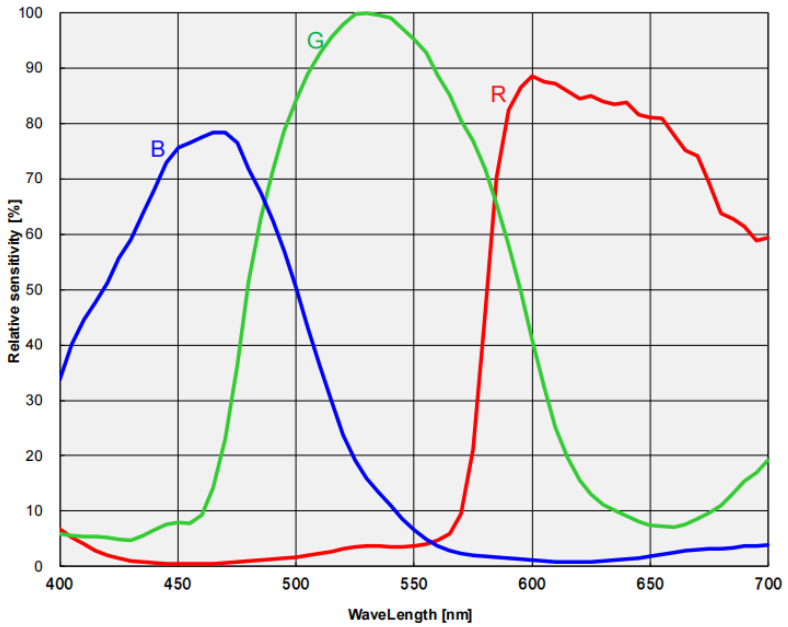


Figure 8-4 SCC571-C-TR/-10G spectral response curve

8.5 SCC342-M-TR

Table 8-5 SCC342-M-TR camera specifications

Parameter \ Model	IUC31000KMA
	31.0M pixels 1.8" (APS-C) CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX342LLA
Pixel size	3.45 μm x 3.45 μm
Sensor size	1.8" (APS-C)
Frame rate	12.0fps@6464 x 4852 45.9fps@3216 x 2426
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Peak QE	71%@575nm
Sensitivity	1830mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	31μs-15sec
Shutter	Global shutter
Binning	Hardware 2x2; Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	12V Power adapter
Power consumption	<7.7w
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	88mmx88mmx36.3mm
Weight	545g
Lens mount	M42 Interface
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

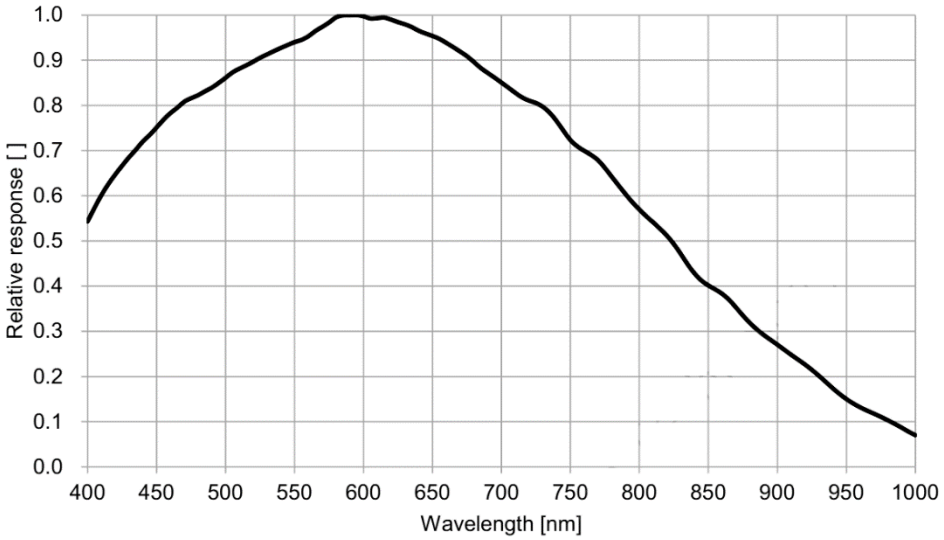


Figure 8-5 SCC342-M-TR spectral response curve

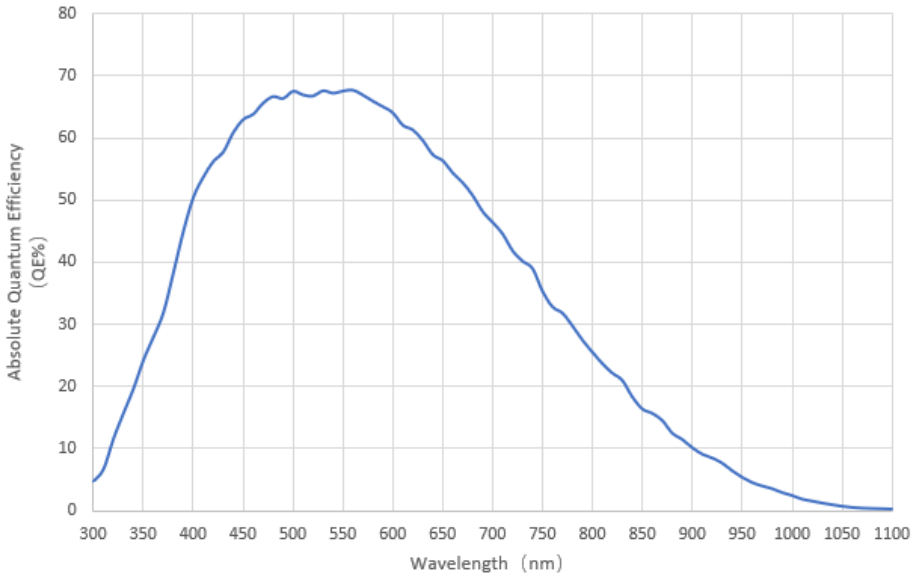


Figure 8-6 SCC342-M-TR absolute quantum efficiency

8.6 SCC342-C-TR

Table 8-6SCC342-C-TR camera specifications

Parameter \ Model	IUC31000KPA
	31.0M pixels 1.8" (APS-C) CMOS USB3.0 industrial camera
Camera	
Sensor model	Sony IMX342LQA
Pixel size	3.45 μm x 3.45 μm
Sensor size	1.8" (APS-C)
Frame rate	12.0fps@6464 x 4852 45.9fps@3216 x 2426
Dynamic range	73.6dB
Signal-to-Noise ratio	40.4dB
Sensitivity	1146mV
Dark current	0.15mV
Gain range	1x-50x
Exposure time	31μs-15sec
Shutter	Global shutter
Binning	Software 2x2, 3x3, 4x4
Data interface	USB3.0 (USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	12V Power adapter
Power consumption	<7.7w
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃
Humidity	20%-80%, no condensation
Size	88mmx88mmx36.3mm
Weight	545g
Lens mount	M42 Interface
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

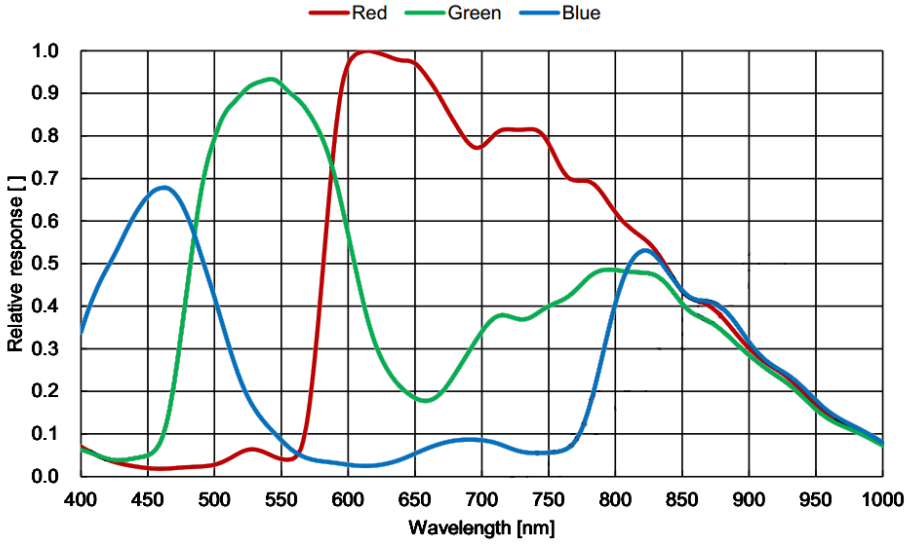


Figure 8-7 SCC342-C-TR spectral response curve

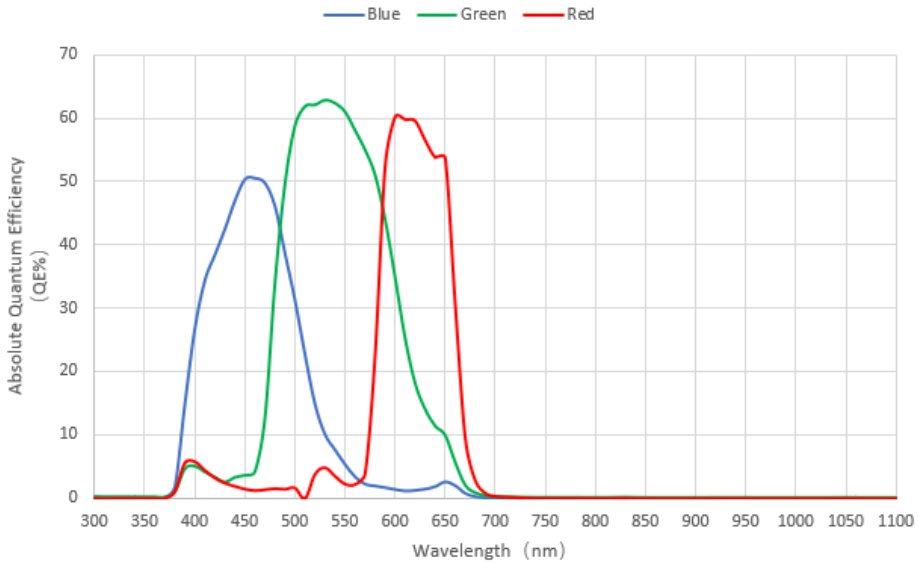


Figure 8-8 SCC342-C-TR absolute quantum efficiency

8.7 SCC455-M-TR/-10G

Table 8-7 ISCC455-M-TR/-10G camera specifications

Parameter \ Model	IUC60000KMA / IUC60000KMA-AFU	IUC60000KMA-10G / IUC60000KMA-AF10G
	60.0M pixels 2.7" (Full Frame) CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX455ALK	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	2.7" (Full Frame)	
Frame rate	6.1fps@9568 x 6380(16bit) 24.6fps@4784 x 3190 55.8fps@3184 x 2124 191.0@1040 x 706	20fps@9568x6380(16bit) 40fps@4784x3190 57.52fps@3184x2124 199.37@1040x706
Conversion Gain	0.79e-(HCG) 1.62e-(LCG)	
Readout Noise	3.51e-(HCG) 5.39e-(LCG)	
Full Well	51550.45e-(HCG) 87353.34e-(LCG)	
Dynamic range	83.34dB (HCG) 84.18dB (LCG)	
Signal-to-Noise ratio	47.12dB(HCG) 49.41dB(LCG)	
Sensitivity	870.9mV	
Dark current	0.04mV	
Gain range	1x-50x	
Exposure time	150us-15sec	
Shutter	Rolling shutter	
Binning	Hardware 2x2, 3x3, 9x9; Software 2x2, 3x3, 9x9	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 16bit	
General Specifications		
Power supply	12V Power adapter	
Power consumption	<5.5W	TBD
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	88mmx88mmx36.3mm	88mmx88mmx51.3mm
Weight	540g	
Lens mount	M52 Interface	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

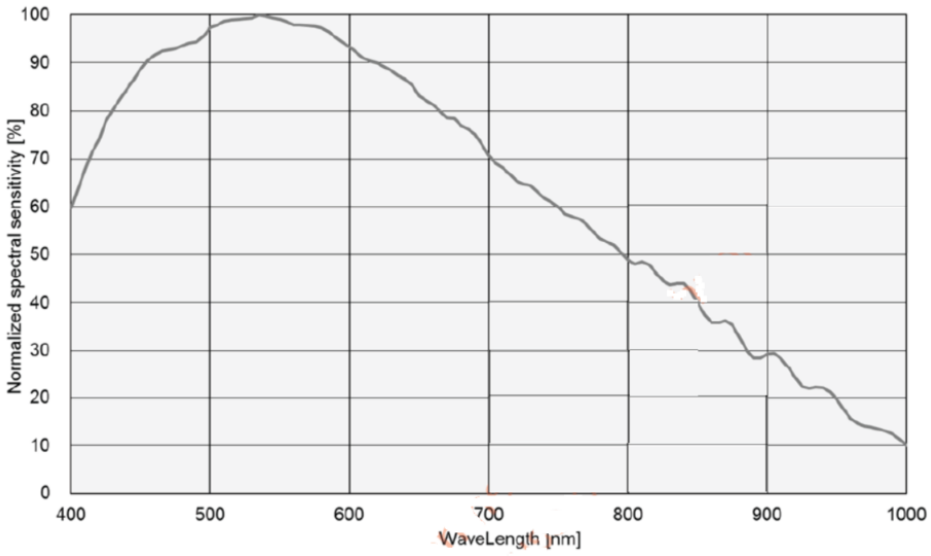


Figure 8-9 SCC455-M-TR/-10G spectral response curve

8.8 SCC455-C-TR/-10G

Table 8-8 SCC455-C-TR/-10G camera specifications

Parameter \ Model	IUC60000KPA / IUC60000KPA-AFU	IUC60000KPA-10G / IUC60000KPA-AF10G
	60.0M pixels 2.7" (Full Frame) CMOS USB3.0 / 10GigE industrial camera	
Camera		
Data interface	USB3.0	10GigE
Sensor model	Sony IMX455AQK	
Pixel size	3.76 μm x 3.76 μm	
Sensor size	2.7" (Full Frame)	
Frame rate	6.1fps@9568 x 6380(16bit) 24.6fps@4784 x 3190 55.8fps@3184 x 2124 191.0@1040 x 706	20fps@9568x6380(16bit) 40fps@4784x3190 57.52fps@3184x2124 199.37@1040x706
Conversion Gain	0.79e-(HCG) 1.62e-(LCG)	
Readout Noise	3.51e-(HCG) 5.39e-(LCG)	
Full Well	51550.45e-(HCG) 87353.34e-(LCG)	
Dynamic range	83.34dB (HCG) 84.18dB (LCG)	
Signal-to-Noise ratio	47.12dB(HCG) 49.41dB(LCG)	
Sensitivity	484.5mV	
Dark current	0.07mV	
Gain range	1x-50x	
Exposure time	150us-15sec	
Shutter	Rolling shutter	
Binning	Hardware 2x2, 3x3, 9x9; Software 2x2, 3x3, 9x9	
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output	
Data Format	8bit / 16bit	
General Specifications		
Power supply	12V Power adapter	
Power consumption	<5.5W	TBD
Temperature	Working temperayure-10~50℃, storage temperature-30~70℃	
Humidity	20%-80%, no condensation	
Size	88mmx88mmx36.3mm	88mmx88mmx51.3mm
Weight	540g	
Lens mount	M52 Interface	
Software	EHDView/ SDK	
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64	
Certification	CE, FCC	

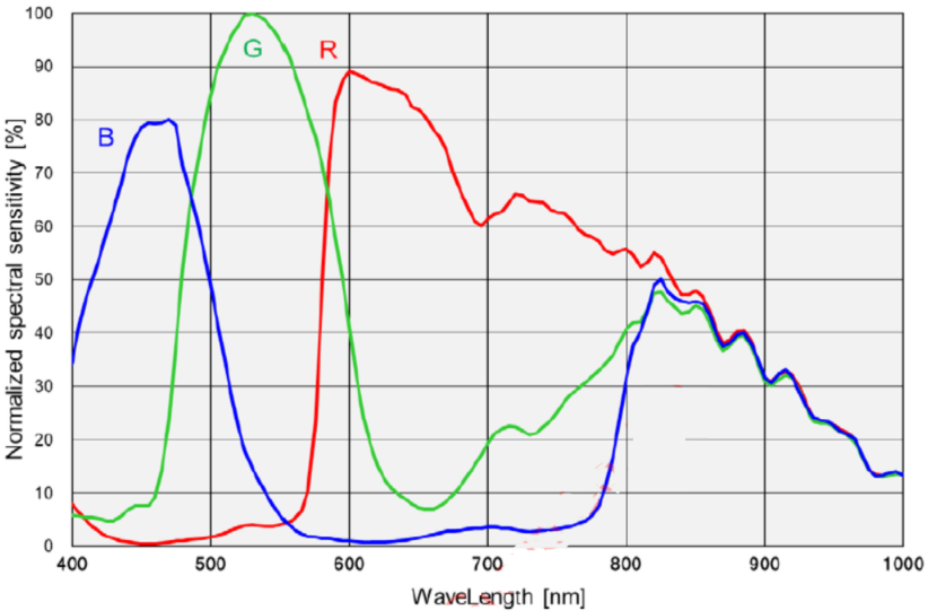


Figure 8-10 SCC455-C-TR/-10G spectral response curve

9 SCD Series Technical Specifications (2)

9.1 SCD16000KMA (NIRE)

Parameter \ Model	IUD16000KMA
	16M pixels 1.8" CMOS USB3.0 industrial camera
Camera	
Sensor model	PYTHON 16K
Pixel size	4.5 μm x 4.5 μm
Sensor size	1.8"
Frame rate	22.5@4096x4096
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	TBD
Dark current	TBD
Gain range	1x-50x
Exposure time	1us-60s
Shutter	Global shutter
Binning	Hardware 1x1, 2x2, 3x3
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	Two non-isolated input, Three non-isolated output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	59mm×59mm×27.2mm
Weight	139.3g
Lens mount	M42-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

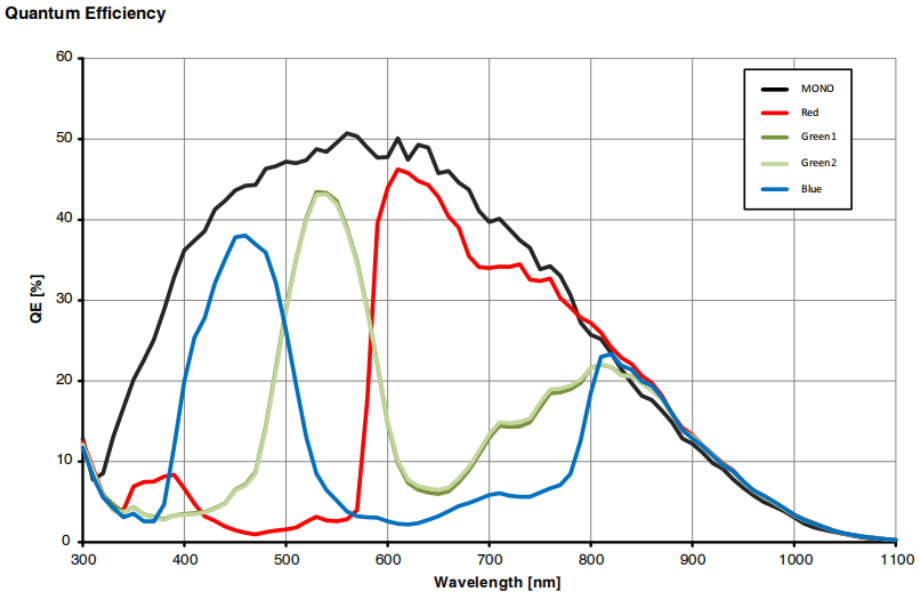


Figure 9-1 SCD16000KMA spectral response curve

9.2 SCD25000KMA (NIRE)

Table 9-2 SCD25000KMA camera specifications

Model / Parameter	IUD25000KMA
	25M 2.04" CMOS USB3.0 industrial camera
Camera	
Sensor model	PYTHON 25K
Pixel size	4.5 μm x 4.5 μm
Sensor size	2.04"
Frame rate	14.8fps@5120x5120 14.8fps@2560x2560 14.8fps@1664x1664
Dynamic range	59dB
Signal-to-Noise ratio	41dB
Sensitivity	<1/5000
Dark current	3.9e⁻/s@ 20°C
Gain range	1x-50x
Exposure time	1us-60s
Shutter	Global shutter
Binning	Hardware 1x1, 2x2, 3x3
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	Two non-isolated input, Three non-isolated output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	59mm×59mm×27.2mm
Weight	139.3g
Lens mount	M42-mount
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

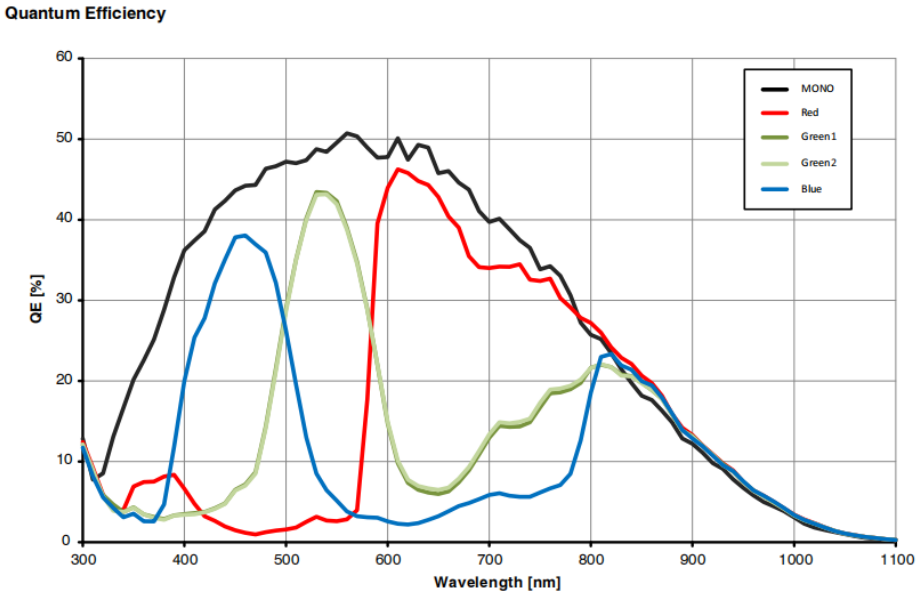


Figure 9-2 SCD25000KMA spectral response curve

10 SCE Series Technical Specifications (1)

10.1 SCE1800KMA

Table 10-1 SCE1800KMA camera specifications

Model / Parameter	IUE1800KMA
	1.8M CMOS USB3.0 industrial camera
Camera	
Sensor model	CMOS Sensor
Pixel size	96 μm x 96 μm
Sensor size	TBD
Frame rate	120fps@1200x1536
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	TBD
Dark current	2200e/s/pixel@25℃
Gain range	1x-50x
Exposure time	10us-15s
Shutter	Rolling shutter
Binning	Hardware 1x1, 2x2, 3x3
Data interface	USB3.0(USB3.1 GEN1)
Digital I/O	One optical-coupling isolated input, one optical-coupling isolated output, two non-isolated input and output
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB3.0
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	220mmx160mmx28.6mm
Weight	TBD
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

11 EHD-AVCAM Series Technical Specifications (1)

11.1 AVCAM290A

Table 11-1 EHD-AVCAM290A camera specifications

Parameter \ Model	AVCAM290A
	4.0M pixels 1/2.8" CMOS CVBS industrial camera
Camera	
Sensor model	Sony IMX307
Pixel size	2.9 μm x 2.9 μm
Sensor size	1/2.8"
Frame rate	25fps@720 × 576
Dynamic range	TBD
Signal-to-Noise ratio	TBD
Sensitivity	TBD
Dark current	2200e/s/pixel@25℃
Gain range	1x-100x
Exposure time	105us-20ms
Shutter	Rolling shutter
Binning	Hardware 1x1, 2x2, 3x3
Data interface	CVBS(PAL-N)
Data Format	8bit / 12bit
General Specifications	
Power supply	Power with USB2.0
Power consumption	TBD
Temperature	Working temperature -10~50℃, storage temperature -30~70℃
Humidity	20%-80%, no condensation
Size	45mmx58.5mm
Weight	TBD
Lens mount	M12
Software	EHDView/ SDK
Platform and architecture	Win32/WinRT/Linux/macOS/Android；X86/X64/armhf/armel/arm64
Certification	CE, FCC

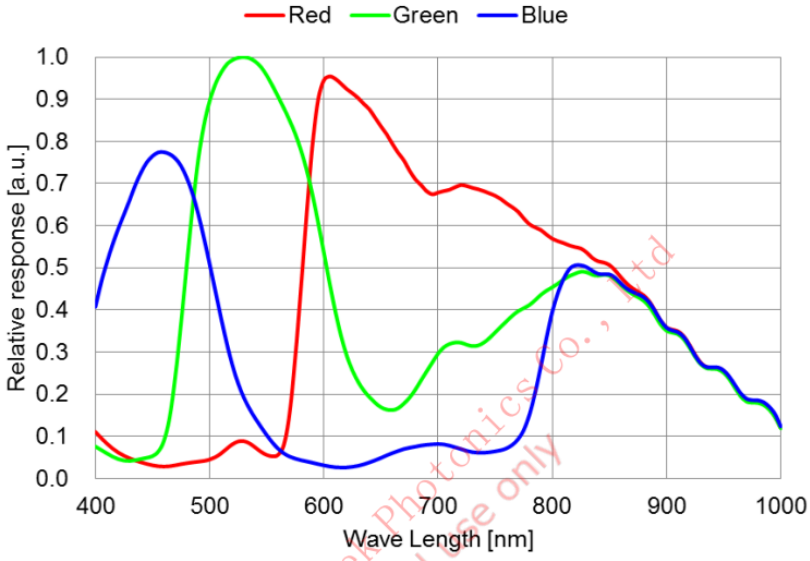


Figure 11-1 EHD-AVCAM290A spectral response curve

12 Camera Dimension and Interface

12.1 MaxCam Series USB3 Camera

12.1.1 Mechanical Housing Dimensions

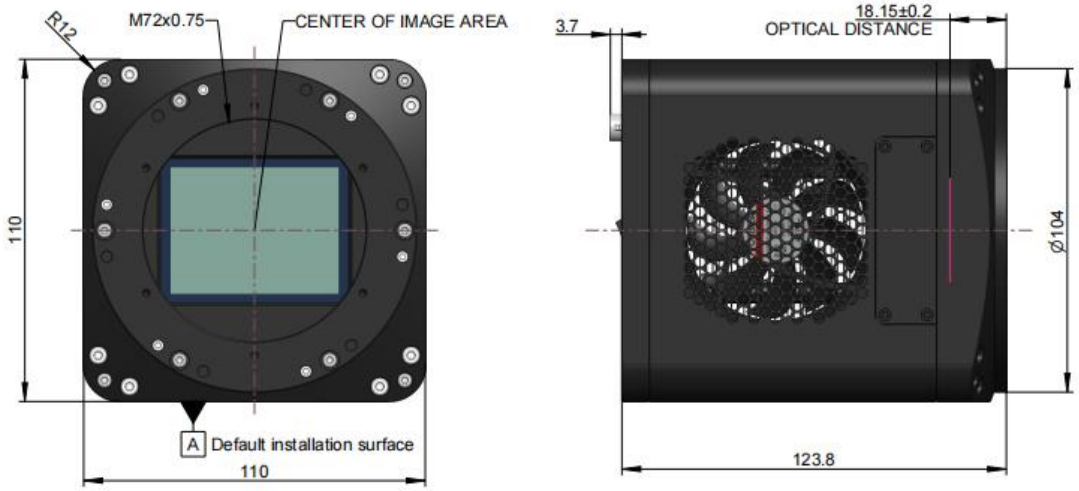


Figure 12-1 MaxCam-811M/C-TE & MaxCam-411M/C-TE dimensions (mm)

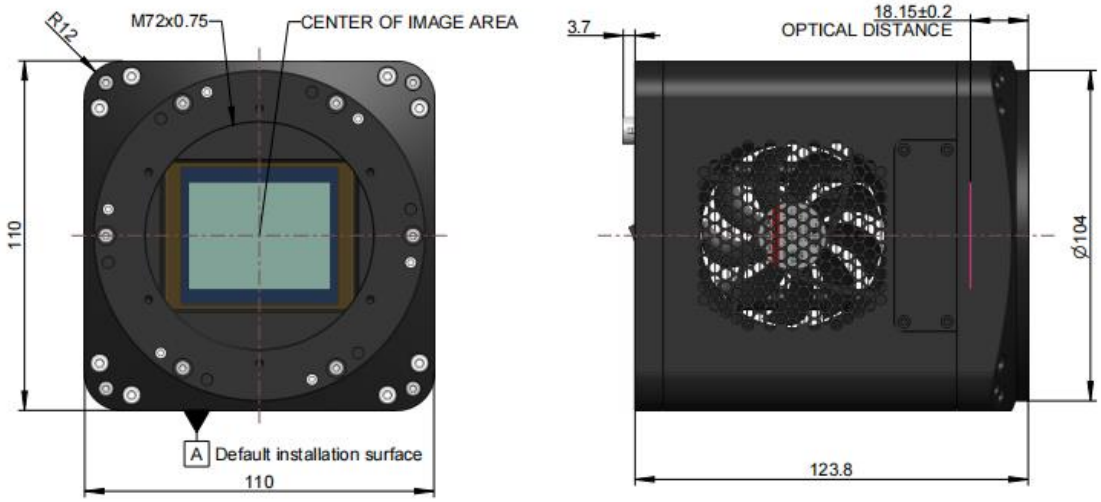


Figure 12-2 MaxCam-461M-TE dimensions (mm)

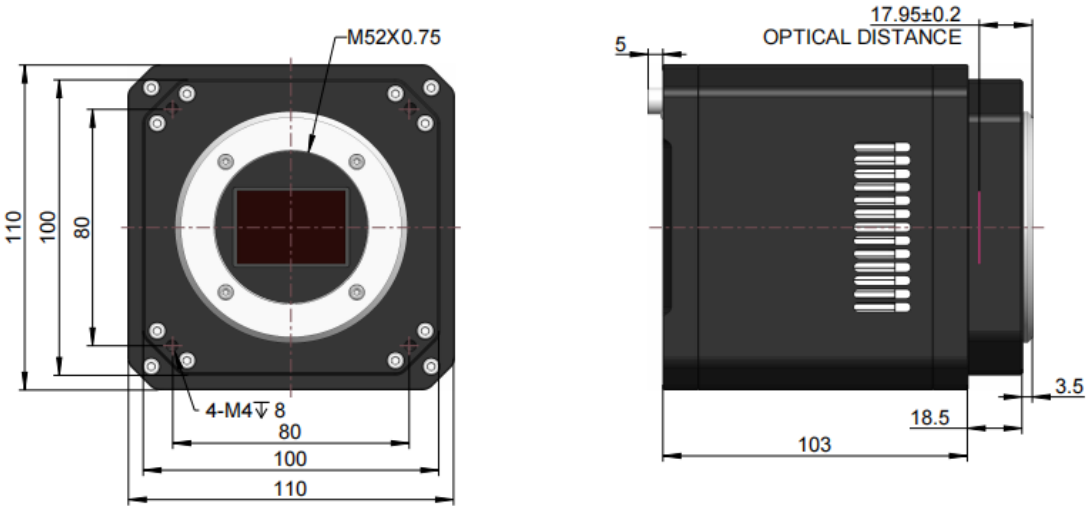


Figure 12-3 MaxCam-455M/C-TE& MaxCam-410C-TR dimensions (mm)

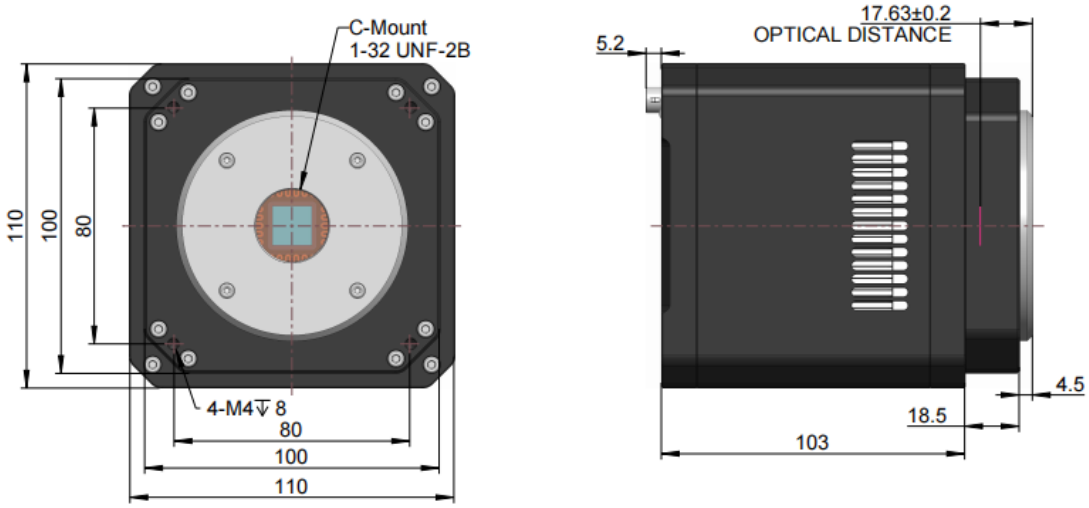


Figure 12-4 MaxCam-2020UV-TE dimensions (mm)

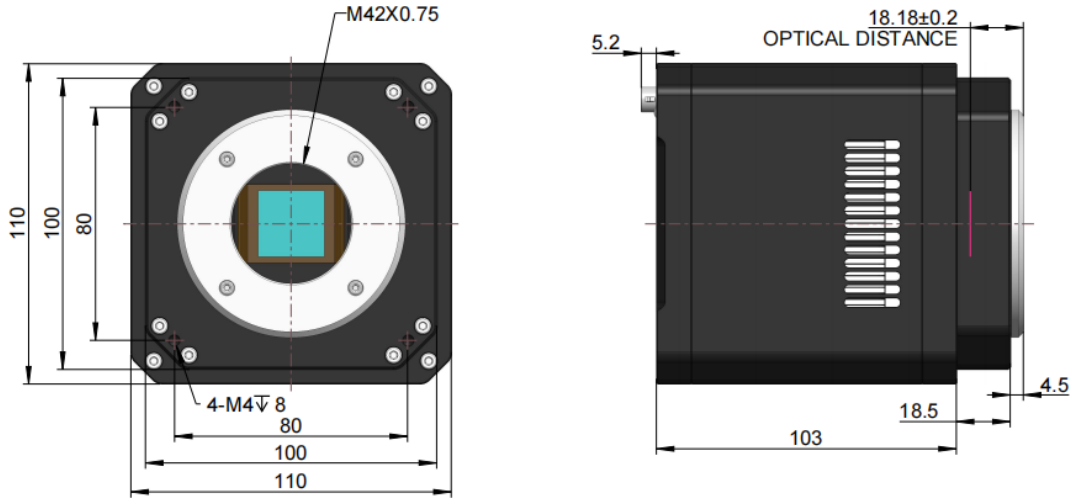


Figure 12-5 MaxCam-400UV-TE dimensions (mm)

12.1.2 Interface Description



Figure 12-6 MaxCam-811, -411, -461 Camera interface diagram

Table 12-1 MaxCam-811, -411, -461 Camera interface definition

Item	Specification
1	DC 19V power port
2	Trigger 7PIN
3	USB 3.0 port
4	Power switch
5	Power LED indicators
6	System LED indicators
7	TEC LED indicators
8	FAN LED indicators

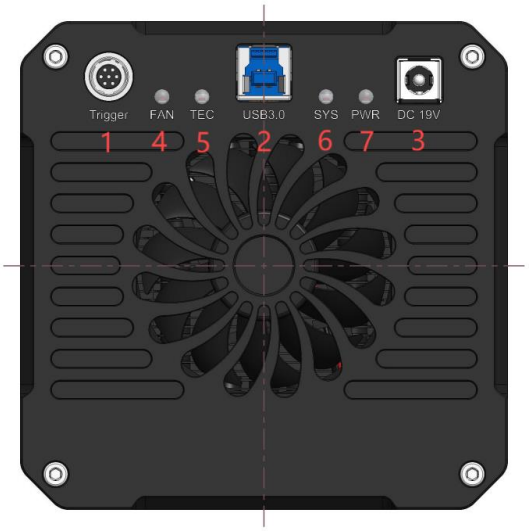


Figure 12-7 MaxCam-455, -410C, -2020 Camera interface diagram

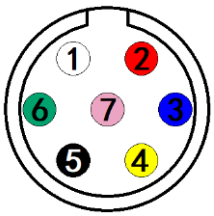
Table 12-2 MaxCam-455, -410C, -2020 interface definition

Item	Specification
1	Trigger 7PIN
2	USB 3.0/ USB 2.0 port
3	DC 19V power port

4	FAN LED indicators
5	TEC LED indicators
6	System LED indicators
7	Power LED indicators

12.1.3 Power Supply and I/O Connector

Table 12-3 MaxCam series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	19V	19VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.1.4 Packing Information

Table 12-4 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
	Power adapter	1	Input: AC 100~240V 50Hz/60Hz,output: DC 19V 4A
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	USB3.0 or Micro USB3.0 cable
4	Lens (optional)	1	M72 or M52 or M42 or C-mount lens

12.2 MaxCam Series GigECamera

12.2.1 Mechanical Housing Dimensions

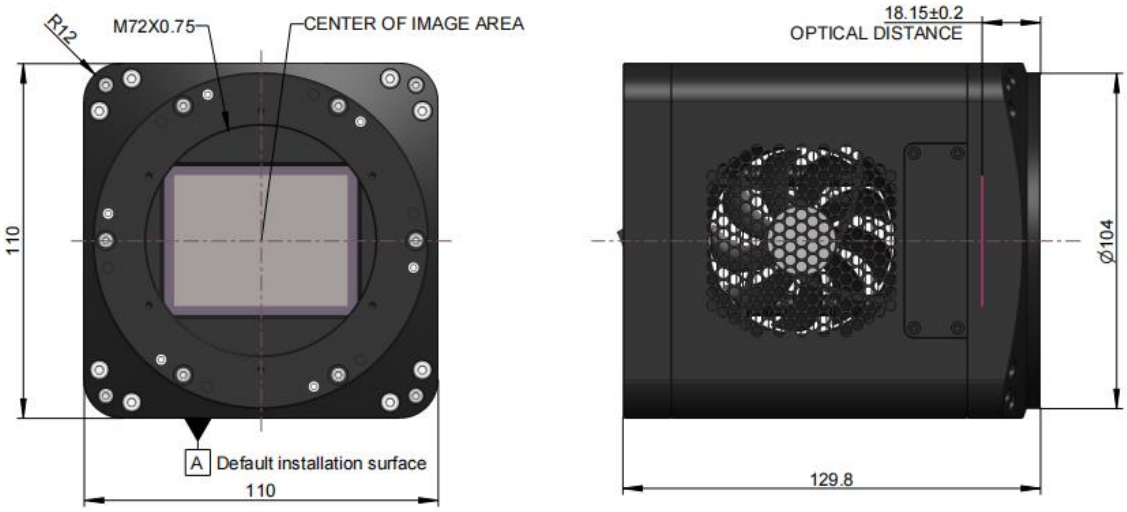


Figure 12-8 MaxCam- 811M/C-TE& MaxCam-411M/C-TE dimensions (mm)

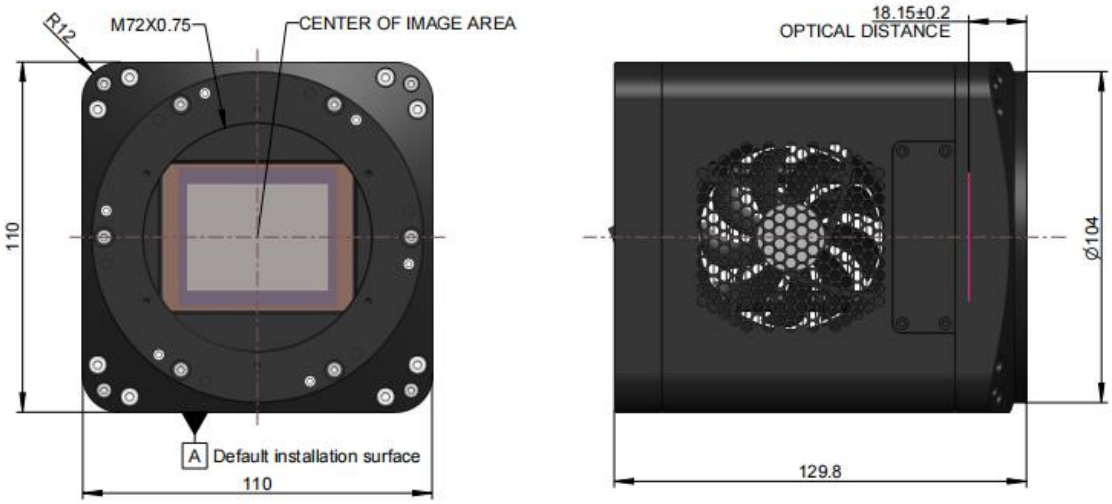


Figure 12-9 MaxCam-461M/C-TE dimensions (mm)

12.2.2 Interface Description



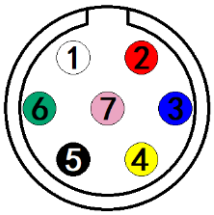
Figure 12-10 MaxCam-811, -411, -461 Camera interface diagram

Table 12-5 MaxCam-811, -411, -461 Camera interface definition

Item	Specification
1	DC 19V power port
2	Trigger 7PIN
3	10GigE port
4	Power switch
5	Power LED indicators
6	System LED indicators
7	TEC LED indicators
8	FAN LED indicators

12.2.3 Power Supply and I/O Connector

Table 12-6 MaxCam series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	19V	19VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.2.4 Packing Information

Table 12-7 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
	Power adapter	1	Input: AC 100~240V 50Hz/60Hz,output: DC 19V 4A
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	GigE cable
4	Lens (optional)	1	M72 or M52 or M42 or C-mount lens

12.3 SC-ITR Series USB3 Camera

12.3.1 Mechanical Housing Dimensions

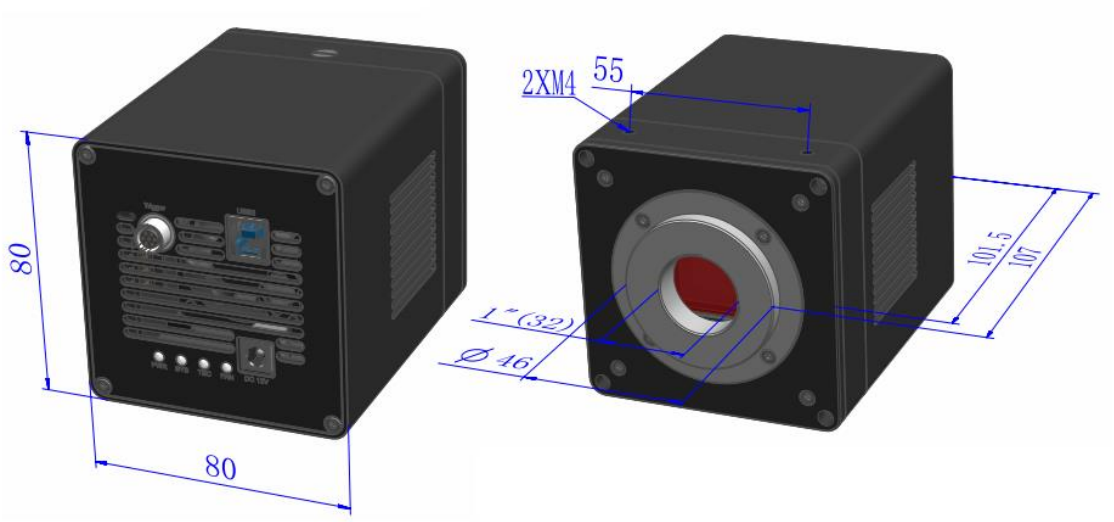


Figure 12-11 SC-ITR dimensions (mm)

12.3.2 Interface Description

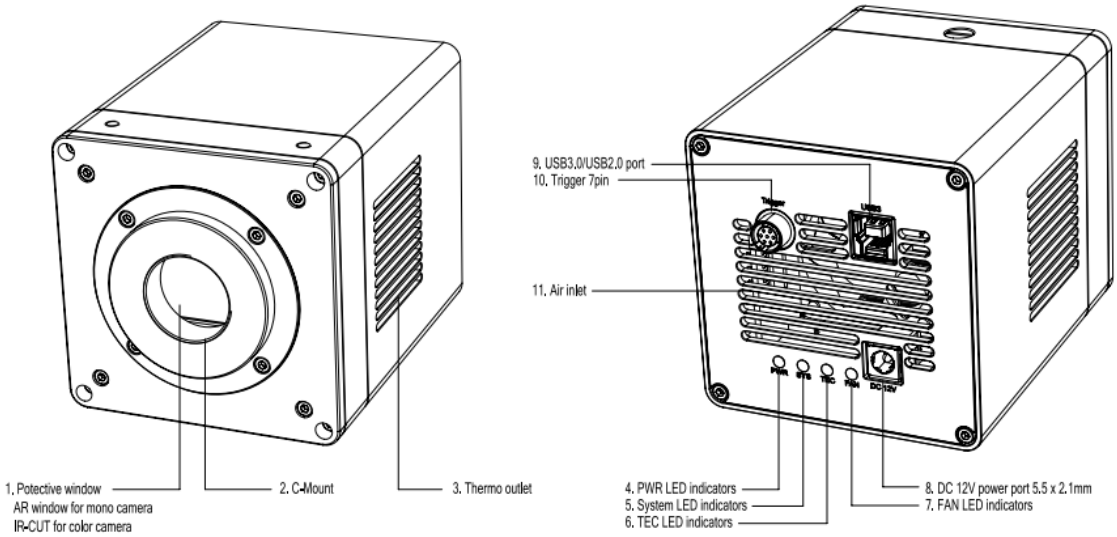


Figure 12-12 SC-ITR Camera interface diagram

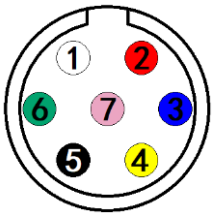
Table 12-8 SC-ITR Camera interface definition

Item	Specification
1	Protective window: AR window for mono camera; IR-CUT for color camera
2	C mount
3	Thermo outlet
4	Power LED indicators
5	System LED indicators
6	TEC LED indicators
7	FAN LED indicators
8	DC 12V power port
9	USB 3.0/ USB 2.0 port
10	Trigger 7PIN

11	Air inlet

12.3.3 Power Supply and I/O Connector

Table 12-9 MaxCam series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.3.4 Packing Information

Table 12-10 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
	Power adapter	1	Input: AC 100~240V 50Hz/60Hz,output: DC 12V 3A
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	USB3.0 cable
4	Lens (optional)	1	C-mount lens

12.4 SC-ITR Series GigE Camera

12.4.1 Mechanical Housing Dimensions

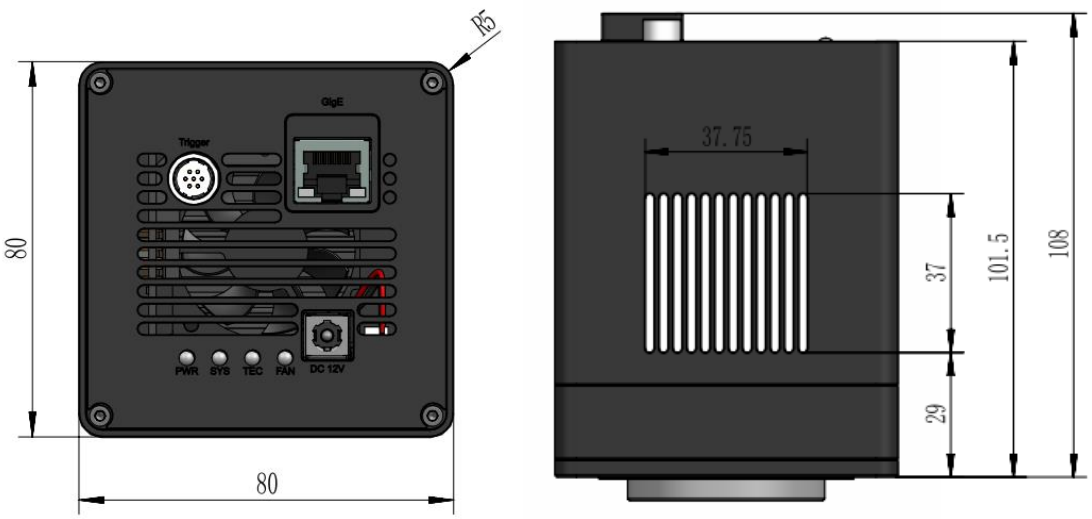


Figure 12-13 SC-ITR dimensions (mm)

12.4.2 Interface Description



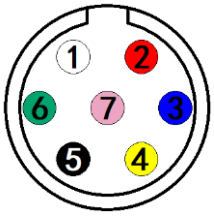
Figure 12-14 SC-ITR Camera interface diagram

Table 12-11 SC-ITR Camera interface definition

Item	Specification
1	Trigger 7PIN
2	GigE port
3	DC 12V power port
4	Power LED indicators
5	System LED indicators
6	TEC LED indicators
7	FAN LED indicators

12.4.3 Power Supply and I/O Connector

Table 12-12 SC-ITR series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.4.4 Packing Information

Table 12-13 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
	Power adapter	1	Input: AC 100~240V 50Hz/60Hz,output: DC 12V 3A
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	GigE cable
4	Lens (optional)	1	C-mount lens

12.5 SC-CTR Series USB3 Camera

12.5.1 Mechanical Housing Dimensions

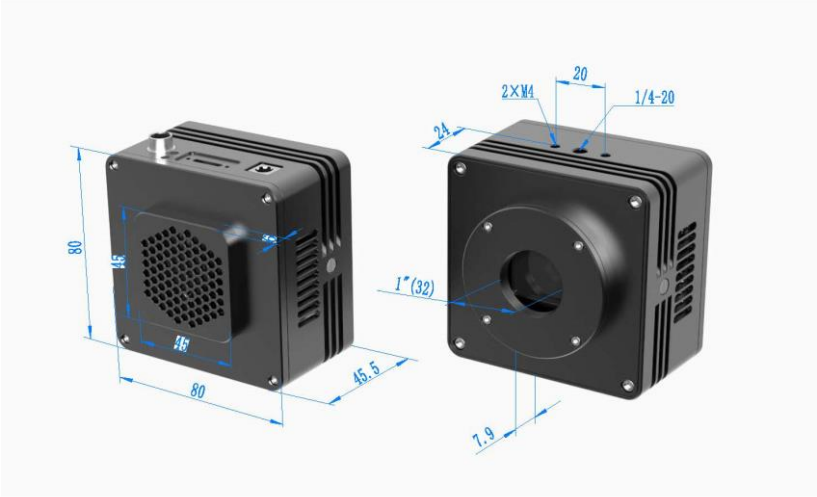


Figure 12-15 SC-CTR dimensions (mm)

12.5.2 Interface Description

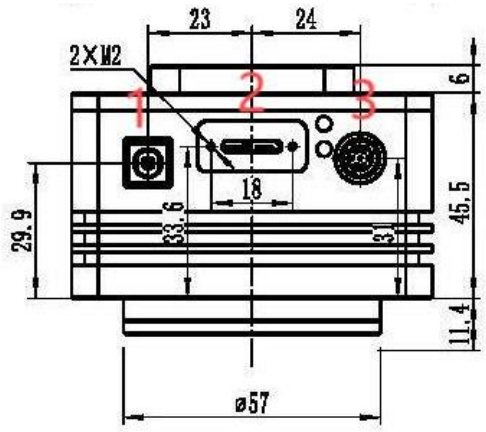


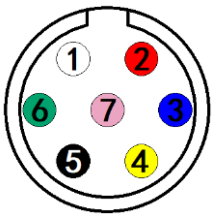
Figure 12-16 SC-CTR Camera interface diagram

Table 12-14 SC-CTR Camera interface definition

Item	Specification
1	DC 12V power port
2	USB 3.0 port
3	Trigger 7PIN

12.5.3 Power Supply and I/O Connector

Table 12-15 SC-CTR series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.5.4 Packing Information

Table 12-16 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
	Power adapter	1	Input: AC 100~240V 50Hz/60Hz,output: DC 12V 3A
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	Micro USB3.0 cable
4	Lens (optional)	1	C-mount lens

12.6 SC-CTR Series GigE Camera

12.6.1 Mechanical Housing Dimensions

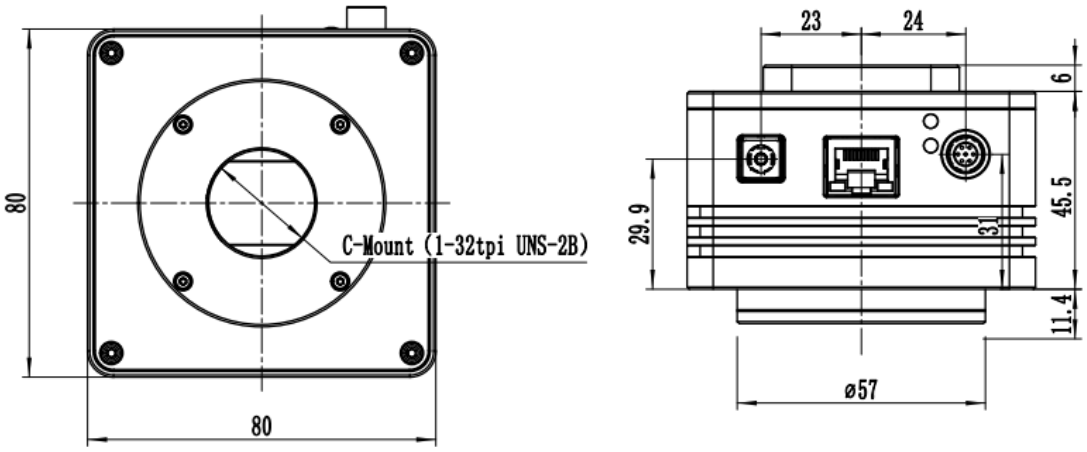


Figure 12-17 SC-CTR dimensions (mm)

12.6.2 Interface Description

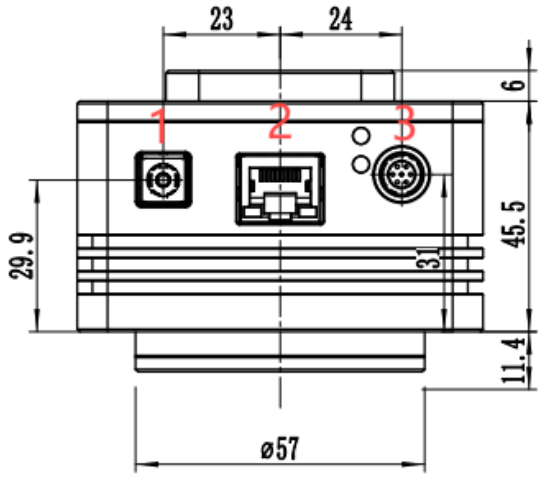


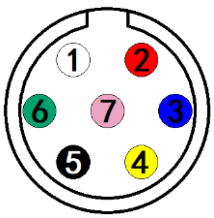
Figure 12-18 SC-CTR Camera interface diagram

Table 12-17 SC-CTR Camera interface definition

Item	Specification
1	DC 12V power port
2	GigE port
3	Trigger 7PIN

12.6.3 Power Supply and I/O Connector

Table 12-18 SC-CTR series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.6.4 Packing Information

Table 12-19 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
	Power adapter	1	Input: AC 100~240V 50Hz/60Hz,output: DC 12V 3A
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	GigE cable
4	Lens (optional)	1	C-mount lens

12.7 ICM Series USB3 Camera

12.7.1 33mm Mechanical Housing Dimensions

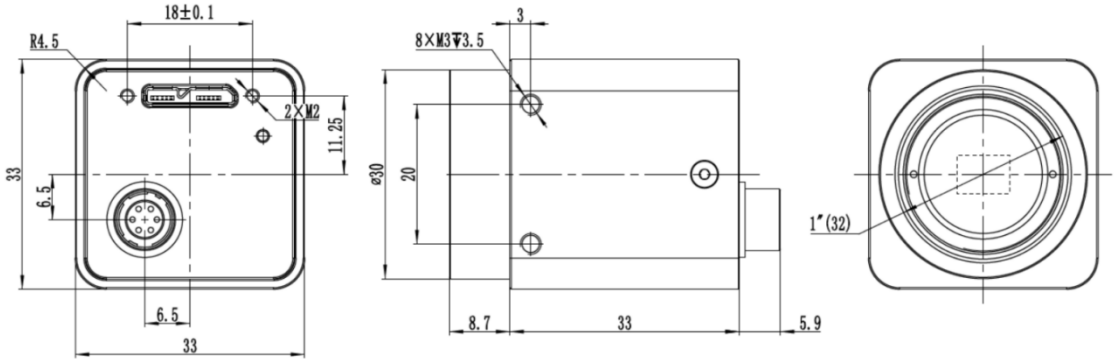


Figure 12-19 Dimensions of camera housing(mm)

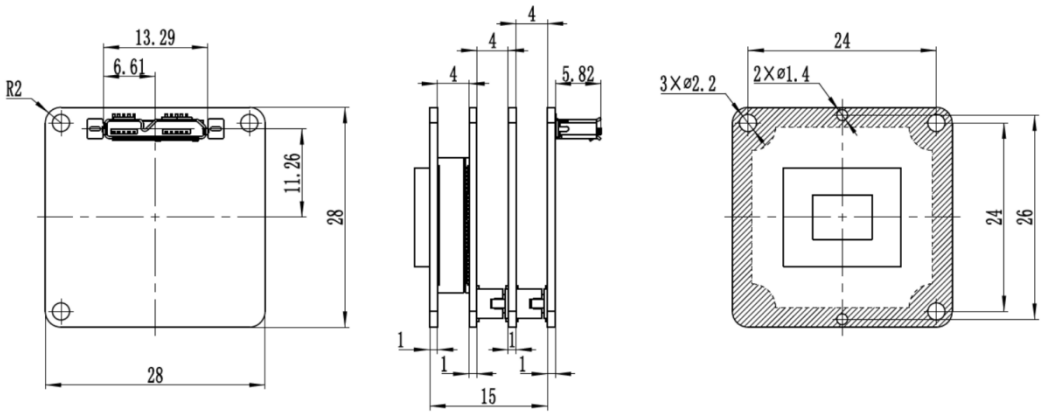


Figure 12-20 Dimensions of circuit board(mm)

12.7.2 38mm Mechanical Housing Dimensions

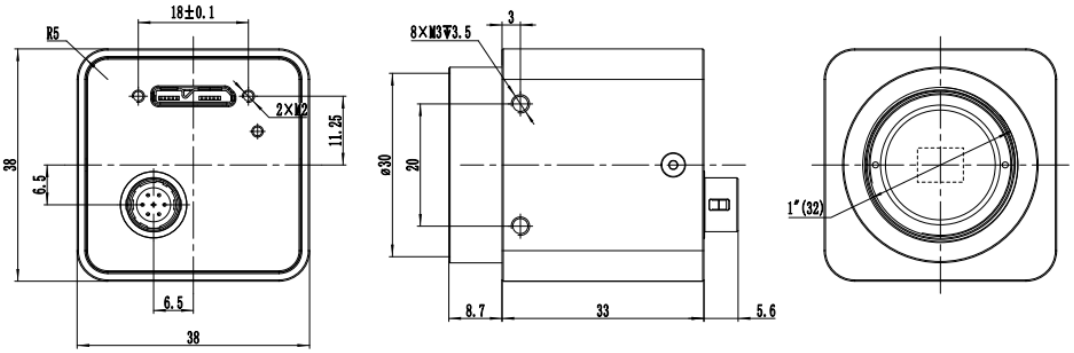


Figure 12-21 Dimensions of camera housing(mm)

12.7.3 Interface Description

The back of the industrial camera is shown in Figure 12-22. It has standard USB3.0 output, 6 Pin I/O port (aviation head) and on/off indicator. It has two M2 screw holes on both sides of USB 3.0 port to fix the cable. The holes reduce cable loosening caused by field vibration.

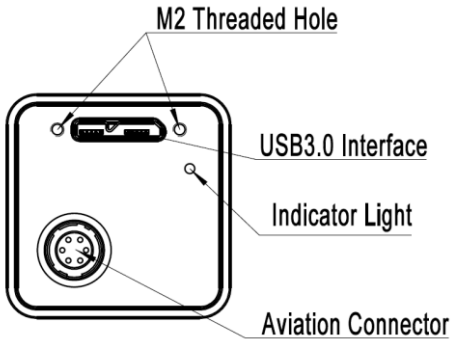


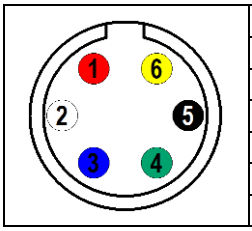
Figure 12-22 Schematic diagram of camera back panel

12.7.4 Power Supply and I/O Connector

The hardware version number of model I3CMOS00500KMA and I3ISPM00500KPA is V1, and the other models is V2.

The pin signal definition for the camera 6 Pin I/O connector of hardware version V1 is shown in Table 12-20.

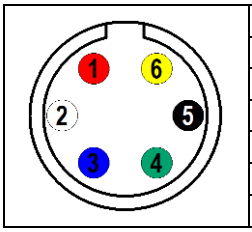
Table 12-20 Pin signal definition



Color	Pin	Signal	Signal description
red	1	DIR_IN	Direct-coupled input signal (line2)
white	2	OPTO_GND	Opto-isolated signal ground
blue	3	OPTO_OUT	Opto-isolated output signal(line1)
green	4	OPTO_IN	Opto-isolated input signal(line0)
black	5	GND	Direct-coupled signal ground
yellow	6	DIR_OUT	Direct-coupled output signal(line3)

The pin signal definition for the camera 6 Pin I/O connector with hardware version number V2 and above is shown in Table 12-21.

Table 12-21 V2.0 and above pin signal definitions



Color	Pin	Signal	Signal description
red	1	DIR_GPIO	Direct-coupled General Purpose I/O (Software configurable input / output) (line2)
white	2	OPTO_GND	Opto-isolated signal ground
blue	3	OPTO_OUT	Opto-isolated output signal(line1)
green	4	OPTO_IN	Opto-isolated input signal(line0)
black	5	GND	Direct-coupled signal ground
yellow	6	5V	5 VDC power input

12.7.5 Packing Informatio

Table 12-22 Packing information and recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	6 Pin cable or extended cable
3	Cable	1	Micro USB3.0 cable
4	Lens (optional)	1	C-mount lens

12.8 ICM Series GigE Camera

12.8.1 Mechanical Housing Dimensions

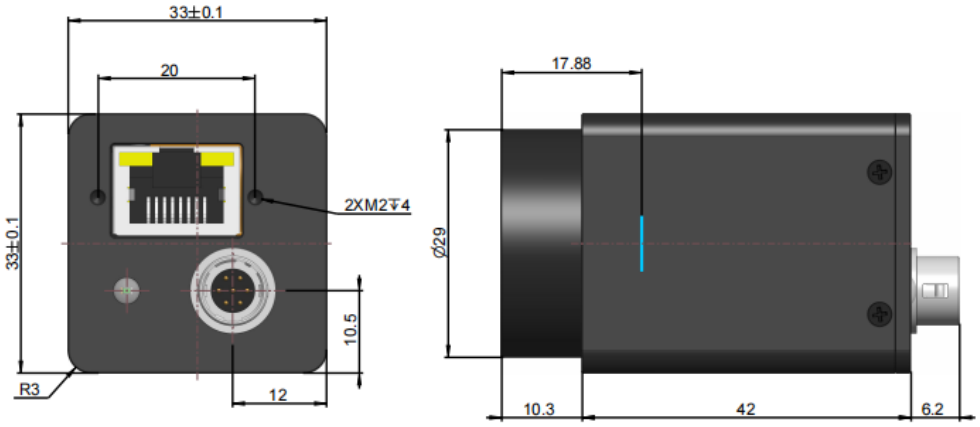


Figure 12-23 Dimensions of camera housing(mm)

12.8.2 Interface Description

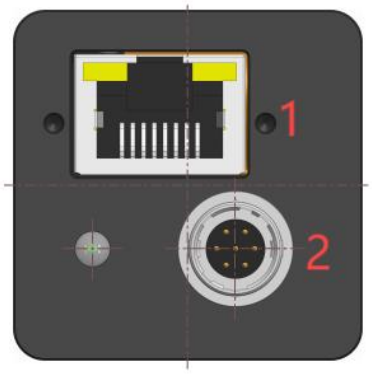


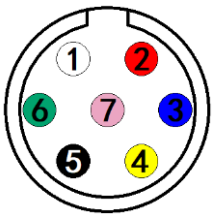
Figure 12-24 Schematic diagram of camera back

panel Table 12-23 ICM Camera interface definition

Item	Specification
1	GigE port
2	Trigger 7PIN

12.8.3 Power Supply and I/O Connector

Table 12-24 Pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.8.4 Packing Informatio

Table 12-25 Packing information and recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	GigE cable

4	Lens (optional)	1	C-mount lens

12.9 SCM/SCA Series USB3 Camera

12.9.1 Mechanical Housing Dimensions

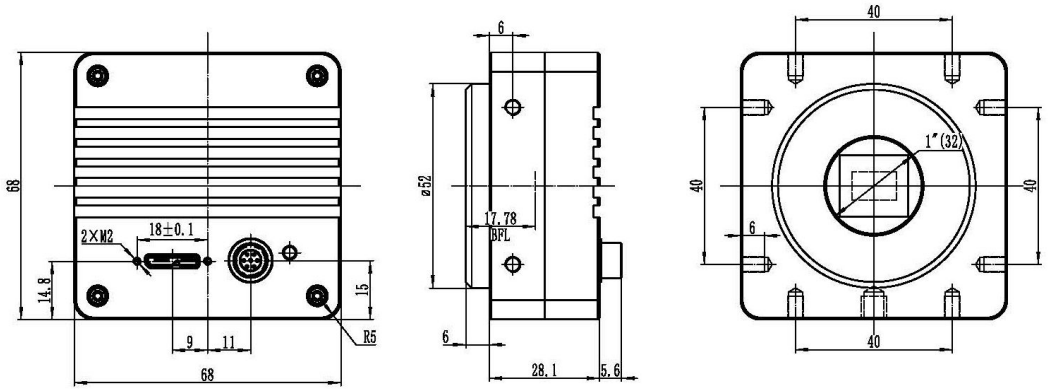


Figure 12-25 Dimensions of SCM/SCA camera housing (mm)

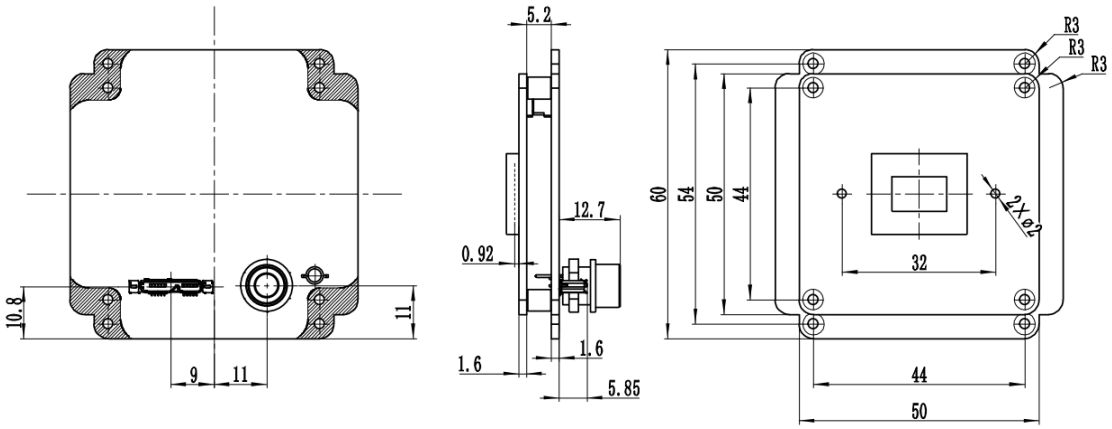


Figure 12-26 Dimensions of SCM/SCA circuit board (mm)

12.9.2 Interface Description

The back of the industrial camera is shown in Figure 12-27. It has standard USB3.0 output, 7 Pin I/O port (aviation head) and on/off indicator. It has two M2 screw holes on both sides of USB 3.0 port to fix the cable. The holes reduce cable loosening caused by field vibration.

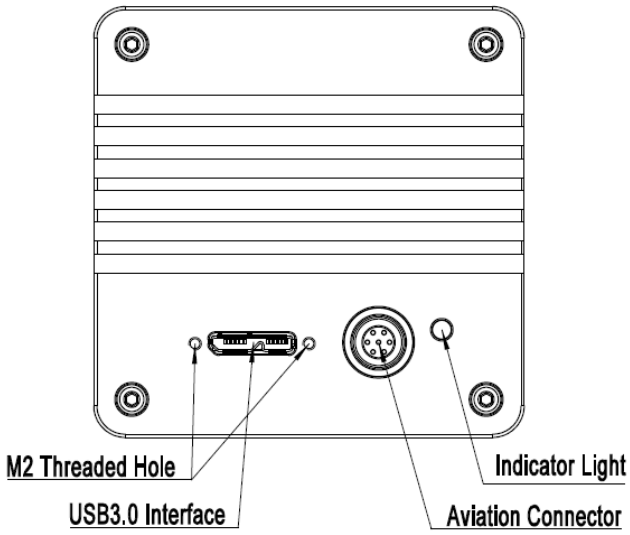
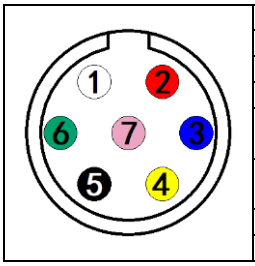


Figure 12-27 Schematic diagram of SCM/SCA camera back panel

12.9.3 Power Supply and I/O Connector

Table 12-26 SCM/SCA series pin signal definition



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.9.4 Packing Information

Table 12-27 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	Micro USB3.0 cable
4	Lens (optional)	1	C-mount lens

12.10 IUB Series USB3 Camera

12.10.1Mechanical Housing Dimensions

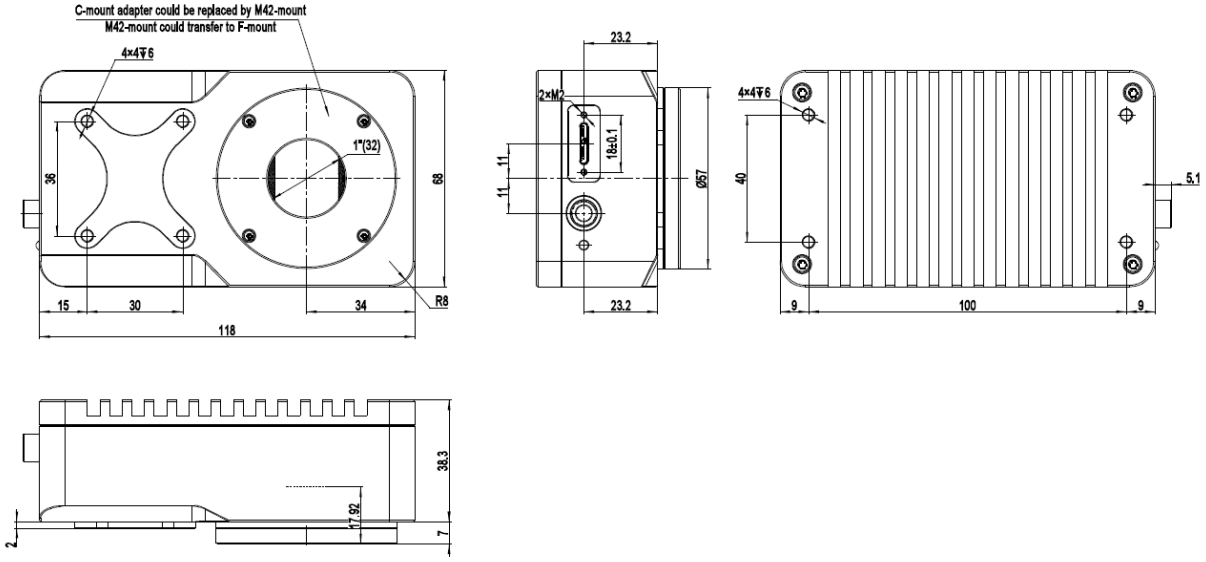


Figure 12-28 Dimensions of IUB camera housing (mm)

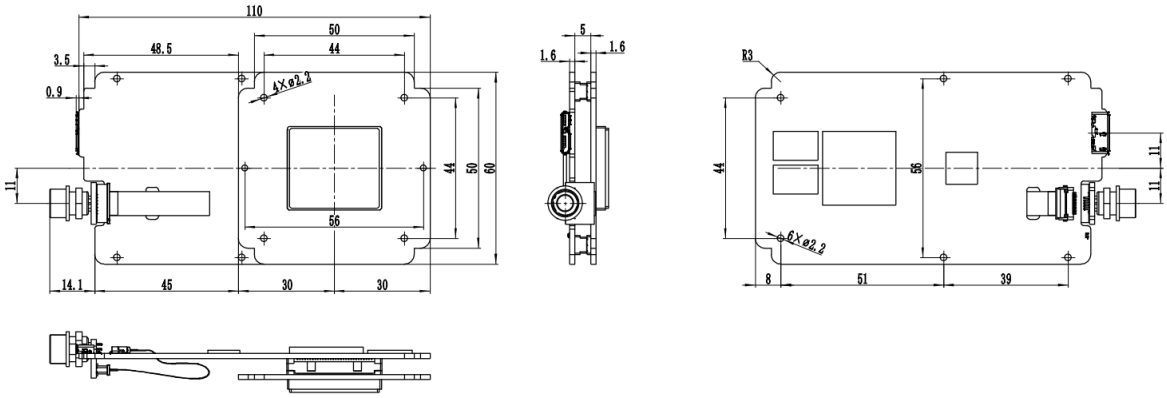


Figure 12-29 Dimensions of IUB circuit board (mm)

12.10.2Interface Description

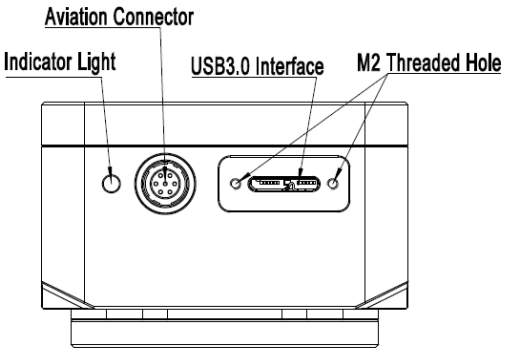
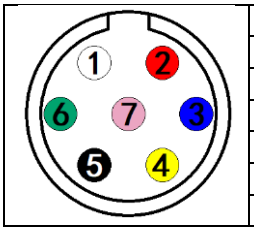


Figure 12-30 Schematic diagram of IUB camera back panel

12.10.3Power Supply and I/O Connector

Table 12-28 IUB series pin signal definitions

	Color	Pin	Signal	Signal description



White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.10.4Packing Information

Table 12-29 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	Micro USB3.0 cable
4	Power	1	12V/3A air plug power adapter
5	Lens (optional)	1	C-mount lens

12.11 SCC Series USB3 Camera

12.11.1Mechanical Housing Dimensions

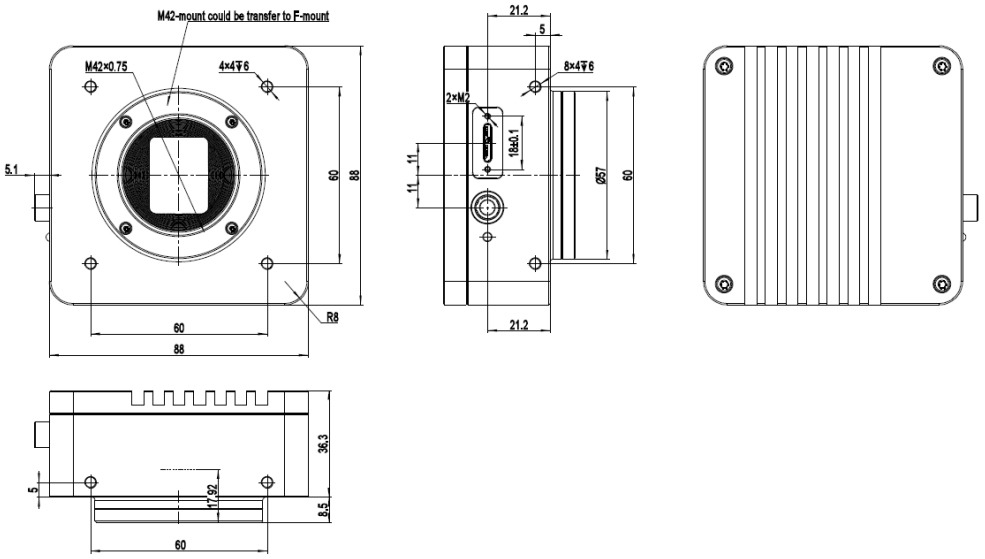


Figure 12-31 Dimensions of SCC camera housing (mm)

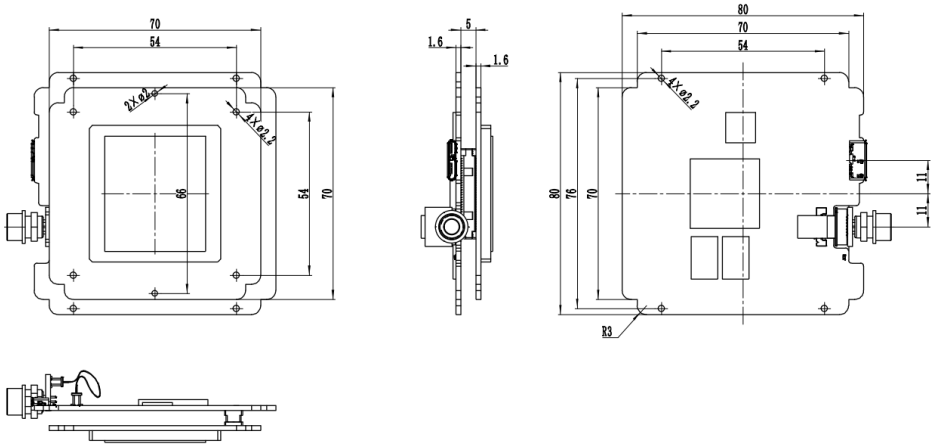


Figure 12-32 Dimensions of SCC circuit board

(mm) **12.11.2Interface Description**

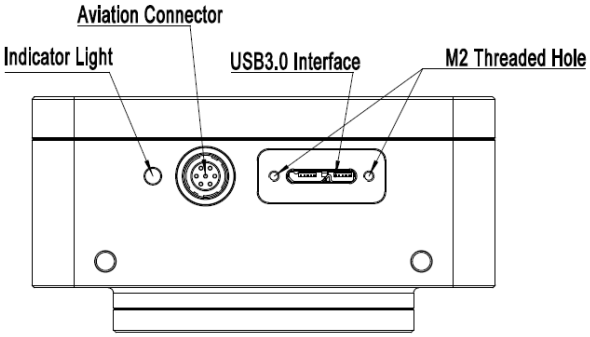
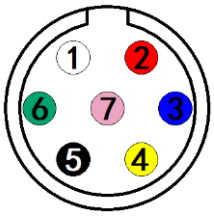


Figure 12-33 Schematic diagram of SCC

camera **12.11.3Power Supply and I/O Connector**

Table 12-30 SCC series pin signal definitions



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.11.4Packing Information

Table 12-31 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	Micro USB3.0 cable
4	Power	1	12V/3A air plug power adapter
5	Lens (optional)	1	C-mount lens

12.12 SCC Series GigE Camera

12.12.1Mechanical Housing Dimensions

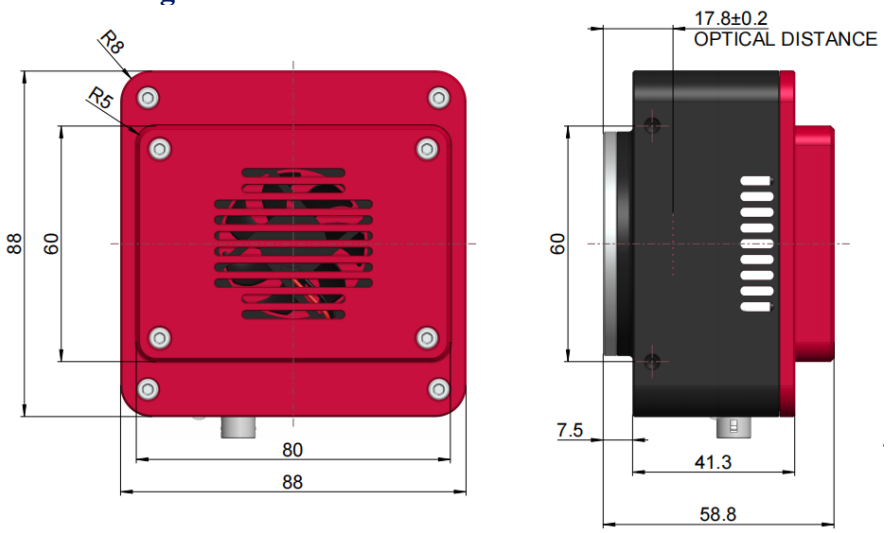


Figure 12-34 Dimensions of SCC camera housing

(mm) **12.12.2Interface Description**

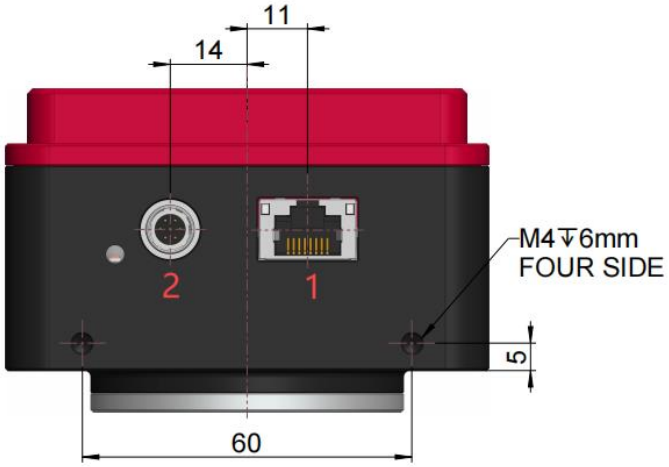


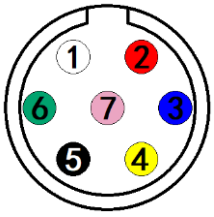
Figure 12-35 Schematic diagram of SCC

camera Table 12-32 SCC Camera interface

Item	definition Specification
1	10GigE port
2	Trigger 7PIN

12.12.3Power Supply and I/O Connector

Table 12-33 SCC series pin signal definitions



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.12.4Packing Information

Table 12-34 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	GigE cable
4	Power	1	12V/3A air plug power adapter
5	Lens (optional)	1	M42-mount lens

12.13 SCC Series CameraLink Camera

12.13.1Mechanical Housing Dimensions

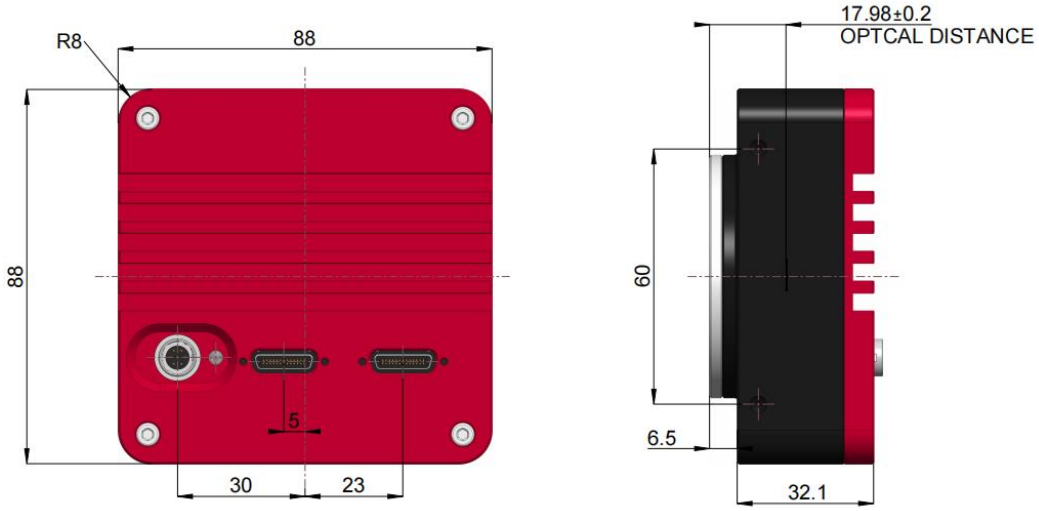


Figure 12-36 Dimensions of SCC camera housing

(mm) **12.13.2Interface Description**

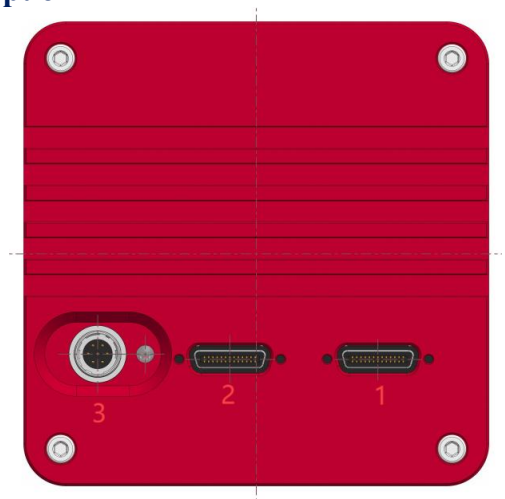


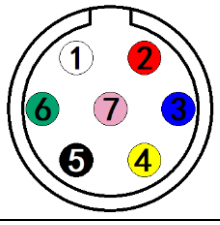
Figure 12-37 Schematic diagram of SCC

camera Table 12-35 SCC Camera interface

Item	definition Specification
1	CameraLink1
2	CameraLink2
3	Trigger 7PIN

12.13.3Power Supply and I/O Connector

Table 12-36 SCC series pin signal definitions



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)

	Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.13.4Packing Information

Table 12-37 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable
3	Cable	1	CameraLinkcable
4	Power	1	12V/3A air plug power adapter
5	Lens (optional)	1	C-mount lens

12.14 SCD Series USB3 Camera

12.14.1Mechanical Housing Dimensions

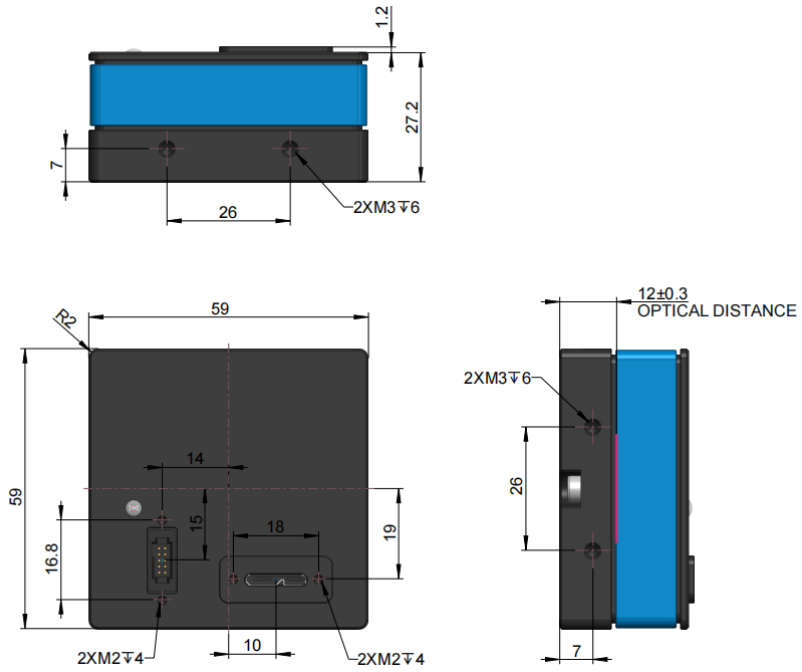


Figure 12-38 Dimensions of SCD camera housing

(mm) **12.14.2Interface Description**

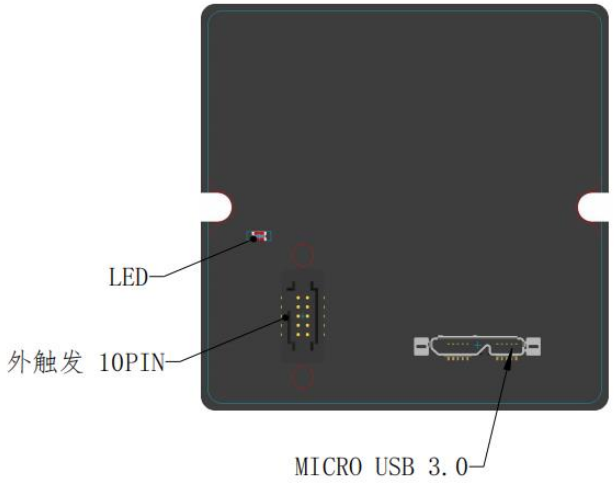
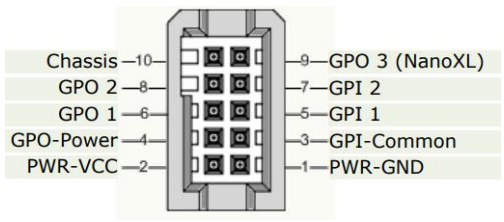


Figure 12-39 Schematic diagram of SCD

camera **12.14.3Power Supply and I/O Connector**

Table 12-38 SCD series pin signal definitions



Pin	Signal	Signal description
1	GND	Power ground
2	12V	12VDC power
3	GPI_GND	General Input Common Ground
4	GPO-POWER	General Output Common Power
5	GPI1	General External Input 1
6	GPO1	General External Output 1
7	GPI2	Opto-isolated output signal
8	GPO2	General External Output 2

	9	GPO3	General External Output 3
	10	Chassis	Camera Chassis

12.14.4Packing Information

Table 12-39 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	10 Pin cable or extended cable
3	Cable	1	Micro USB3.0 cable
4	Power	1	Power adapter for SCD series
5	Lens (optional)	1	M42-mount lens

12.15 IUE Series USB3 Camera

12.15.1Mechanical Housing Dimensions

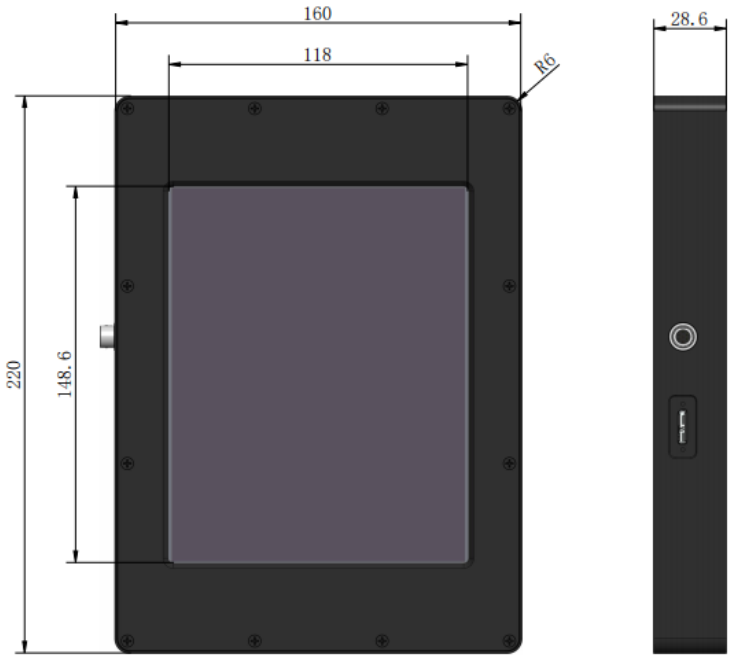


Figure 12-40 Dimensions of IUE camera housing (mm)

12.15.2Interface Description



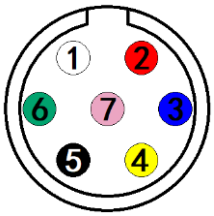
Figure 12-41 Schematic diagram of IUE camera

Table 12-40 IUE Camera interface definition

Item	Specification
1	USB 3.0 port
2	Trigger 7PIN

12.15.3Power Supply and I/O Connector

Table 12-41 IUE series pin signal definitions



Color	Pin	Signal	Signal description
White	1	GND	Direct-coupled signal ground
Red	2	12V	12VDC power input or output
Blue	3	OPTO_GND	Opto-isolated signal ground
Yellow	4	DIR_GPIO0	Direct-coupled General Purpose I/O (Software configurable input/output) (line2)
Black	5	DIR_GPIO1	Direct-coupled General Purpose I/O (Software configurable input/output) (line3)
Green	6	OPTO_IN	Opto-isolated input signal (line0)
Pink	7	OPTO_OUT	Opto-isolated output signal (line1)

12.15.4Packing Information

Table 12-42 Recommended accessories

Order number	Accessories name	Quantity	Instruction
1	Camera	1	Camera referred in this manual
2	I/O cable	1	7 Pin cable or extended cable

3	Cable	1	Micro USB3.0 cable
4	Power	1	12V/3A air plug power adapter

12.16 AVCAM Series

12.16.1 Mechanical Housing Dimensions

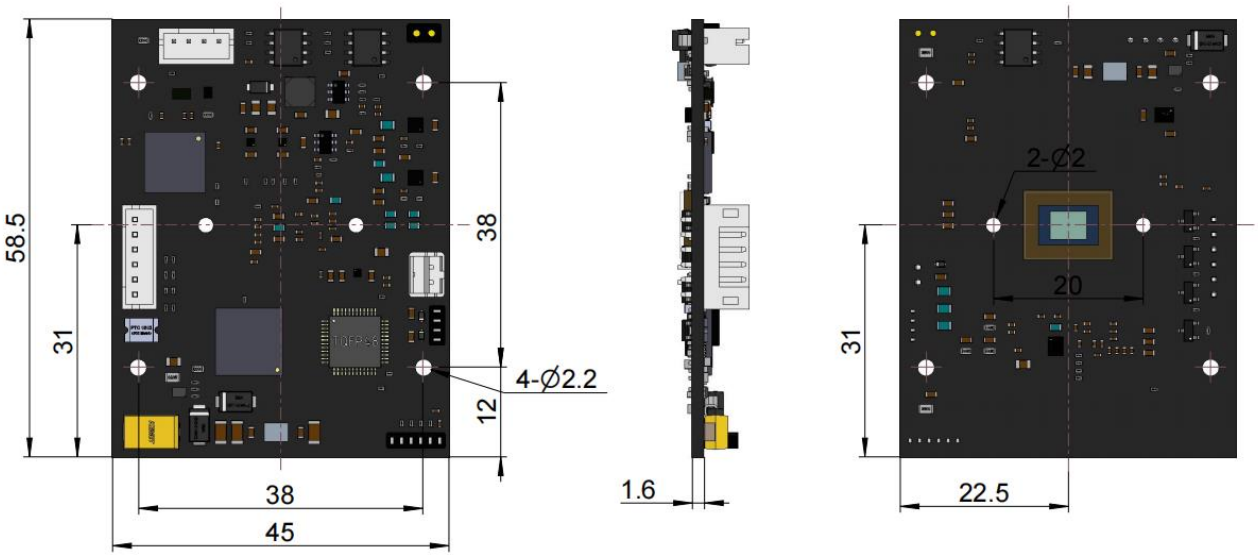


Figure 12-42 Dimensions of AVCAM(mm)

13 Electrical Characteristics

13.1 7PIN I/ O Electrical Properties

13.1.1 Opto-isolated Input Circuit (line0)

In the camera I/O control, opto-isolated input circuit is shown in Figure 13-1.

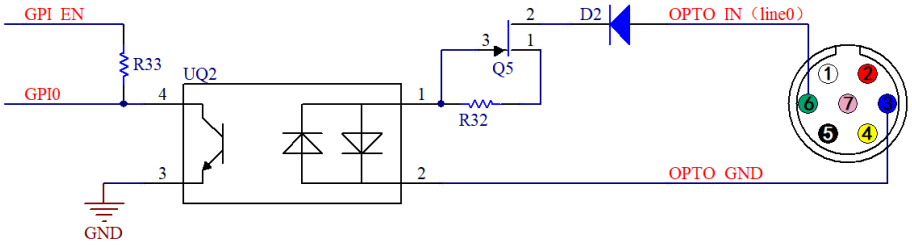


Figure 13-1 Opto-isolated input circuit

Logic 0 input level: 0~2.2VDC (OPTO_IN pin)

Logic 1 input level: 3.3~24VDC (OPTO_IN pin)

Maximum input current: 30mA

The input level is between 2.2V and 3.2V, the circuit action state is uncertain, please avoid the input voltage working in this range.

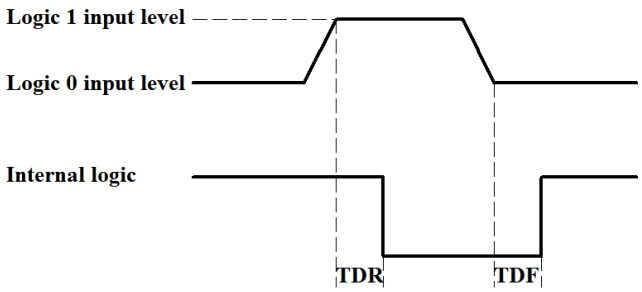


Figure 13-2 Input logic level

Input rise delay (TDR): 6us

Input drop delay (TDF): 6us

13.1.2 Opto-isolated Output Circuit(line1)

In camera I/O control, opto-isolated output circuit is shown in Figure 13-3.

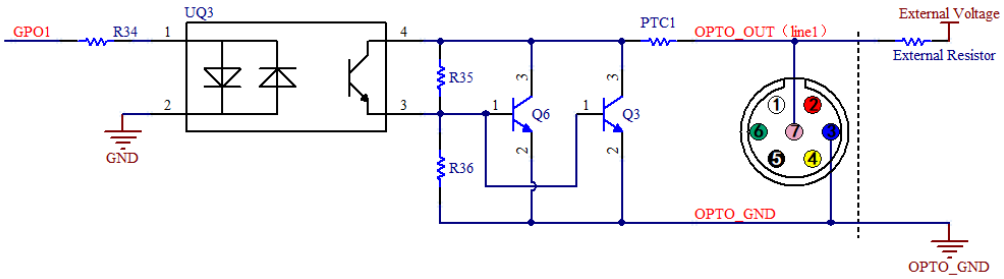


Figure 13-3 Opto-isolated output circuit

Opto-isolated output maximum current: 30mA

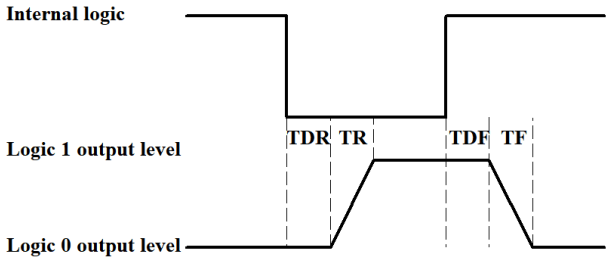


Figure 13-4 Output logic level

The electrical characteristics of the opto-isolated output signal (external voltage 5V, external resistor 1K) are shown in Table 13-1.

Table 13-1 Opto-isolated output signal's electrical characteristics

Parameter name	Parameter symbol	Parameter values
Output logic low level	VL	742mV
Output logic high	VH	4.134V
output rise time	TR	4us
Output downtime	TF	1.8us
Output rising delay	TDR	12us
Output drop delay	TDF	2us

The corresponding current and output logic low level parameters are shown in Table 13-2 when different voltage and resistors are used in external circuit.

Table 13-2 Opto-isolated output logic's low level parameters

External voltage	Non-essential resistance	VL	Output current
3.3V	1KΩ	510mV	2.82mA
5V	1KΩ	742mV	4.31mA
12V	2.4KΩ	795mV	4.68mA
24V	4.7KΩ	850mV	4.97mA

13.1.3 Input and Output I/O Circuit(line2/line3)

Non-isolated configurable input, output I/O circuit is shown in Figure 13-5, Figure 13-6.

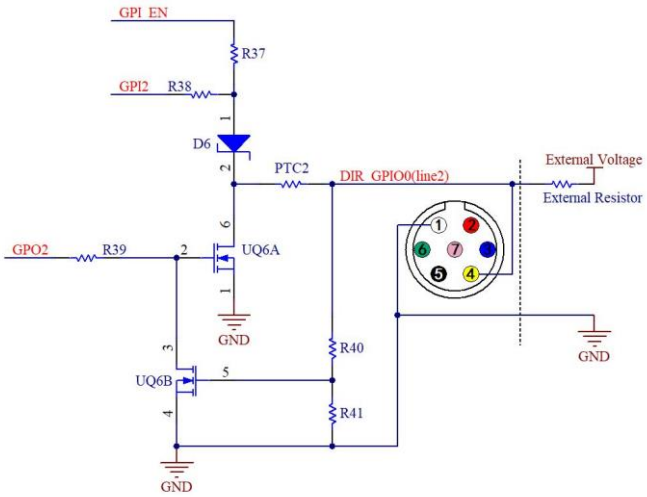


Figure 13-5 Non-isolated configurable input, output I/ O circuit (line2)

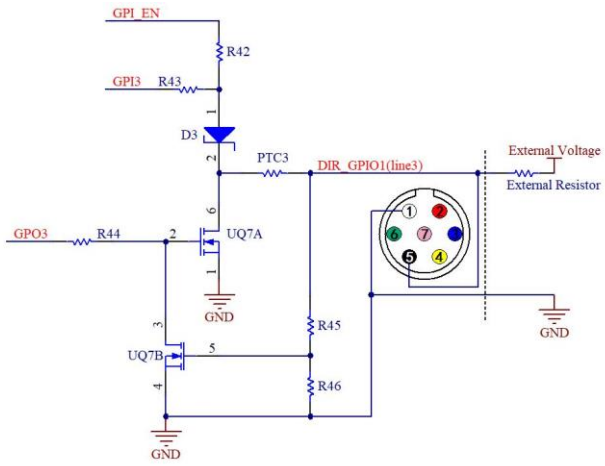


Figure 13-6 Non-isolated configurable input, output I/ O circuit (line3)

1, Line2/line3 set as input pin:

Logic 0 input level: 0-0.6 VDC (DIR_GPIO1/DIR_GPIO2 pin)

Logic 1 input level: 2.0~24VDC (DIR_GPIO1/DIR_GPIO2 pin)

Maximum input current: 25mA

The input level is between 0.6V and 2.0V, the circuit action state is uncertain. Please avoid the input voltage working in this range.

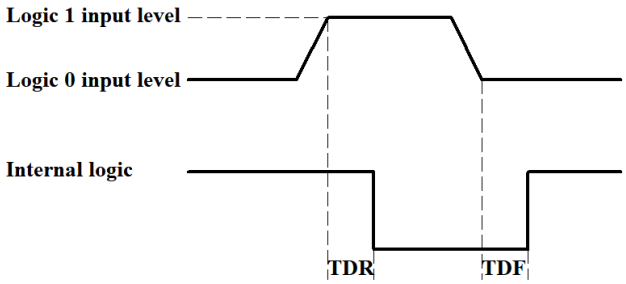


Figure 13-7 Input logic level

To prevent damage to the GPIO pin, connect the GND pin before entering voltage to the Line2 pin.

Input rise delay (TDR): 0.02us

Input drop delay (TDF): 0.02us

2, Line2/line3 set as output pin

The maximum current allowed through this pin is 25 mA.

When the ambient temperature is 25 degrees Celsius, the relationships between the external voltage, resistance and output low level are shown in Table 13-3.

Table 13-3 Non-isolated output logic's low level parameters

External voltage	Non-essential resistance	VL (GPIO)
3.3V	1KΩ	0.11V
5V	1KΩ	0.167V
12V	2.4KΩ	0.184V
24V	4.7KΩ	0.385V

The external pull-up voltage 5V pull-up resistance 1KΩ, GPIO output logic level, electrical characteristics are shown in Figure 13-8.

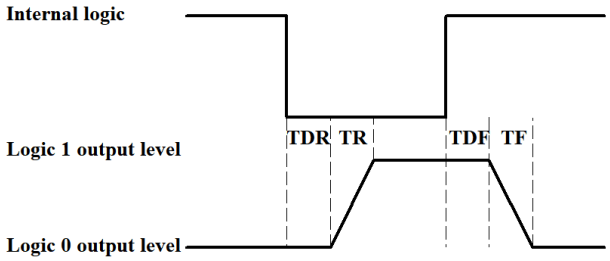


Figure 13-8 Output logic level

Table 13-4 Non-isolated output's electrical characteristics

Parameter name	Parameter symbol	Parameter values
Output rise time	TR	0.08us
Output downtime	TF	0.02us
Output rising delay	TDR	0.1us
Output drop delay	TDF	0.04us

13.2 6PIN I/ O Electrical Properties

13.2.1 Opto-isolated Input Circuit (line0)

In the camera I/O control, opto-isolated input circuit is shown in Figure 13-9.

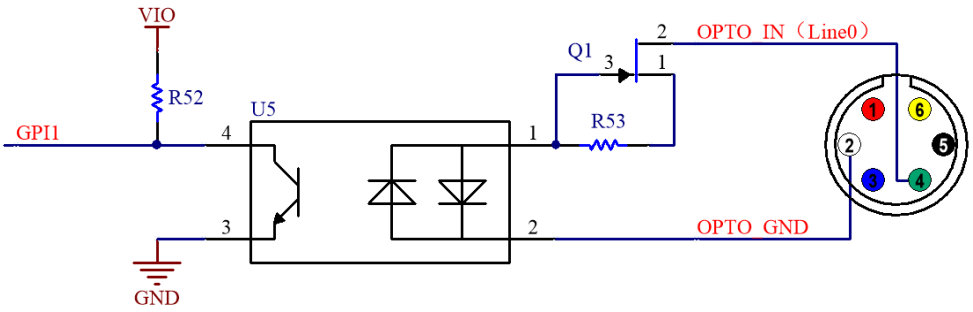


Figure 13-9 Opto-isolated input circuit

Logic 0 input level: 0~1.4VDC (OPTO_IN pin)

Logic 1 input level: 2.2~24VDC (OPTO_IN pin)

Maximum input current: 30mA

The input level is between 1.4V and 2.2V, the circuit action state is uncertain, please avoid the input voltage working in this range.

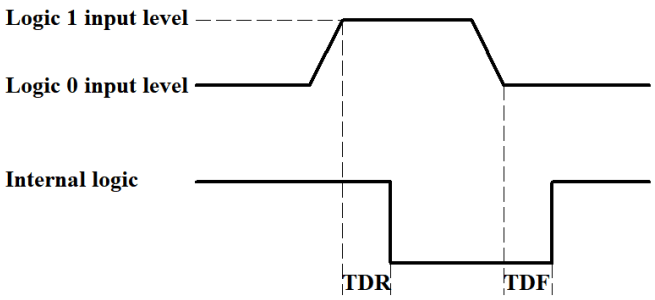


Figure 13-10 Input logic level

Input rise delay (TDR): 5us

Input drop delay (TDF): 25us

13.2.2 Opto-isolated Output Circuit(line1)

In camera I/O control, opto-isolated output circuit is shown in Figure 13-11.

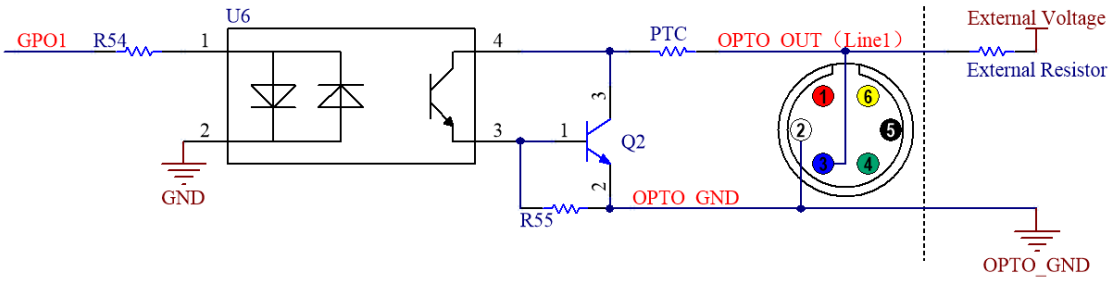


Figure 13-11 Opto-isolated output circuit

Opto-isolated output maximum current: 30mA

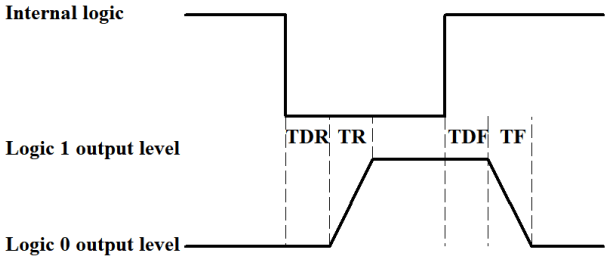


Figure 13-12 Output logic level

The electrical characteristics of the opto-isolated output signal (external voltage 5V, external resistor 1K) are shown in Table 13-5.

Table 13-5 Opto-isolated output signal's electrical characteristics

Parameter name	Parameter symbol	Parameter values
Output logic low level	VL	760mV
Output logic high	VH	5V
output rise time	TR	8.6us
Output downtime	TF	2.2us
Output rising delay	TDR	17.5us
Output drop delay	TDF	4.2us

The corresponding current and output logic low level parameters are shown in Table 13-6 when different voltage and resistors are used in external circuit.

Table 13-6 Opto-isolated output logic's low level parameters

External voltage	Non-essential resistance	VL	Output current
3.3V	1KΩ	668mV	2.82mA
5V	1KΩ	760mV	4.31mA
12V	2.4KΩ	798mV	4.68mA
24V	4.7KΩ	833mV	4.97mA

13.2.3 Input and Output I/O Circuit(line2/line3, applicable to V1.0 hardware version)

In camera I/O control with hardware version number V1.0, non-isolated input, output I/O circuit is shown in Figure 13-13.

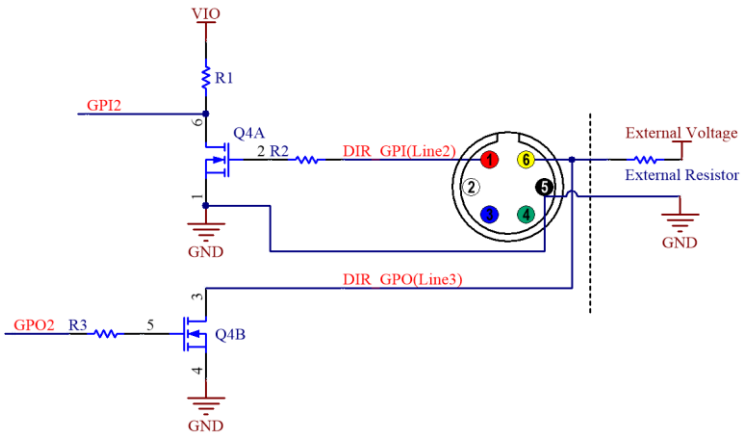


Figure 13-13 Non-isolated input, output I/ O circuit(line2)

1, GPI2 input level parameter:

Logic 0 input level: 0~0.9 VDC (DIR_GPI pin)

Logic 1 input level: 1~20VDC (DIR_GPI pin)

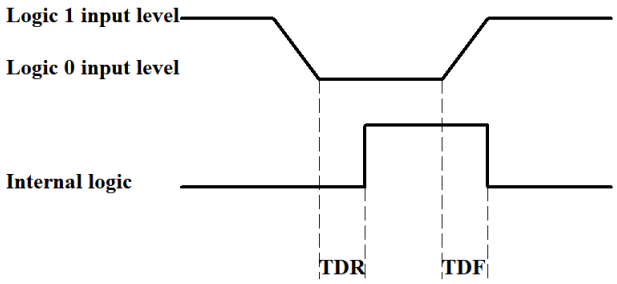


Figure 13-14 Input logic level

To prevent damage to the GPI pin, connect the GND pin before entering voltage to the DIR_GPI pin.

2, GPO2 output level parameter:

The maximum current allowed through this pin is 25 mA.

When the ambient temperature is 25 degrees Celsius, the relationships between the external voltage, resistance and output low level are shown in Table 13-7.

Table 13-7 Non-isolated output logic's low level parameters

External voltage	Non-essential resistance	VL(GPO2)
3.3V	1KΩ	0V
5V	1KΩ	0V
12V	2.4KΩ	0V
24V	4.7KΩ	0V

The external pull-up voltage 5V pull-up resistance 1K Ω, GPO2 output logic level, electrical characteristics are shown in Figure 13-15.

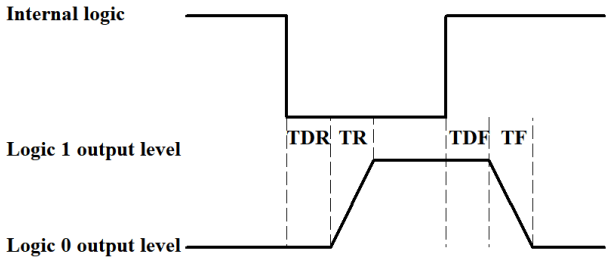


Figure 13-15 Output logic level

Table 13-8 Non-isolated output's electrical characteristics

Parameter name	Parameter symbol	Parameter values
Output rise time	TR	0.01us
Output downtime	TF	0.01us
Output rising delay	TDR	0.02us
Output drop delay	TDF	0.04us

13.2.4 Input and Output I/O Circuits(line2, the hardware version is V2.0 or later)

Camera with hardware version V2.0 and above, its input and output I/O circuits are shown in Figure 13-16.

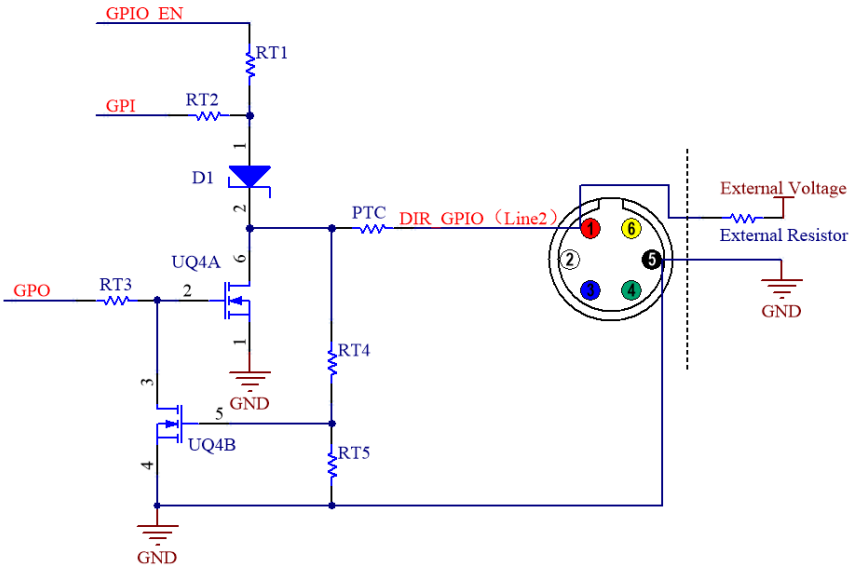


Figure 13-16 Non-isolated configurable input / output I/O circuits

Line2 is set as input pin

Logic 0 input level: 0~0.6VDC (DIR_GPIO pin)

Logic 1 input level: 2~24VDC (DIR_GPIO pin)

Maximum input current: 25mA

When the input level is between 0.6 V and 2 V, the circuit action is uncertain. Please avoid the input voltage working in this range.

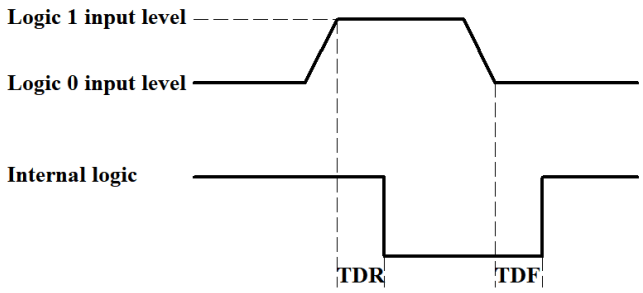


Figure 13-17 Input logic level

To prevent the GPIO pin from being damaged, first connect the ground pin GND and then input the voltage to the Line2 pin.

Input rise delay (TDR): 0.02us

Input drop delay (TDF): 0.02us

Line2 is set as output pin

The maximum current allowed through this pin is 25 mA.

When the ambient temperature is 25 degrees Celsius, the relationships between external voltage, resistance and output low level are shown in Table 13-9.

Table 13-9 Non-isolated output logic low level parameters

External voltage	Non-essential resistance	VL(GPIO)
3.3V	1KΩ	0.11V
5V	1KΩ	0.167V
12V	2.4KΩ	0.184V
24V	4.7KΩ	0.385V

The external pull-up voltage is 5V, the pull-up resistance is 1KΩ, the GPIO is configured as the output logic level and the electrical characteristics are shown in Figure 13-18.

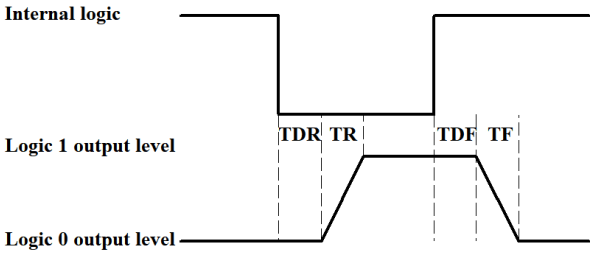


Figure 13-18 Output logic level

Table 13-10 Non-isolated output's electrical characteristics

Parameter name	Parameter symbol	Parameter values
Output rise time	TR	0.08us
Output downtime	TF	0.02us
Output rising delay	TDR	0.1us
Output drop delay	TDF	0.04us

14 Description of Functions

14.1 Camera Capture Mode

Camera operation mode support: Video Mode or Trigger Mode.

Camera trigger mode supports: Soft Trigger Mode(Software) or External Trigger Mode(Isolated input, GPIO0, GPIO1, Counter or PWM).

14.2 ROI Control

Partial cameras supports hardware ROI. The smaller the ROI size, the faster the frame rate.

14.3 Bandwidth and Precise Frame Rate Control

14.3.1 Bandwidth

Partial cameras supports bandwidth adjustment from 1% to 100%. As shown in Figure 14-1, the camera is with 100% bandwidth by default, and you can drag the slider to set the desired bandwidth.

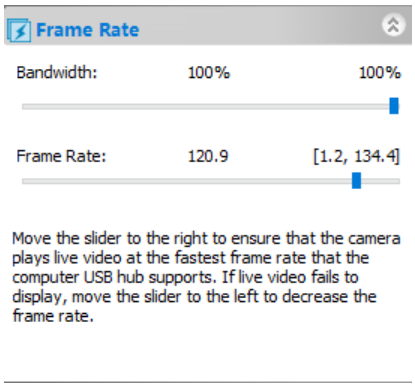


Figure 14-1 Bandwidth and precise frame rate settings

14.3.2 Precise Frame Rate Control

Partial cameras series supports precise frame rate control. The frame rate range will vary based on bandwidth, bit depth, resolution, ROI. As shown in Figure 14-1, the current frame rate can be set by dragging the Bandwith or Frame Rate slider bar left or right.

14.4 DDR3 Buffer

Camera has a built-in 512MB (4Gb) DDR3 buffer, which can effectively improve the stability of USB3.0 data transmission and ensure that the camera does not lose frames when working.

14.5 Binning

Camera supports additive or averaged 1x1 to 8x8 digital binning, and averaged 1x1 to 2x2 hardware binning. Hardware binning can achieve higher frame rates than software binning.

14.6 Power Supply and Cooling System

MaxCam series adopts DC19V power supply, SC-ITR series and SC-CTR series adopts DC12V power supply. When DC19V or DC12V power supply is plugged in, both the camera cooling system and the imaging system use a unified 19V or 12V power supply.

When the power is disconnected, the camera cooling system stops working, and the imaging system will automatically switch to the USB 5V power supply and the camera can work normally in passive cooling mode.

The cooling system of the camera is TEC cooling, using an external cooling structure and fan assisted cooling, the operating temperature can be adjusted to a specific value, the effective cooling temperature can be lower than the ambient temperature 10-25°C, the efficient cooling system ensures a very low level of dark current.

TEC system adopts PID algorithm to control, so that the TEC can be accurately adjusted to the target temperature, and the temperature deviation is 0.1°C.

There is a Cooling group on the left sidebar in EHDView. To enable the Cooling function, an external 12V power supply is required. By default, the TEC is turned on. One can set the Target Temperature. After entering the value, click "Apply", and the sensor temperature will gradually approach to the Target time, EHDView can display the current temperature in real time, as shown in Figure 14-2.

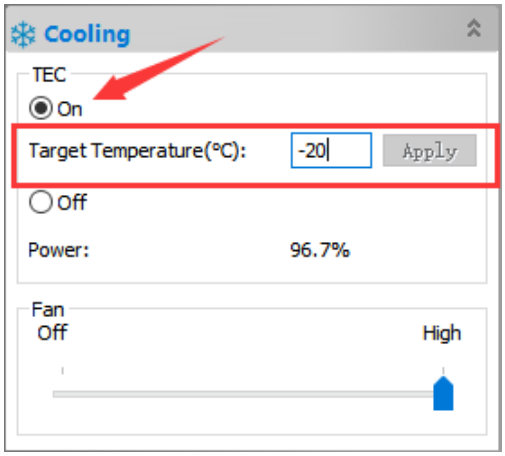


Figure 14-2 TEC settings

The Fan has two gears from Off to High. When High, the Fan speed reaches the highest. When Off, the Fan is turned off, the TEC is also turned off, and the power is 0, as shown in Figure 14-3.

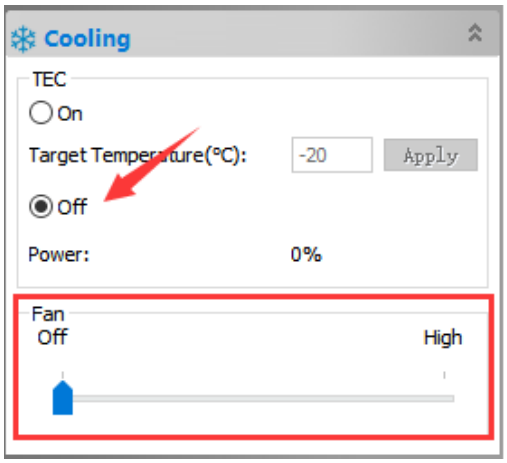


Figure 14-3 Fan settings

When the TEC is turned on, the Fan will automatically turn on preventing the abnormal situation such as the housing temperature is too high if the Fan stops running when the TEC is working; when the Fan is turned off, the TEC will automatically turn off.

15 Trigger Mode and its Configuration

15.1 Video Mode and Trigger Mode

The trigger function can be found on the Capture & Resolution group on the Camera Sidebar in EHDView. When the camera is opened, it is in Video Mode as shown in Figure 15-1 on the left. In Video Mode, Auto Exposure, Exposure Target, Exposure Time and Gain can be set. One can switch to Trigger Mode by checking the Trigger Mode check box.

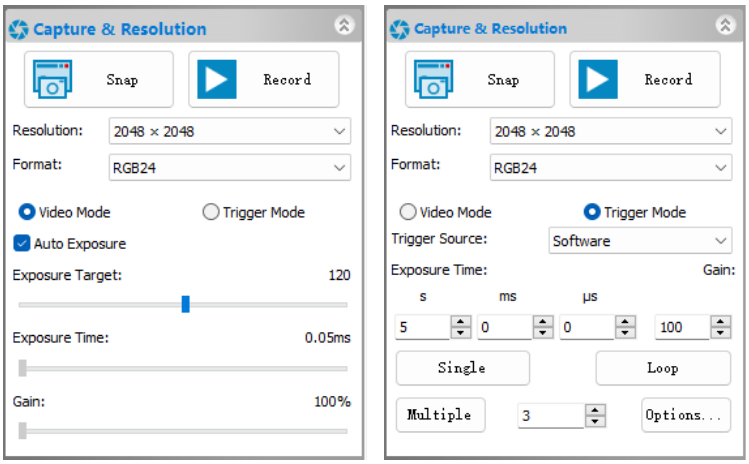


Figure 15-1 Video Mode and Trigger Mode on the Capture & Resolution group in EHDView

After the Trigger Mode is checked, the Capture & Resolution group will switch to Trigger Mode as shown in Figure 15-1 on the right. Where, the Trigger Source, Exposure Time, Gain, Single, Loop, Multiple, Frame Box, and Options can be set.

15.2 Trigger Sources and Their Capture Style

The Trigger Source can be any external input signal inputted into the camera which is called Hardware (Trigger Source), it can also be a command from the application which is called Software (Trigger Source). For the Software Trigger Source, it can be Single, Loop, Multiple, or Sequence style. Figure 15-2 shows the possible Trigger Sources. Table 15-1 shows the designed Trigger Source descriptions and possible capture styles for ToupTek camera.

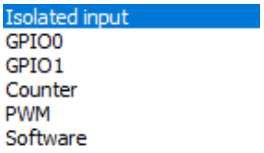
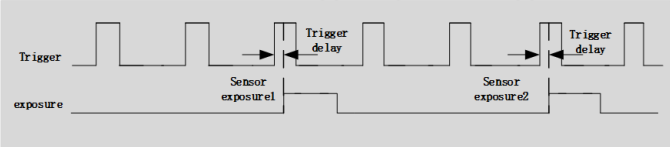
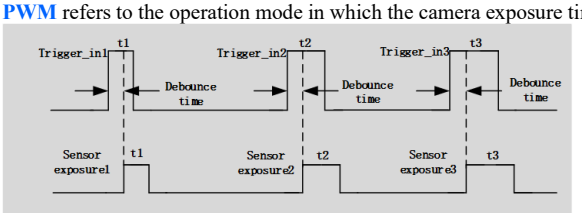
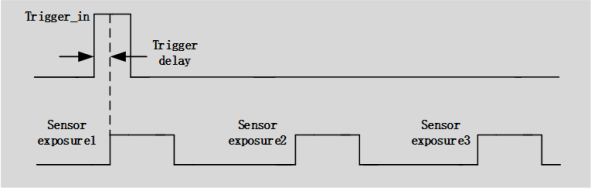


Figure 15-2 Possible Trigger Sources

Table 15-1 Description of possible Trigger Sources and their capture styles

Trigger Source	Description
Isolated input	Logic 0 input level: 0~2.2VDC; Logic 1 input level: 3.3~24VDC;. Maximum input current: 30mA;
GPIO0	Logic 0 input level: 0~0.6VDC (DIR_GPIO0/DIR_GPIO1 pins); Logic 1 input level: 2.0~24VDC (DIR_GPIO0/DIR_GPIO1 pins); Maximum input current: 25mA; If **GPIO0** is chosen as **Trigger Source**, it should be configurated as **Input** in the **GPIO Mode**'s combo box on the **Options>IO Control** page;
GPIO1	Logic 0 input level: 0~0.6VDC (DIR_GPIO0/DIR_GPIO1 pins); Logic 1 input level: 2.0~24VDC (DIR_GPIO0/DIR_GPIO1 pins); Maximum input current: 25mA; If **GPIO1** is chosen as **Trigger Source**, it should be configurated as **Input** in the **GPIO Mode**'s combo box on the **Options>IO Control** page;
Counter	**Counter** refers to the operation mode in which the camera can divide the frequency of the external input trigger signal through the preset **Counter Value** and perform image acquisition according to the customer's logic. For example, when the counter value(Counter Value: 3 [1,1023]) is set to 3, the

	camera needs to receive 3 trigger signals to trigger once;  When **Counter** is chosen in **Trigger Source** combo box in the **Capture & Resolution** group, the **Counter Source** can be **Isolated input**, **GPIO0** or **GPIO1** which can be chosen on **Options>IO Control** page; If **GPIO0** or **GPIO1** is chosen in the **Counter Source** combo box on **Options>IO Control** page. It should be configured as **Input** in the **GPIO Mode** combo box; Check **Options>IO Control** page's **Line Select** related items and **Counter** related items for details;
PWM	**PWM** refers to the operation mode in which the camera exposure time is controlled by the input trigger signal's pulse width;  **PWM Trigger Source** can be **Isolated input**, **GPIO0** or **GPIO1**. If **GPIO0** or **GPIO1** is chosen in the **PWM Source** combo box on the **Options>IO Control** page, it should be configured as **Input** in the **GPIO Mode** combo box; Check **Options>IO Control** page's **Line Select** related items and **PWM** related items for details;
Software	When **Software** trigger is chosen, the client software can send the command through USB3.0 to trigger, acquire and transfer images, In EHDView, **Single**, **Loop**, **Multiple,** or **Sequence** can be used to send the **Software** trigger command; If the **Plan** or **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page, the **Multiple** button will switch to **Sequence** button and the camera will use the **Exposure Time** and **Gain** in the **Sequence table** on this page one by one to capture the specified frames. Check **Single**, **Loop**, **Multiple,** or **Sequence** on **Capture & Resolution** group for the **Software** capture operations; Check **Options>Sequence** page and **Options>Advanced** page for the related **Sequence** and **Software** capture setup options;
Single	When **Single** is clicked, the camera will start to capture the image. At the same time the **Single** button will switch to **Stop** button. Clicking **Stop** button to stop the current **Single** capture operation, the **Stop** button will switch to **Single** button again for the next capture operation; Note: 1) The captured frames will always **Show in the video window** to prevent too many captures; 2) Enabled when **Software** in the **Trigger Source** combo box is chosen or **Always enable software trigger** checkbox is checked on the **Options>Advanced** property page;
Loop	When **Loop** is clicked, the camera will start to capture the image continuously and the **Loop** button will switch to **Stop** button. Clicking **Stop** button to stop **Loop** captures and the **Stop** button will switch to **Loop** button for the next **Loop** capture operation; Note: 1)The captured frames will always **Show in the video window** to prevent too many captures; 2)Enabled to capture continually when **Software** in the **Trigger Source** combo box is chosen or **Always enable software trigger** checkbox is checked on the **Options>Advanced** property page;
Multiple	**Multiple** refers to the operation mode in which the camera receives **Software** trigger signal or command and exports multiple frames of images. An edit box with spin(we call it **Frames Box**) is designed and affiliated to the **Multiple** button (Multiple 3 Options...) for the setting of the frames to be captured; The **Frames Box** can be set in the range of 1~65535. If the **Frames Box** is 3, a three-frame image will be captured and exported;  Note: 1)**Multiple** capture is enabled to capture continually when **Software** in the **Trigger Source** combo box is chosen; 2) **Multiple** capture is enabled when **Always enable software trigger** is checked on the **Options>Advanced** property page, no matter whether **Trigger Source** is **Software** or **Hardware** on the **Capture & Resolution** group; 3) If the **Plan** or **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page, the **Multiple** button will switch to **Sequence** button and the camera will use the **Exposure Time** and **Gain** in the **Sequence table** on this page. The captured frames will be displayed either in **Show in the video window**, or **Show in a new window** or **Save to disk** which can be specified on **Options>Output** page;
Sequence	When **Sequence** is clicked, the camera will start to capture the image until the specified frames in the **Frames Box** are captured. At the same time the **Sequence** button will switch to **Stop** button. Clicking **Stop** button will stop the current **Sequence** capture and the **Stop** button will switch to **Sequence** again for the next **Sequence** capture operation; Note: 1) Switched from **Multiple** to **Sequence** to capture the specified frames in the edit box with spin(**Frames Box**) when **Plan** or **Hardware** in the **Type** combo box is chosen on the **Options>Sequence** property page; 2)If the **Plan** or **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page, the **Sequence** button will be enabled and the capture will use the **Exposure Time** and **Gain** in the **Sequence table** list below one by one on the

	Options>Sequence page; 3) If the **Plan** or **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page and **Always enable software trigger** is checked on the **Options>Advanced** property page, the **Sequence** button will not switch to **Multiple** button and will be enabled only when the still in Sequence enable 4)If the **Plan** is chosen in the **Type** combo box on the **Options>Sequence** page and the **Software** is chosen in the **Trigger Source** combo box, the **Sequence** button will be enabled. 5)If the **Hardware** is chosen in the **Trigger Source** combo box, the **Sequence** button will be disabled, but the **Frame Box** will still be enabled and the **Sequence** will switch to the **Hardware Sequence** capture. One **Hardware** trigger signal will capture the specified frames on the **Frame Box** using the **Exposure Time** and **Gain** in the **Sequence table** on **Options>Sequence** page; 6)Check **Options>Sequence** page for the related **Sequence** setup options;

15.3 The trigger capture and IO Control configurations

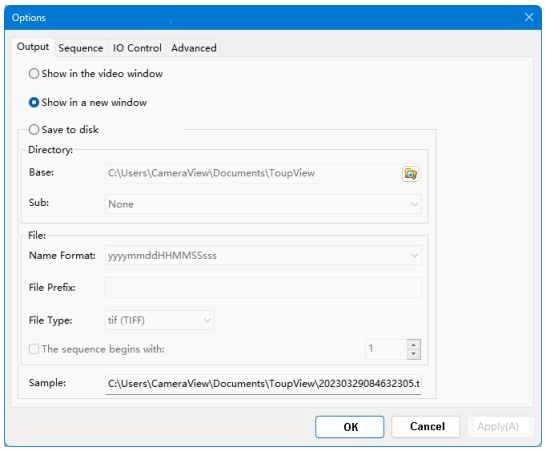


Figure 15-3 Options>Output page

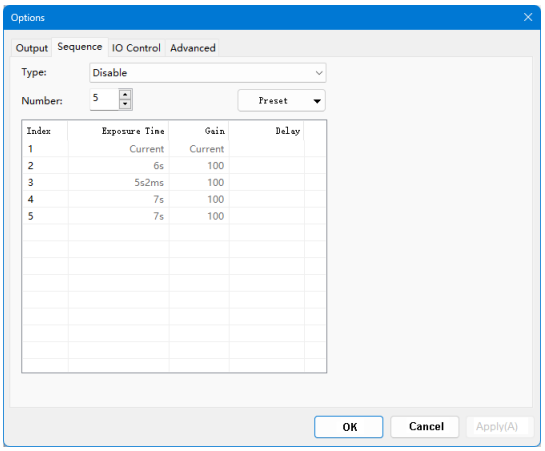


Figure 15-4 Options>Sequence page

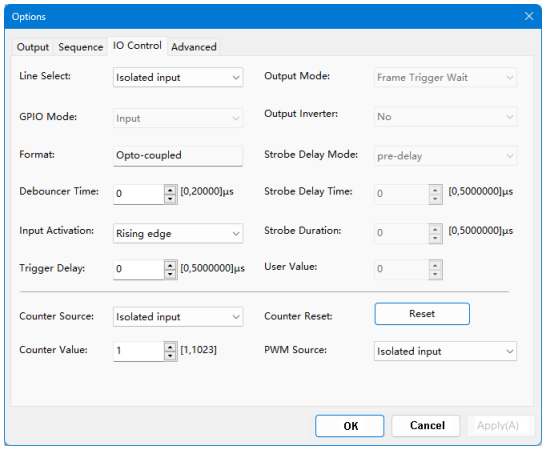


Figure 15-5 Options>IO Control page

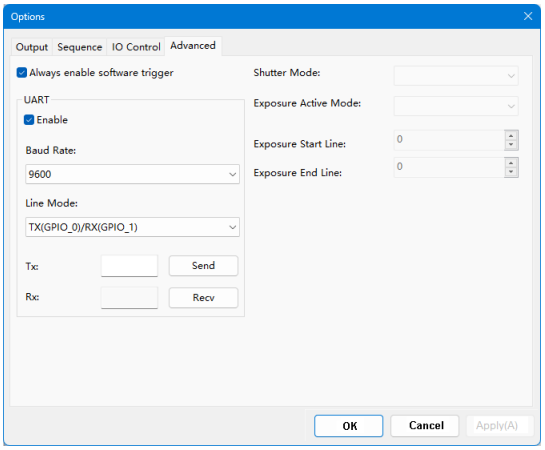


Figure 15-6 Options>Advanced page

The Trigger Source can be Isolated input, GPIO0, GPIO1(when configured as input), Counter, or PWM which can be configurated on the Options property sheet. Also the camera's Isolated output, GPIO0 or GPIO1(can be configurated as Output) can be used as Output or UART (GPIO0, GPIO1 only) applications. All of these configurations can be realized on the Options property sheet described in Table 15-2 below.

About the captured file operation style, one can find it on the Option>Output page;

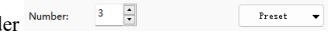
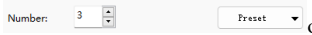
About the Sequence setup, one can find it on the Option>Sequence page;

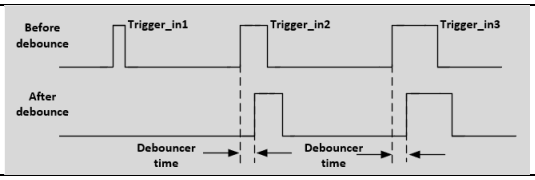
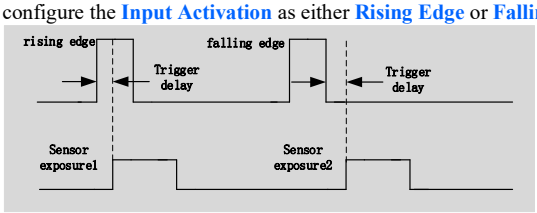
About the camera pin IO Control style, one can find it on the Options>IO Control page;

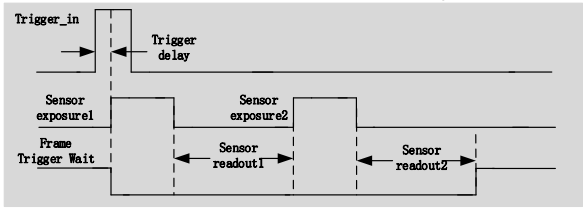
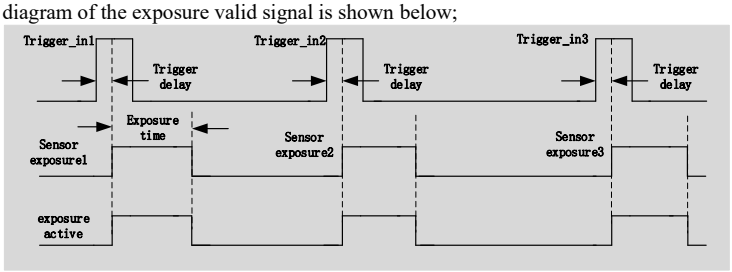
About the Always enable software trigger and UART setup, Shutter Mode, and Exposure Active Mode, one can find it on the Options>Advance page.

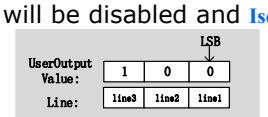
Table 15-2 Options property sheet for Trigger Source or camera pin configuration

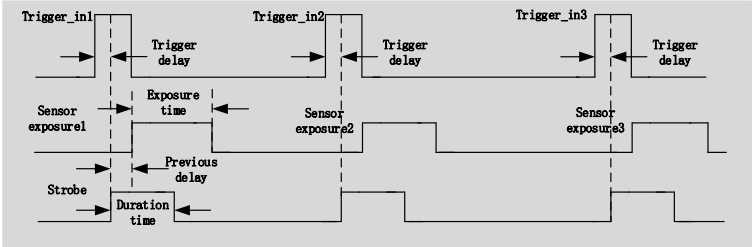
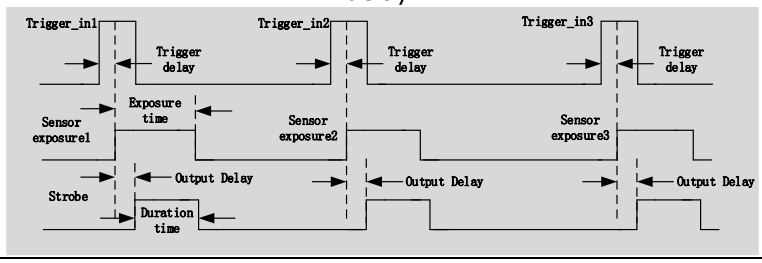
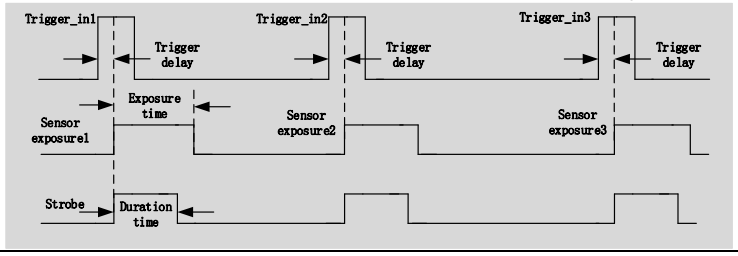
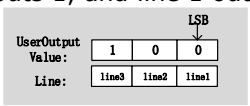
Pages	Items	Descriptions

Output page	**Output Destination**	Used to set the captured frame's **Output** destination, can be **Show in the video window**, **Show in a new window** or **Save to disk**; When **Save to disk** is checked, the  button will be enabled clicking it to choose the **Base** directory, clicking the **Sub** combo box's dropdown button to choose the **Sub** directory; The **File Name Format**, **File Prefix**, **File Type**, and even **The sequence begin with** can be chosen, set, or defined. Note: 1)Valid only for **Sequence** or **Multiple** capture setup; 2)For **Single** or **Loop** capture, the captured image will be always displayed on the video window;
Sequence page	**Type** 	**Disable**: If the **Disable** button is chosen in the **Type** combo box on the **Options>Sequence** page, the **Sequence** button on the **Capture & Resolution** page will switch to **Multiple** button;
		Plan: 1)If **Plan** is chosen in the **Type** combo box on the **Options>Sequence** page, the **Multiple** button on the **Capture & Resolution** group will switch to **Sequence** button; 2) If the **Software Trigger Source** is chosen in the **Capture & Resolution** group or the **Always enable software trigger** is checked on the **Options>Advanced** property page, the **Sequence** button will be enabled After the **Software** trigger signal is arrived(By clicking **Single**, **Loop**, or **Sequence** button), the camera will capture frames specified in the edit box with spin  (we call it **Frames Box**) affiliated to the **Sequence** button; The whole captures will use the **Exposure Time**, **Gain** and **Delay** in the **Sequence table** list under  one by one by the software; 3) If the **Disable** button is chosen in the **Type** combo box on the **Options>Sequence** page, the **Sequence** button on the **Capture & Resolution** page will switch to **Multiple** button; 4) The **Sequence** button will be enabled only when a) the **Plan** in the **Type** combo box is chosen on the **Options>Sequence** page and b) he **Software Trigger Source** is chosen in the **Capture & Resolution** group or c) **Always enable software trigger** is checked on the **Options>Advanced** property page;
		Hardware: 1) if **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page, the **Multiple** button on the **Capture & Resolution** group will switch to **Sequence** button and will be disabled for **Hardware** trigger. But users can still set the frames number in the **Frame Box** on the **Capture & Resolution** group; 2) After the **Hardware** trigger signal arrives, the camera will capture frames specified in the edit box with spin  (we call it **Frame Box**) affiliated to the **Sequence** button; The whole capture will use the **Exposure Time**, **Gain** (**Delay** is not used) in the **Sequence table** list under  one by one but stored in the camera hardware for the quick operation; 3) If the **Disable** button is chosen in the **Type** combo box on the **Options>Sequence** page, the **Sequence** button on the **Capture & Resolution** page will switch to **Multiple** button. 4) The **Sequence** button is always disabled if a) The **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page and b)the **Hardware Trigger Source** is chosen in the **Capture & Resolution** group; 5) The **Sequence** button will be enabled if a) the **Software Trigger Source** is chosen in the **Capture & Resolution** group or b) the **Always enable software trigger** checkbox is checked on the **Options>Advanced** property page, in this case, both the **Plan** and **Hardware Sequence** capture are supported;
	Number	The possible **Sequence**(capture) frames to be captured. If the **Number** is larger than the **Sequence Number** in the **Frames Box** on the **Capture & Resolution** group, the other **Indices** will be executed at the next **Sequence** operation one by one recycled;
	Index	The order of the **Number** group;
	Exposure Time	The camera **Exposure Time** for the specified capture **Index** in the **Sequence** capture;
	Gain	The camera **Gain** for the specified capture **Index** in the **Sequence** capture;
	Delay	The **Delay** time for the specified capture **Index** in the **Plan Sequence** capture(Valid for **Plan Sequence** capture only);
	Preset	Choosing **Save** to save the current **Sequence table**'s settings; Clicking **Management** to **Rename** the saved **Sequence table**'s setting files or **Remove** them from the **Management** list;
IO Control page	**Line Select**	Choosing which line to set. Can be **Isolated input**, **Isolated output**, **GPIO0** or **GPIO1 et al**;
	GPIO Mode	To configure whether the line selected in **Line Select** is for **Input** or **Output**. Only **GPIO0** or **GPIO1** can be configured as either **Input** or **Output**; If **Isolated input** or **Isolated output** is chosen, the **GPIO Mode** will be specified as **Input** or **Output** (Not configurable) respectively;
	Format	Specify the current selected signal's **Format** in the **Line Select** combo box, can be **Opto-coupled**(**Isolated input**, **Isolated output**)or **TTL** (**GPIO0** or **GPIO1**)for clarity(Unconfigurable);
	Debouncer Time	Since there may be a glitch in the external trigger input signal if it directly enters into the internal logic circuit of the camera, it will cause false triggering, so the input trigger signal should be debounced. In addition, the effective pulse width of the trigger signal input by the user should be greater than the **Debouncer Time**, otherwise, the trigger signal will be ignored; When **Isolated input**, **GPIO0** or **GPIO1** is chosen in the **Line Select** combo box and **GPIO0** or **GPIO1** is configured as **Input** in the **GPIO Mode** combo box, the **Debouncer Time** will be enabled for the user to input the **Debounter Time** between 0 to 20000us;

<table>
<tr><td></td><td></td><td>
</td></tr>
<tr><td></td><td>Input Activation</td><td>When Isolated input, GPIO0 or GPIO1 is chosen in the Line Select combo box and GPIO0 or GPIO1 is configured as Input in the GPIO Mode combo box; The Input Activation combo box will be enabled to configure the Input Activation as either Rising Edge or Falling Edge;


Also can be configure as high level or low level. When high level is selectd, the camera keeps triggering the frame when the input signal is high; When low level is selectd, the camera keeps triggering the frame when the input signal is low;</td></tr>
<tr><td></td><td>Trigger Delay</td><td>When Isolated input, GPIO0 or GPIO1 is chosen in the Line Select combo box and GPIO0 or GPIO1 is configured as Input in the GPIO Mode combo box, the Trigger Delay will be enabled for the user to input the Trigger Delay time between 0 to 5000000us;
If the Trigger Delay time is set to 1000000us, the camera will wait for 1s to capture the image after receiving the trigger signal;</td></tr>
<tr><td></td><td>Output Mode
Frame Trigger Wait
Exposure Active
Strobe
User Output
Counter Output
Timer Output</td><td>When Isolated output, GPIO0 or GPIO1 is selected in the Line Select combo box and GPIO0 or GPIO1 is configured as Output in the GPIO Mode combo box, the Output Mode will be enabled. It can be Frame Trigger Wait, Exposure Active, Strobe, User Output, Counter Output or Timer Output. The chosen mode can be used for diversified applications;</td></tr>
<tr><td></td><td></td><td>The Frame Trigger Wait signal is pulled low at the start of exposure and pulled high when the last frame of data is read out. The trigger signal input by the user should be in the valid period. If the user inputs a trigger signal when the signal is low, the trigger signal input at this time will be ignored. The following example is the case when Burst Count = 2, as shown below;

</td></tr>
<tr><td></td><td></td><td>Exposure Active: when this signal is high, it means the sensor is exposing. This signal can be used to control an external mobile device to remain stationary or move at low speed while the camera is at exposure. The timing diagram of the exposure valid signal is shown below;


When the relative position of the camera and the object to be photographed changes, you can refer to Exposure Active signal to prevent the captured image from being affected by movement and focus adjustment during the exposure process;</td></tr>
<tr><td></td><td></td><td>When Strobe is chosen, Strobe Delay Mode, Strobe Delay Time, Strobe Duration will be enabled;</td></tr>
<tr><td></td><td></td><td>When User Output is chosen, User Value will be enabled. lines3, line2, line1 are the combination of GPIO1, GPIO0 and Isolated output respectively. If User Value is 001, then line GPIO1 and GPIO0 will be disabled and Isolated output will be enabled;

</td></tr>
<tr><td></td><td></td><td>When the Counter Output is selectd, when the counter value is “m”, the camera triggers “m” times to output a signal.</td></tr>
<tr><td></td><td></td><td>When the Timer Output is selectd, the camera keeps output signals. When the Strobe Delay Time is delay, the pulse width of the high level is determined by the Strobe Duration. The pulse width of low level is determined by the Strobe Delay Time.</td></tr>
</table>

	Output Inverter	When **Isolated output**, **GPIO0** or **GPIO1** is selected in the **Line Select** combo box and **Output** is chosen for **GPIO0** or **GPIO1** in the **GPIO Mode** combo box, the **Output Inverter** will be enabled to configure the current selected line's output as either inverted or not(**Yes** or **No**).
	Strobe Delay Mode	Strobe can be used to control external devices such as the strobe, and the effective level duration, delay time, and pre-delay time of the strobe signal can be set; When the **Output Mode** is **Strobe**, **Strobe Delay Mode** will be enabled. It can be **pre-delay** or **delay**;
	Strobe Delay Time	When exposure starts, the strobe does not take effect immediately, and the output is delayed according to the value set by **Strobe Delay Time** which is between 0 to 5000000us. The **Strobe Delay Mode** can be **pre-delay** or **delay**; It is described below; pre-delay:  delay: 
	Strobe Duration	The high level duration of the strobe is determined by the **Strobe Duration** which is between 0 to 5000000us as shown below; 
	User Value	Users can input a value at **User Value** edit box with spin to control the line as disable or enable. Enabled when **User Output** is chosen in the **Output Mode** combo box. The logical value 0 or 1's combination of **GPIO1**(line3), **GPIO0**(line2) and **Isolated output**(line1); When the output mode is selected as **User Output**, the user can input a value at **User Value** edit box to control the corresponding line output with 0 or 1; The value here is only valid for the lower three bits of a binary. For example, when line 1 and line 3 are set to **User Output** mode, and its **User Value** is set to 4 ('b100), then line 3 outputs 1, and line 1 outputs 0, as shown below. 
	Counter Source	When **Counter** is chosen in the **Trigger Source** combo box in the **Capture & Resolution** group, the **Counter Source** can be chosen from **Isolated input**, **GPIO0** or **GPIO1** in this combo box on the **Option>IO Control** page;
	Counter Value	The **Counter Value** is used to divide the frequency of the external input trigger signal when the **Counter Trigger Source** is chosen in the **Capture & Resolution** group; See **Counter** in Table 15-1 for detail;
	Counter Reset	Click **Reset** button can clear the current counting process and begin a new one;
	PWM Source	When **PWM** is chosen in the **Trigger Source** combo box in the **Capture & Resolution** group, the **PWM Source** can be from **Isolated input, GPIO0,** or **GPIO1** in this combo box et al. ;
Advanced page	**Always enable software trigger**	When this button is checked, no matter whether **Trigger Source** is **Software** or **Hardware**, the software trigger buttons(**Single**, **Loop**, **Multiple**) are always enabled; If the **Plan** or **Hardware** is chosen in the **Type** combo box on the **Options>Sequence** page, the **Multiple** button will switch to **Sequence** button; The **Sequence** button will be enabled if a)the **Software Trigger Source** is chosen

		in the **Capture & Resolution** group or b) the **Always enable software trigger** checkbox is checked on the **Options>Advanced** property page, in this case, both the **Plan** and **Hardware Sequence** captures are supported;
	UART	There is a serial port function on the **Advanced** page, which can be used to communicate with external devices via serial port. Check **Enable** to enable this function. When enabled, **GPIO0** and **GPIO1** can only be used as **UART** transfers; The **Baud Rate** supports 9600-115200. **Cable Select** can configure **GPIO0** and **GPIO1**, which can be configured as **TX** or **RX** respectively. Setting a value at **TX**, clicking **Send** to send the set value out; click **Accept** at **RX** to receive the value from the external device;
	Shutter Mode	Enabled if the camera supports. Users can select **Rolling Shutter** or **Global Reset**;
	Exposure Active Mode	Enabled if the camera supports. Users can select **Specified lines** or **Common exposure time**;
	Exposure Start Line	Enabled when **Specified lines** in the **Exposure Active Mode** combo box is selected. To configure when the Exposure Active signal is valid;
	Exposure End Line	Enabled when **Specified lines** in the **Exposure Active Mode** combo box is selected. To configure when the Exposure Active signal is invalid;

16 Application

16.1 Application installation

In terms of software, customers are welcome to visit our website: https://www.ehd.de/ to download the latest EHDView, also be used with ASCOM, DirectShow interface. If the third-party software is compatible with these interfaces, customers can also download software drivers from our website and install them into the third-party software.

16.2 Introduction to EHDView

EHDView is a professional software that integrates camera control, image acquisition and processing, image browsing and analysis functions. EHDView has the following characteristics:

- x86: XP SP3 and above ; CPU supports SSE2 and above
- x64: Win7 and above
- Support video mode and Trigger Mode (Raw format or RGB format)
- Automatic capture and quick recording capabilities
- Supports multiple languages
- Hardware ROI and digital binning capabilities
- Rich image processing functions, such as image stitching, real-time overlay, flat field correction, dark field correction, etc.
- Supports all ToupTek cameras

16.2.1 User interface design

- The menus and toolbars are properly set to ensure quick operation
- Professionally integrated with 5 sidebars - Camera, Folders, Undo/Redo, Layers, Measure
- Comfortable operation method (double-click or right-click context menu)
- Detailed help manual

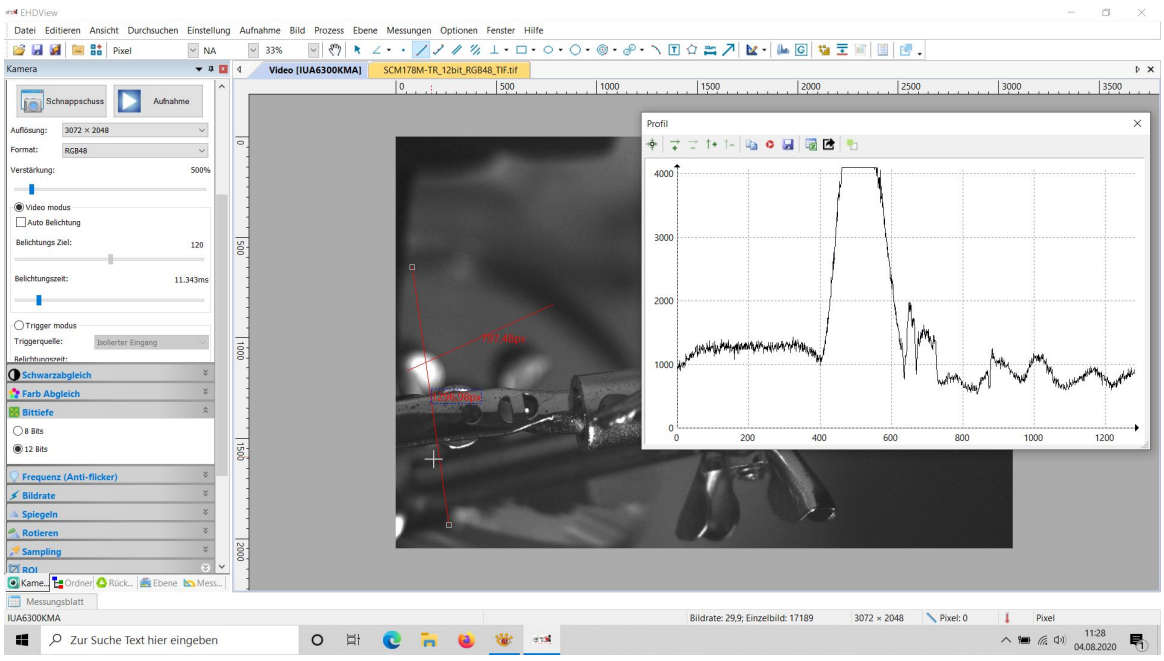


Figure 16-1 EHDView video window

16.2.2 Professional Camera Control Sidebar

Capture & Resolution	Set up live and still capture, snap images, or record video
Exposure & Gain	Auto exposure (preset exposure target value), manual exposure (exposure time can be manually entered and set by slider); gain up to 5 times
White Balance	Advanced one-click smart white balance settings, and you can adjust white balance by manually setting

	color temperature and color
Color Adjustment	Color, saturation, brightness, contrast, gamma initial high-speed adjustment function
Frame Rate Control	For different computer and USB performance, the camera can be super compatible by adjusting the frame rate
Flip	Select "Horizontal" or "Vertical" to adjust the sample orientation to ensure the same orientation as the visual system
Sampling	Neighborhood averaging can improve the signal-to-noise ratio of the video stream; while the sampling extraction mode can ensure the sharpness of the video stream. Supports histogram expansion of video stream, image negative and positive switching, grayscale calibration, and sharpness factor calculation to facilitate video focusing
Bit Depth	8, 12-bit switching, 8-bit is the basic Windows image format. 12-bit has higher image quality but reduces frame rate
Roi	ROI, Region of interest. This function can set the ROI value of the video window. After the ROI group is expanded, a rectangular box will appear in the middle of the video window, and the ROI can be changed. The mouse can adjust the size of the ROI. If there is no problem with the ROI, click "Apply" to set the video to the size of the ROI, and the default value will be restored to the original size.
Dark Field Correction	To enable darkfield correction, you should first capture a field image, then click Enable. Check Enable to enable darkfield correction. Uncheck it to disable darkfield correction
Cooling	Set TEC Target Temperature, fan on/off
Parameter Save	Load, save, overwrite, load, export custom camera panel controls (including calibration information, exposure parameters and color settings information, etc.)

16.2.3 Professional and practical image processing functions

Video Function	Various video professional processing functions: video broadcasting, timing capture, video recording, video watermarking, watermark mobile alignment, watermark rotation alignment, video grid overlay, video measurement, video scaling, gray scale calibration, video high dynamic (HDR), video depth of field extension, video image stitching, video scale, date, etc.
Image Processing and Enhancement	Image contrast control and adjustment, image denoising, various image filtering algorithms, image mathematical morphology algorithms, image rotation, image scaling and image printing, etc.
Image Overlay	The EHDView image overlay denoising function introduces advanced image matching technology. Users only need to record a short video of the image to be superimposed, and they can superimpose and output high fidelity in the case of displacement, rotation and magnification change between multiple frames of the video. images, easy to use

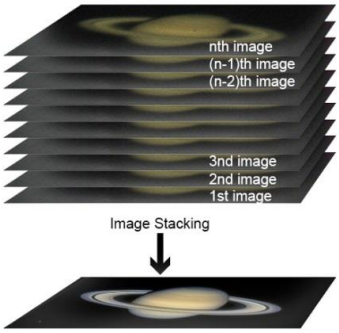


Figure 16-2 Image overlay denoising

16.2.4 Super compatibility

Camera Video Interface	Provide Twain, DirectShow, Labview, SDK installation package (native C++, C#)
Supported Platform and architectures	Compatible with Microsoft® Windows® XP / Vista / 7 / 8 /10 /11(32 & 64 bit), Mac OSX, Linux
Language Support	Language support can be added manually, currently supports English, Simplified Chinese, Traditional Chinese, German, Japanese, Russian, French, Italian, Polish, Turkish

16.2.5 Basic hardware requirements

PC Basic Configuration Requirements	CPU: Intel Core 2 2.8GHz or higher
	RAM: 2GB or more
	USB Port: USB3.0 / USB 2.0
	Monitor: 17" or higher
	CD-ROM

17 Software development instructions

17.1 SDK description

The download link of the SDK is as follows:

17.1.1 SDK support platform

- Win32:
  x86: XP SP3 and above; the CPU needs to support at least the SSE2 instruction set.

  x64: Win7 and above.

  arm: Win10 and above.

  arm64: Win10 and above.
- WinRT: x86, x64, arm, arm64; Windows 10 and above.
- macOS: x86 and x64 bundle; macOS 10.10 and above.
- Linux: core 2.6.27 and above.
  x86: The CPU needs to support at least the SSE3 instruction set; GLIBC 2.8 and above.

  x64: GLIBC 2.14 and above.

  armel: GLIBC 2.17 and above; compiled by toolchain arm-linux-gnueabi (version 4.9.2).

  armhf: GLIBC 2.17 and above; compiled by toolchain arm-linux-gnueabihf (version 4.9.2).

  arm64: GLIBC 2.17 and above; compiled by toolchain aarch64-linux-gnu (version 4.9.2).
- Android: arm, arm64, x86, x64; compiled by android-ndk-r18b.

17.1.2 Introduction to SDK content

nncam series cameras support a variety of APIs, including: Native C/C++,.NET/C#/VB.NET, Python, Java, DirectShow, Twain, LabView, Matlab, etc. Compared with other APIs, Native C/C++ API as a low-level API is characterized by using pure C/C++ development without relying on other runtime libraries. The interface is simple and the control is flexible. This SDK zip package contains all the resources and information needed. The directory is as follows:

- inc:
  nncam.h, the C/C++ header file.
- win: Microsoft Windows platform
  file
  - dotnet:
    nncam.cs, supports C#. nncam.cs uses P/Invoke to call nncam.dll. Please copy nncam.cs to your C# project for use.

    nncam.vb, supports VB.NET. nncam.vb uses P/Invoke to call nncam.dll. Please copy nncam.vb to your VB.NET project for use.
  - x86:

    nncam.lib, x86 lib file.

    nncam.dll, x86 dynamic library file.

    democpp.exe, x86 C++ demo execute the procedure.
- x64:

  nncam.lib, x64 lib file.

  nncam.dll, x64 dynamic library file.

  democpp.exe, x64 C++ demo execute the

  procedure.
- arm:
  nncam.lib, arm lib file.

nncam.dll, arm dynamic library file.

- arm64:

  nncam.lib, arm64 lib file.

  nncam.dll, arm64 dynamic library file.

- winrt:

  They can be applied for Dynamic library files of WinRT/ UWP (Universal Windows Platform)/ Windows Store App. They are compatible with Windows Runtime and can be referenced by Universal Windows Platform apps. If you use C# to develop UWP, you can use the nncam.cs wrapper class. Please pay attention to the Device Capability of uwp. Refer to how to add USB device capabilities to the app manifest. (Microsoft seems to limit the Device entry under DeviceCapability to no more than 100) demouwp.zip is a simple example of uwp. Please modify vid and pid. under DeviceCapability in the file Package.appxmanifest before compiling the run example.

- Drivers: (Cameras produced after 2017.1.1 support WinUSB, and drivers no longer need to be installed on Windows 8 and above)

  The x86 folder contains the x86 kernel-mode driver files, including nncam.cat, nncam.inf and nncam.sys.

  The x64 folder contains the x64 kernel-mode driver files, including nncam.cat, nncam.inf and nncam.sys.

- samples:

  1. democpp, C++ example. This example demonstrates enumerating devices, opening devices, previewing videos, capturing images, setting resolution, triggering, saving images to files in various image formats (.bmp,.jpg,.png, etc.), wmv format video recording, Trigger ModeTrigger Mode, IO control and so on. This example uses the Pull Mode mechanism. To keep the code clean, the WTL library used by the examples can be downloaded from this link http://sourceforge.net/projects/wtl/.

  2. demopush, C++ example, using the Push Mode mechanism, StartPushModeV3.

  3. demomfc, a simple C++ example, uses MFC as a GUI library, supports opening devices, previewing videos, capturing images, setting resolution, saving images to files in various image formats (.bmp,.jpg,.png, etc.), etc. This example uses the Pull Mode mechanism.

  4. demowinformcs1, take C# winform for example, it supports opening devices, previewing videos, capturing images, saving images to files, and setting white balance. This example uses the Pull Mode mechanism, StartPullModeWithWndMsg.

  5. demowinformcs2, take C# winform for example, it supports opening devices, previewing videos, capturing images, saving images to files, and setting white balance. This example uses the Pull Mode mechanism, StartPullModeWithCallback.

  6. demowinformcs3, take C# winform for example, it supports opening devices, previewing videos, capturing images, saving images to files, and setting white balance. This example uses the Push Mode mechanism, StartPushMode.

  7. demowinformvb, take VB.NET winform for example, it supports opening devices, previewing videos, capturing images, saving images to files, and setting white balance. This example uses the Pull Mode mechanism.

- linux: Linux platform files

  Udev: 99-nncam.rules, udev rule file.

  Please refer to: http://reactivated.net/writing_udev_rules.html.

- c#: nncam.cs, Support. Net Core C#. nncam.cs uses P/Invoke to call libnncam.so. Please copy nncam.cs to your C# project for use.
- x86: libnncam.so, x86 version so file.
- x64: libnncam.so, x64 version so file.
- armel: libnncam.so, armel version so file, toolchain is arm-linux-gnueabi.
- armhf: libnncam.so, armhf version so file, toolchain is arm-linux-gnueabihf.

- arm64: libnncam.so, arm64 version so file, toolchain is aarch64-linux-gnu.
- android: libnncam.so for four architectures of Android platform arm, arm64, x86, x64.
- mac: macOS platform files.
- python: nncam.py and example code.
- java: nncam.java and example code (console and Swing).
- doc: SDK usage documentation, Simplified Chinese, English.
- sample:
- de emosimplest, the simplest example, is about 60 lines of code.
- demoraw, RAW data and still shots, about 120 lines of code.
- extras:
- directshow: DirectShow SDK and demo program.
- twain: TWAIN SDK.
- labview: Labview SDK and demo program.
- matlab: MatLab demo program.

EHD imaging GmbH, Zum Rennplatz 15, D-49401 Damme (Germany)
Tel: +49-5491-2090
email: info@ehdimaging.de
web: www.ehd.de