

# INGaAs USB2.0 CAMERA

## Product Family SWIR Camera

EHD-IK1112



### Description

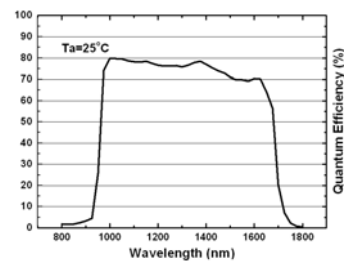
The EHD-IK1112 camera is a highly sensitive infrared camera (SWIR, NIR). The sensitivity interval reaches from 900 nm to 1700 nm. The sensor doesn't need active cooling and thus powered by USB bus (no other power supply needed). The small housing enables easy integration into existing measurement with stable temperature conditions.

The optional available M42 to C-mount adapter or F-mount (Nikon) to C-mount extends the number of lenses which can be used with this camera. Via standard USB2.0 interface can be controlled by each PC or notebook. The 14-bit A/D converter provides high dynamics of captured image data. Correction procedures specially adapted to properties of InGaAs sensors assure very high image quality.

### Application Fields

- Laser beam profiling
- NIR (SWIR) image processing
- Imaging NIR spectroscopy
- Image improvement, (covered) surveillance
- Semiconductor inspection, e.g. solar cells
- Scientific applications (medicine [e.g. OCT], biology, astronomy)
- Material analysis (plastics, textiles, glass, metal, wood)
- Thermal imaging in industry at  $T > 200^{\circ}\text{C}$
- 2D humidity analysis, water detection
- Biometrics (artificial hair appears black and natural hair white)
- Authenticity testing of paintings, furniture, and documents (IR reflectography)

### Spectral Sensor Sensitivity



### Technical Specifications

Sensor	3/4", InGaAs, progressive scan
Image resolution	320 × 256 pixel*
Pixel size	30 μm × 30 μm
Sensor frame rate (internal)	110 fps at 320 x 256 pixel
Shutter	Global shutter
Exposure time range	10 μs – 1 s
A/D resolution	14 bit
Gain	Two modes (Low Gain and High Gain), factor 21× at High Gain
Internal image memory	32 MB
Data interface	USB2.0 (high speed)
Power supply	USB bus powered
Power loss	typ. 2,1 W
Temperature (operational)	+ 0 °C to + 55 °C
Temperature (storage)	- 40 °C to + 85 °C
Dimensions (without lens)	31,4 mm × 45 mm × 95 mm
Mass	ca. 130 g (without lens)
Lens adapter	C-Mount / adjustable
Options	<b>Digital inputs:</b> <ul style="list-style-type: none"><li>• 2× opto-decoupled (programmable)</li><li>• 1× TTL trigger input (fast)</li></ul> <b>Digital outputs:</b> <ul style="list-style-type: none"><li>• 2× opto-decoupled (programmable as strobe)</li></ul> <ul style="list-style-type: none"><li>▪ Temperature sensor near the sensor</li><li>▪ RS232 interface</li></ul>

\* Sensor specifications are valid within a centered image field of 318 × 254 pixel.

### Dimensions

