



Key Specifications:

- **Megapixel Zoom Ratio: 0.5X—0.07X**
- **Telecentric Design at 0.25X—0.5X**
- **Adjustble W.D.: 182mm –577,2mm**
- **Zoom Ratio 7:1**
- **Sensor: 1.2“ 8 Diagonal 17.4mm)**
- **F Stop: F4.3**
- **Resolution 100lp/mm center and corner**
- **C-Mount**
- **Filter Size: M62 X P0.75**
- **Manuel Iris/Focus/Zoom**

EHD imaging GmbH
Zum Rennplatz 15
D-49401 Damme/Germany
Phone:+49-5491-2090
Fax:+49-5491-2098
e-mail: info@ehdimaging.de

www.ehd.de

Telecentric MacroZoom 7X



Telecentric Macrozoom Lens

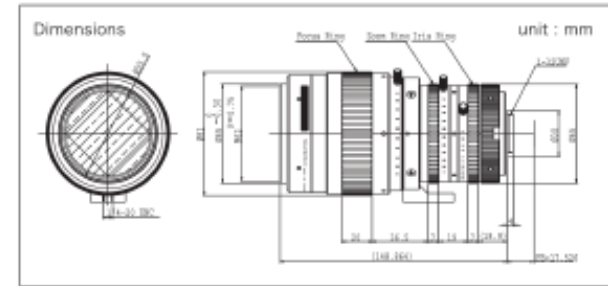
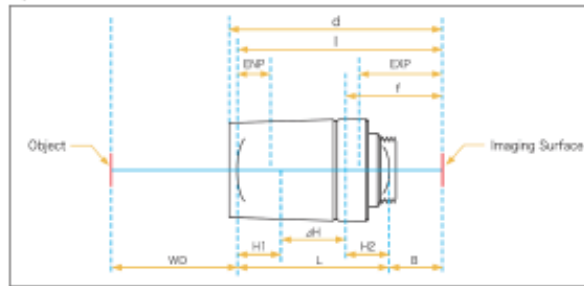
This high performance lens incorporates 2 design functions. It operates both as a 7X macro zoom lens with 0.07X to 0.5X magnification and as a telecentric lens within the 0.25X to 0.5X magnification range. It provides excellent brightness throughout the zoom range, maintaining 70% illumination at both center and corners.

The TEC-V7X's unique features provide the versatility to meet a wide range of industrial applications. The working distance is adjustable from 182-577mm and a F4.3-32C manual iris allows precise depth of field and contrast adjustments. This lens is suitable for cameras up to 5 megapixels with 1/1.1" sensors.

| | |
|-----------------------|-------------------------|
| Optical Magnification | 0.07X – 0.5X |
| Max.Magnification | 47.65 – 106.26mm |
| Max.Aperture Ratio | 1 : 4.3 |
| Operation range | Iris F4.3-F32 |
| | Focus 182 mm – 577.2 mm |
| Control | Iris Manual operation |
| | Focus Manual operation |
| | Zoom Manual operation |
| Operating Temperature | -10°C ~ 50°C |

| | | | | | | | |
|--------------------|-----------------|---------|-------|----|--------|------|-------|
| Optical distortion | tele | 1.1" | 1.0% | 1" | 0.84% | 2/3" | 0.39% |
| | wide | | -1.7% | | -1.45% | | -0.7% |
| BackFocal Length | tele | 39.53mm | | | | | |
| | wide | 49.78mm | | | | | |
| Flange Back Length | 17.526 mm | | | | | | |
| Mount | C Mount | | | | | | |
| Filter Size | M62xP0.75 | | | | | | |
| Dimensions | φ 61 x 152.86mm | | | | | | |
| Weight | 1.4kg | | | | | | |

Optical Data



| | | Focal Length | First Principal Point | Second Principal Point | L-(H1+H2) | Total Length | Back Focus | Second Principal Point | Entrance Pupil Diameter | Entrance Pupil Position | Exit pupil Diameter | Exit pupil Position | Distortion | Extension | Length |
|---------|------|--------------|-----------------------|------------------------|-----------|--------------|------------|------------------------|-------------------------|-------------------------|---------------------|---------------------|------------|-----------|--------|
| | | f | H1 | H2 | ΔH | L | B | l | ENP | EXP | | | | | d |
| TEC-V7X | Tele | 106.26 | -136.10 | 12.50 | -134.50 | 122.40 | 39.53 | 161.93 | 53.64 | 375.00 | 16.50 | 38.96 | 1.00 | - | 166.39 |
| | Wide | 47.65 | -143.10 | 110.50 | -33.21 | 112.10 | 49.78 | 161.91 | 11.00 | 126.90 | 16.50 | 38.96 | -1.70 | - | 166.39 |

*First Principal Point and Entrance Pupil Position are calculated from front lens
 *Second Principal Point and Exit Pupil Position are calculated from rear lens

TEC-V7X Field of view(mm)

| Working Distance (mm) | Optical Magnification | 1.1 inch | | | 1 inch | | | 2/3 inch | | | |
|-----------------------|-----------------------|----------|--------|--------|--------|--------|--------|----------|--------|-------|--------|
| | | H | V | D | H | V | D | H | V | D | |
| 182 | Wide | 0.2525 | 48.74 | 48.74 | 69.12 | 50.32 | 38.06 | 63.28 | 34.88 | 26.16 | 43.6 |
| | Middle | 0.3643 | 33.64 | 33.64 | 47.33 | 34.72 | 26.3 | 43.6 | 24.12 | 18.1 | 30.11 |
| | Tele | 0.5 | 24.6 | 24.6 | 34.75 | 25.4 | 19.246 | 31.88 | 17.65 | 13.26 | 22 |
| 200 | Wide | 0.2258 | 54.52 | 54.52 | 76.94 | 56.3 | 42.56 | 70.84 | 39 | 29.24 | 48.76 |
| | Middle | 0.3258 | 37.62 | 37.62 | 52.95 | 38.83 | 29.4 | 48.78 | 26.96 | 20.24 | 33.67 |
| | Tele | 0.4451 | 27.5 | 27.5 | 38.68 | 28.38 | 21.51 | 35.64 | 19.72 | 14.81 | 24.62 |
| 300 | Wide | 0.1413 | 87.48 | 87.48 | 124.06 | 90.34 | 68.18 | 114.1 | 62.46 | 46.8 | 78.178 |
| | Middle | 0.2037 | 60.24 | 60.24 | 85.34 | 62.18 | 47.06 | 78.18 | 42.15 | 32.38 | 53.898 |
| | Tele | 0.2784 | 44 | 44 | 61.94 | 45.42 | 34.3 | 57.46 | 31.55 | 23.69 | 39.38 |
| 400 | Wide | 0.1037 | 119.47 | 119.47 | 169.98 | 123.4 | 93.02 | 156.05 | 85.2 | 63.82 | 106.71 |
| | Middle | 0.1495 | 82.15 | 82.15 | 115.97 | 84.8 | 64.16 | 106.72 | 58.82 | 44.12 | 73.48 |
| | Tele | 0.2042 | 59.99 | 59.99 | 84.52 | 61.92 | 46.89 | 77.82 | 43 | 32.28 | 53.7 |
| 500 | Wide | 0.082 | 151.25 | 151.24 | 215.44 | 156.25 | 117.67 | 197.8 | 107.78 | 80.68 | 135.04 |
| | Middle | 0.1183 | 103.92 | 103.92 | 146.82 | 107.28 | 81.12 | 135 | 74.37 | 55.78 | 92.94 |
| | Tele | 0.1617 | 75.84 | 75.84 | 106.89 | 78.29 | 59.28 | 98.4 | 54.36 | 40.8 | 67.88 |
| 577.5 | Wide | 0.0708 | 175.21 | 175.21 | 250.66 | 181.4 | 136.35 | 229.82 | 125.08 | 93.62 | 156.76 |
| | Middle | 0.102 | 120.57 | 120.57 | 170.44 | 124.47 | 94.1 | 156.74 | 86.28 | 64.72 | 107.84 |
| | Tele | 0.1398 | 87.99 | 87.99 | 124.04 | 90.8 | 68.75 | 114.16 | 63.06 | 47.32 | 78.74 |