

TELECENTRIC LENS

CCTV FACTORY AUTOMATION LENSES



- Very low distortion compared to standard macro lenses
- Wide depth of field
- Working distance: 140mm - Infinity
- Suitable for use as a telephoto lens and macro lens
- Fast F2.8 F-stop at Infinity

TEC-M55



| | | | |
|---------------------------|---|--------------|-----------|
| Max. Magnification | 55mm | | |
| Max. Aperture Ratio | 1:2.8 | | |
| Max. Image Format HxVxD | 8.8mm x 6.6mm (φ 11mm) | | |
| Operation Range | Irises | F2.8 - F32C | |
| | Focus | 0.14m - Inf. | |
| Magnification | Inf. - 0.5X (Max 1.0X at 140mm with 2X Converter) | | |
| Relative Illumination | 78.5% (at 0.5X) | | |
| Depth of Field | 1/2" 3.5mm(at 0.5X F2.8), 6.0mm(at 0.5X F5.6) | | |
| Control | Irises | Manual | |
| | Focus | Manual | |
| Object Dimension at M.O.D | 1.7(H)cm x 1.3(V)cm 2/3" | | |
| Angle of View | D | 11.5° | 8.3° |
| | H | 2/3" 9.2° | 1/2" 6.7° |
| | V | 6.9° | 5.0° |
| Operating Temperature | -10°C ~ +50°C | | |

| | | | | |
|--------------------|----------------------------------|-----------------------|------|-----------------------|
| Distortion | 2/3" | +0.2% at 0.2X (y=5.5) | 1/2" | +0.1% at 0.2X (y=4.0) |
| | | +0.6% at 0.5X (y=5.5) | | +0.3% at 0.5X (y=4.0) |
| Back Focal Length | 29.8mm | | | |
| Flange Back Length | 17.526mm | | | |
| Mount | C-Mount | | | |
| Filter Size | M43 P=0.75mm | | | |
| Dimensions | φ 53.0mm x 92.9mm (Max. at 0.5X) | | | |
| Weight | 320g | | | |

| CCD Size | H(mm) | V(mm) | D(mm) |
|----------|-------|-------|-------|
| 2/3" | 8.8 | 6.6 | 11.0 |
| 1/2" | 6.4 | 4.8 | 8.0 |
| 1/3" | 4.8 | 3.6 | 6.0 |
| 1/4" | 3.6 | 2.7 | 4.5 |

f=55mm

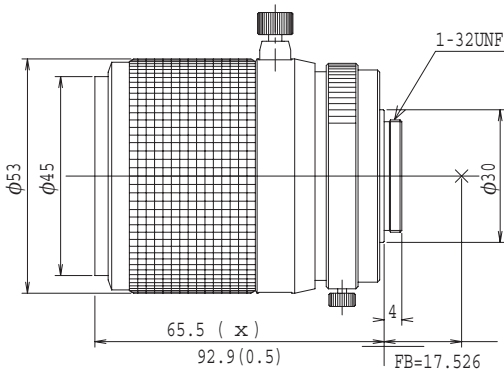
| Working Distance (mm) | Optical Magnification | Field of View(mm) | | | | | |
|-----------------------|-----------------------|-------------------|-------|-------|-------|-------|-------|
| | | 2/3" | | 1/2" | | 1/3" | |
| | | H | V | H | V | H | V |
| 5000 | 0.011X | 796.2 | 597.8 | 579.7 | 435.0 | 435.0 | 326.3 |
| 4000 | 0.014X | 636.1 | 477.6 | 463.1 | 347.5 | 347.5 | 260.7 |
| 3000 | 0.018X | 476.0 | 357.4 | 346.6 | 260.1 | 260.1 | 195.1 |
| 2000 | 0.028X | 315.9 | 237.2 | 230.0 | 172.6 | 172.6 | 129.5 |
| 1500 | 0.037X | 235.9 | 177.1 | 177.1 | 128.9 | 128.9 | 96.7 |
| 1000 | 0.056X | 155.8 | 117.0 | 113.4 | 85.1 | 85.1 | 63.9 |
| 950 | 0.059X | 147.8 | 111.0 | 107.6 | 80.7 | 80.7 | 60.6 |
| 900 | 0.063X | 139.8 | 105.0 | 101.8 | 76.4 | 76.4 | 57.3 |
| 850 | 0.067X | 131.8 | 99.0 | 96.0 | 72.0 | 72.0 | 54.0 |
| 800 | 0.071X | 123.8 | 92.9 | 90.1 | 67.6 | 67.6 | 50.7 |
| 750 | 0.076X | 115.8 | 86.9 | 84.3 | 63.2 | 63.2 | 47.4 |
| 700 | 0.081X | 107.8 | 80.9 | 78.5 | 58.9 | 58.9 | 44.2 |
| 650 | 0.088X | 99.8 | 74.9 | 72.6 | 55.5 | 55.5 | 40.9 |
| 600 | 0.096X | 91.8 | 68.9 | 66.8 | 51.1 | 51.1 | 37.6 |
| 550 | 0.105X | 83.8 | 62.9 | 61.0 | 45.8 | 45.8 | 34.3 |
| 500 | 0.116X | 75.8 | 56.9 | 55.2 | 41.4 | 41.4 | 31.0 |
| 450 | 0.130X | 67.8 | 50.9 | 49.3 | 37.0 | 37.0 | 27.8 |
| 400 | 0.147X | 59.8 | 44.9 | 43.5 | 32.6 | 32.6 | 24.5 |
| 350 | 0.170X | 51.8 | 38.8 | 37.7 | 28.3 | 28.3 | 21.2 |
| 300 | 0.201X | 43.8 | 32.8 | 31.8 | 23.9 | 23.9 | 17.9 |
| 250 | 0.246X | 35.7 | 26.8 | 26.0 | 19.5 | 19.5 | 14.6 |
| 200 | 0.317X | 27.7 | 20.8 | 20.2 | 15.1 | 15.1 | 11.4 |
| 150 | 0.446X | 19.7 | 14.8 | 14.3 | 10.8 | 10.8 | 8.1 |
| 140 | 0.486X | 18.1 | 13.6 | 13.2 | 9.9 | 9.9 | 7.4 |

f=55mm with 0.75X Converter

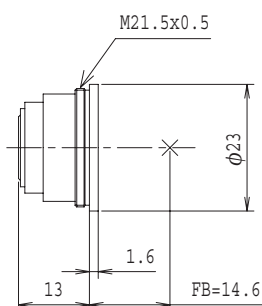
| Working Distance (mm) | Optical Magnification | Field of View(mm) | | | | | |
|-----------------------|-----------------------|-------------------|-------|-------|-------|-------|-------|
| | | 2/3" | | 1/2" | | 1/3" | |
| | | H | V | H | V | H | V |
| 5000 | 0.008X | 1066.2 | 797.6 | 773.3 | 579.2 | 579.2 | 434.0 |
| 4000 | 0.010X | 851.9 | 637.3 | 617.8 | 462.7 | 462.7 | 346.8 |
| 3000 | 0.014X | 637.6 | 476.9 | 462.4 | 346.3 | 346.3 | 259.5 |
| 2000 | 0.021X | 423.2 | 316.6 | 306.9 | 229.9 | 229.9 | 172.3 |
| 1500 | 0.028X | 316.1 | 236.4 | 229.2 | 171.7 | 171.7 | 128.6 |
| 1000 | 0.423X | 208.9 | 156.2 | 151.5 | 113.4 | 113.4 | 85.0 |
| 950 | 0.045X | 198.2 | 148.2 | 143.7 | 107.6 | 107.6 | 80.6 |
| 900 | 0.047X | 187.4 | 140.2 | 135.9 | 101.8 | 101.8 | 76.3 |
| 850 | 0.050X | 176.7 | 132.2 | 128.1 | 96.0 | 96.0 | 71.9 |
| 800 | 0.053X | 166.0 | 124.2 | 120.4 | 90.1 | 90.1 | 67.5 |
| 750 | 0.057X | 155.3 | 116.1 | 112.6 | 84.3 | 84.3 | 63.2 |
| 700 | 0.061X | 144.6 | 108.1 | 104.8 | 78.5 | 78.5 | 58.8 |
| 650 | 0.066X | 133.8 | 100.1 | 97.0 | 72.7 | 72.7 | 54.5 |
| 600 | 0.072X | 123.1 | 92.1 | 89.3 | 66.8 | 66.8 | 50.1 |
| 550 | 0.079X | 112.4 | 84.1 | 81.5 | 61.0 | 61.0 | 45.7 |
| 500 | 0.087X | 101.7 | 76.0 | 73.7 | 55.2 | 55.2 | 41.4 |
| 450 | 0.097X | 90.9 | 68.0 | 65.9 | 49.4 | 49.4 | 37.0 |
| 400 | 0.110X | 80.2 | 60.0 | 58.2 | 43.6 | 43.6 | 32.6 |
| 350 | 0.127X | 69.5 | 52.0 | 50.4 | 37.7 | 37.7 | 28.3 |
| 300 | 0.151X | 58.7 | 43.9 | 42.6 | 31.9 | 31.9 | 23.9 |
| 250 | 0.184X | 48.0 | 35.9 | 34.8 | 26.1 | 26.1 | 19.5 |
| 200 | 0.238X | 37.3 | 27.9 | 27.0 | 20.2 | 20.2 | 15.2 |
| 150 | 0.334X | 26.5 | 19.8 | 19.2 | 14.4 | 14.4 | 10.8 |
| 140 | 0.363X | 24.4 | 18.2 | 17.7 | 13.2 | 13.2 | 9.9 |

f=55mm with 2X Converter

| Working Distance (mm) | Optical Magnification | Field of View(mm) | | | | | |
|-----------------------|-----------------------|-------------------|-------|-------|-------|-------|-------|
| | | 2/3" | | 1/2" | | 1/3" | |
| | | H | V | H | V | H | V |
| 5000 | 0.019X | 453.1 | 340.3 | 330.0 | 247.7 | 247.7 | 185.8 |
| 4000 | 0.024X | 362.0 | 271.9 | 263.6 | 197.9 | 197.9 | 148.5 |
| 3000 | 0.032X | 270.9 | 203.4 | 197.3 | 148.1 | 148.1 | 111.1 |
| 2000 | 0.049X | 179.8 | 135.0 | 130.9 | 98.3 | 98.3 | 73.7 |
| 1500 | 0.065X | 134.3 | 100.8 | 97.8 | 73.4 | 73.4 | 55.0 |
| 1000 | 0.098X | 88.7 | 66.6 | 64.6 | 48.5 | 48.5 | 36.4 |
| 950 | 0.104X | 84.1 | 63.2 | 61.3 | 46.0 | 46.0 | 34.5 |
| 900 | 0.110X | 79.6 | 59.8 | 58.0 | 43.5 | 43.5 | 32.6 |
| 850 | 0.116X | 75.0 | 56.3 | 54.6 | 41.0 | 41.0 | 30.8 |
| 800 | 0.124X | 70.5 | 52.9 | 51.3 | 38.5 | 38.5 | 28.9 |
| 750 | 0.133X | 65.9 | 49.5 | 48.0 | 36.0 | 36.0 | 27.0 |
| 700 | 0.142X | 61.4 | 46.1 | 44.7 | 33.5 | 33.5 | 25.2 |
| 650 | 0.154X | 56.8 | 42.7 | 41.4 | 31.0 | 31.0 | 23.3 |
| 600 | 0.167X | 52.3 | 39.2 | 38.1 | 28.6 | 28.6 | 21.4 |
| 550 | 0.183X | 47.7 | 35.8 | 34.7 | 26.1 | 26.1 | 19.6 |
| 500 | 0.203X | 43.2 | 32.4 | 31.4 | 23.6 | 23.6 | 17.7 |
| 450 | 0.227X | 38.6 | 29.0 | 28.1 | 21.1 | 21.1 | 15.8 |
| 400 | 0.257X | 34.0 | 25.6 | 24.8 | 18.6 | 18.6 | 14.0 |
| 350 | 0.297X | 29.5 | 22.1 | 21.5 | 16.1 | 16.1 | 12.1 |
| 300 | 0.352X | 24.9 | 18.7 | 18.2 | 13.6 | 13.6 | 10.2 |
| 250 | 0.431X | 20.4 | 15.3 | 14.8 | 11.1 | 11.1 | 8.4 |
| 200 | 0.558X | 15.8 | 11.9 | 11.5 | 8.7 | 8.7 | 6.5 |
| 150 | 0.789X | 11.3 | 8.5 | 8.2 | 6.2 | 6.2 | 4.6 |
| 140 | 0.861X | 10.4 | 7.8 | 7.6 | 5.7 | 5.7 | 4.3 |



0.75X Converter



2X Converter

