

MVL-MF0824M-5MPE

2/3" 8mm 5MP FA LENS

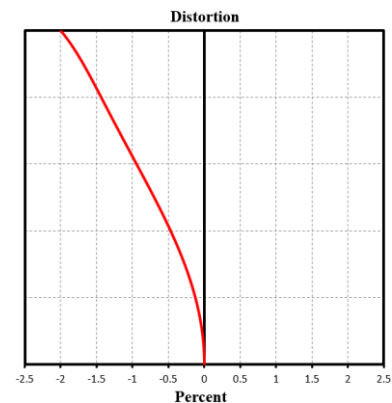
MF-E series FA Lens are optimized for machine vision light sources and sensors, with high resolution, excellent image uniformity, high transmittance and good stability. Featured with fixed focal length, manual aperture and compact size, it is suitable for machine vision industry applications.



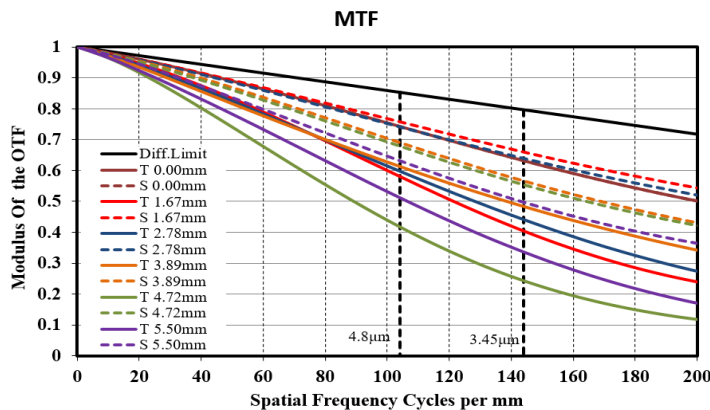
Key Features

- High resolution and consistency of image clarity.
- Lower distortion and higher relative illumination rate.
- Achromatic optical system design and better imaging performance with color camera.
- Excellent performance at high and low temperature.
- Good optical performance at ultra-short working distance.

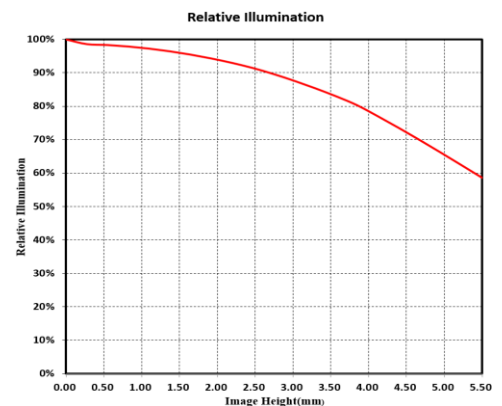
Distortion



MTF



Relative Illumination

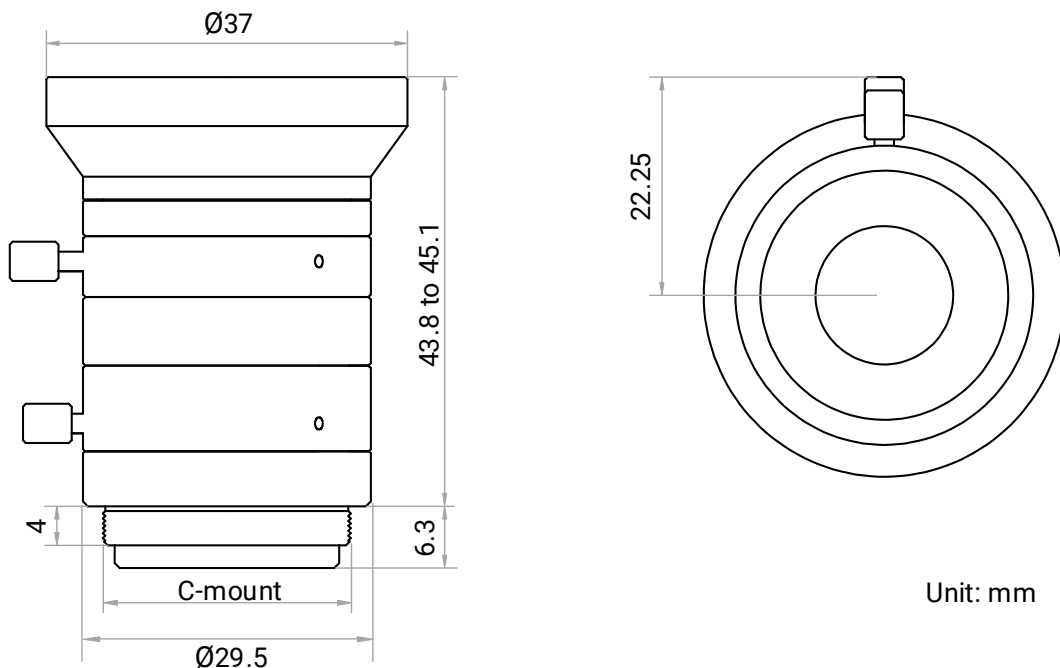


Note: The above curves are the simulate results based on F2.4, $\beta=-0.025$, WD=300 mm.

Specification

| | | |
|-----------------------------|--------------|--|
| | Model | MVL-MF0824M-5MPE |
| Parameter | | Fixed focal length, Manual iris, 5MP, FA Lens |
| Performance | | |
| Focal length | | 8 mm |
| F-number | | F2.4 to F16 |
| Image size | | Ø11 mm (2/3") |
| TV distortion | | -0.90% |
| Min. object distance | | 0.1 m |
| Field of view | | D (11.1 mm): 70.6° H (8.45 mm): 56.4° V (7.07 mm): 48.3° |
| Mechanical | | |
| Iris control | | Manual |
| Focus control | | Manual |
| Filter thread | | M35.5 × 0.5 |
| Mount | | C-mount |
| Flange focal length | | 17.526 mm |
| Dimension | | Ø37 mm × 43.8 mm to 45.1 mm (Ø1.5" × 1.7" to 1.8") |
| Weight | | 87.3 g (0.2 lb.) |
| Temperature | | -10 °C to 50 °C (14 °F to 122 °F) |
| General | | |
| Certification | | RoHS 2.0 |

Dimension



Field of View

| Ring thickness (mm) | Working distance (mm) | | Magnification | Field of view (mm) | | | | | |
|---------------------|-----------------------|--------|---------------|--------------------|------------|------------|------------|------------|------------|
| | | | | 2/3" | | 1/1.8" | | 1/2" | |
| | | | | H (8.45mm) | V (7.07mm) | H (7.38mm) | V (4.92mm) | H (6.22mm) | V (4.67mm) |
| 2 | Near | 8.3 | -0.278 | 29.0 | 23.8 | 24.8 | 16.1 | 20.5 | 15.1 |
| | Far | 19.2 | -0.206 | 39.2 | 32.4 | 33.1 | 21.6 | 27.2 | 20.2 |
| 1 | Near | 25.4 | -0.172 | 47.8 | 39.5 | 40.9 | 26.8 | 33.9 | 25.2 |
| | Far | 58.8 | -0.102 | 81.1 | 67.3 | 67.6 | 44.5 | 55.5 | 41.4 |
| 0 | 100 | | -0.064 | 129.9 | 108.1 | 112.9 | 74.6 | 94.8 | 70.8 |
| | 150 | | -0.046 | 183.0 | 152.4 | 159.1 | 105.3 | 133.7 | 99.9 |
| | 200 | | -0.036 | 235.9 | 196.6 | 205.3 | 135.9 | 172.5 | 129.0 |
| | 250 | | -0.029 | 288.8 | 240.8 | 251.4 | 166.6 | 211.4 | 158.1 |
| | 300 | | -0.025 | 341.8 | 285.1 | 297.6 | 197.3 | 250.2 | 187.2 |
| | 350 | | -0.021 | 394.7 | 329.3 | 343.8 | 227.9 | 289.1 | 216.3 |
| | 400 | | -0.019 | 447.7 | 373.5 | 390.0 | 258.6 | 328.0 | 245.4 |
| | 450 | | -0.017 | 500.6 | 417.8 | 436.2 | 289.3 | 366.8 | 274.5 |
| | 500 | | -0.015 | 553.6 | 462.0 | 482.3 | 319.9 | 405.7 | 303.6 |
| | 550 | | -0.014 | 606.6 | 506.2 | 528.5 | 350.6 | 444.6 | 332.7 |
| | 600 | | -0.013 | 659.5 | 550.5 | 574.7 | 381.3 | 483.4 | 361.8 |
| | 650 | | -0.012 | 712.5 | 594.7 | 620.9 | 411.9 | 522.3 | 390.9 |
| | 700 | | -0.011 | 765.4 | 638.9 | 667.1 | 442.6 | 561.2 | 420.0 |
| | 800 | | -0.010 | 871.3 | 727.4 | 759.4 | 503.9 | 638.9 | 478.2 |
| 900 | | -0.009 | 977.3 | 815.9 | 851.8 | 565.3 | 716.6 | 536.4 | |
| 1000 | | -0.008 | 1083.2 | 904.4 | 944.5 | 626.8 | 794.1 | 594.5 | |