

MVL-MF1224M-5MPE

2/3" 12 mm 5MP FA Lens

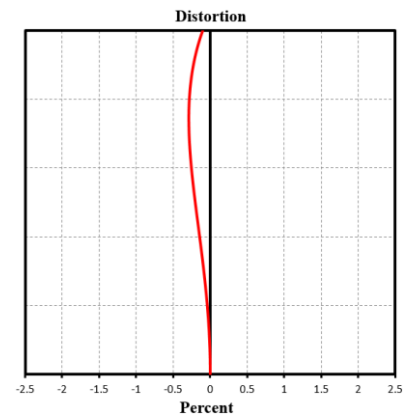
MF-E series FA Lens are optimized for machine vision light sources and sensors, with high resolution, excellent image uniformity, high transmittance and good stability. Featured with fixed focal length, manual aperture and compact size, it is suitable for machine vision industry applications.



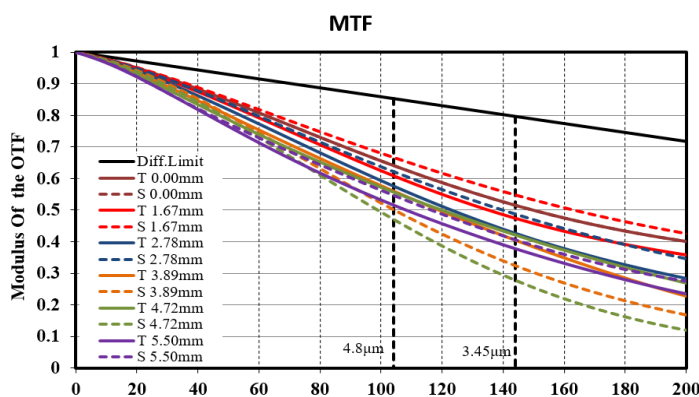
Key Features

- 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.

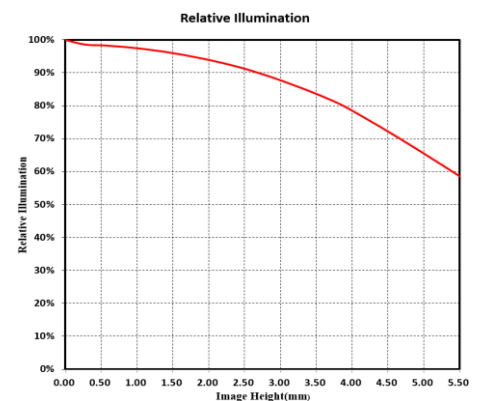
Distortion



MTF



Relative Illumination

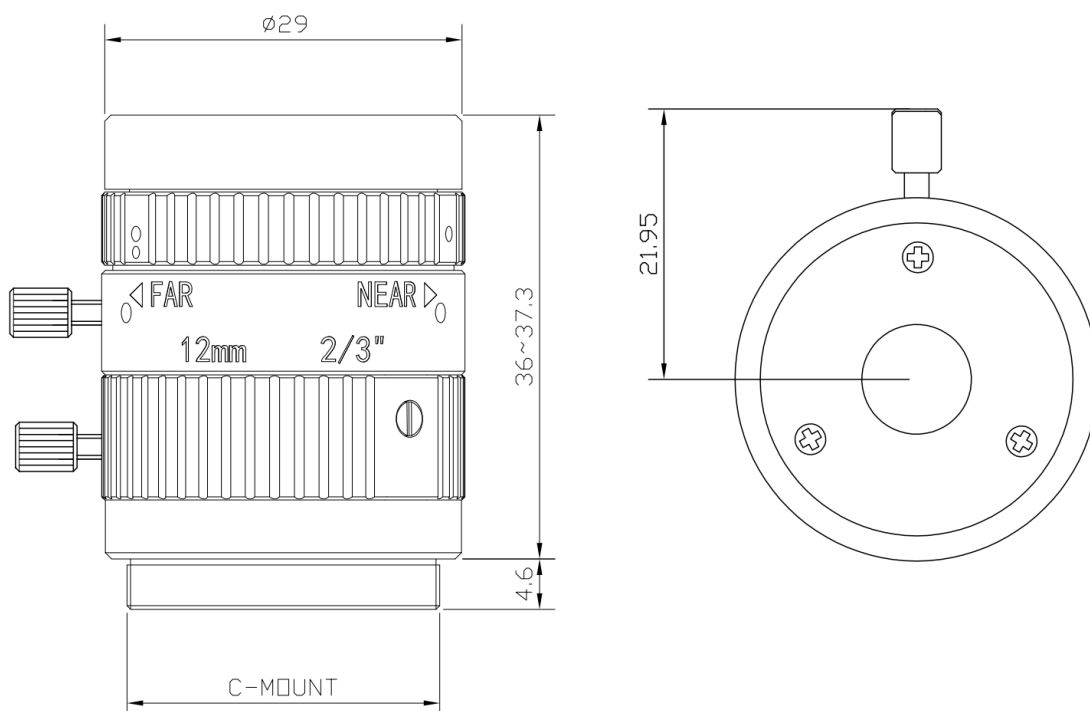


Note: The above curves are the simulate results based on F2.4, $\beta = -0.039$, WD=300 mm.

Specification

Parameter	Model	MVL-MF1224M-5MPE
	Fixed focal length, Manual iris, 5MP, FA Lens	
Performance		
Focal length	12 mm	
F-number	F2.4 to F16	
Image size	Φ11 mm (2/3")	
TV distortion	−0.15%	
Minimum object distance	0.15 m	
Field of view	D (11.1 mm): 48.9° H (8.45 mm): 38.3° V (7.07 mm): 32.4°	
Mechanical		
Iris control	Manual	
Focus control	Manual	
Filter thread	M27 × 0.5	
Mount	C-mount	
Flange focal length	17.526 mm	
Dimension	Φ29 mm × 36 mm to 37.3 mm (Φ1.1" × 1.4" to 1.5")	
Weight	71.6 g (0.2 lb.)	
Temperature	−10 °C to 50 °C (14 °F to 122 °F)	
General		
Certification	RoHS 2.0	

Dimension



Unit: mm

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)
10	Near	2.2	-0.900	9.2	7.7	8.0	5.3	6.7	5.0
	Far	4.2	-0.778	10.7	8.9	9.3	6.1	7.8	5.8
5	Near	12.5	-0.503	16.6	13.8	14.3	9.5	12.0	9.0
	Far	20.0	-0.381	21.9	18.3	18.9	12.5	15.8	11.8
2	Near	33.8	-0.265	31.7	26.4	27.2	18.0	22.8	17.0
	Far	72.2	-0.143	58.8	49.1	50.5	33.5	42.2	31.6
1	Near	53.1	-0.186	45.3	37.8	38.9	25.8	32.5	24.3
	Far	174.6	-0.065	131.1	109.6	113.0	75.2	94.8	71.1
0	150		-0.074	113.8	95.1	99.3	66.1	83.7	62.7
	200		-0.057	149.1	124.6	130.2	86.6	109.6	82.2
	250		-0.046	184.4	154.2	161.0	107.2	135.6	101.7
	300		-0.039	219.7	183.7	191.8	127.7	161.6	121.2
	350		-0.033	255.0	213.3	222.7	148.3	187.6	140.7
	400		-0.029	290.3	242.8	253.5	168.8	213.6	160.2
	450		-0.026	325.6	272.4	284.3	189.4	239.5	179.7
	500		-0.024	360.9	301.9	315.1	209.9	265.5	199.2
	550		-0.021	396.2	331.5	346.0	230.5	291.5	218.7
	600		-0.020	431.5	361.0	376.8	251.0	317.5	238.2
	650		-0.018	466.8	390.6	407.6	271.6	343.5	257.7
	700		-0.017	502.1	420.1	438.5	292.2	369.4	277.2
	800		-0.015	572.6	479.2	500.1	333.3	421.4	316.2
	900		-0.013	643.2	538.3	561.8	374.4	473.4	355.3
	1000		-0.012	713.7	597.3	623.7	415.6	525.4	394.3