MVL-MF1618M-5MPE

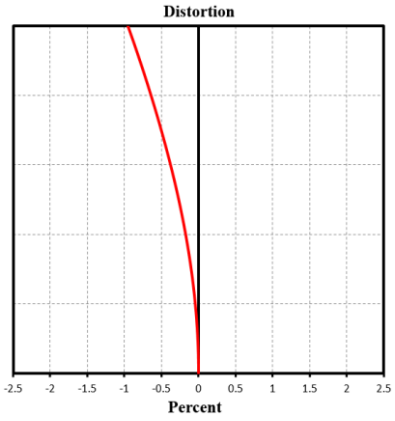
2/3" 16mm 5MP FA LENS

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.

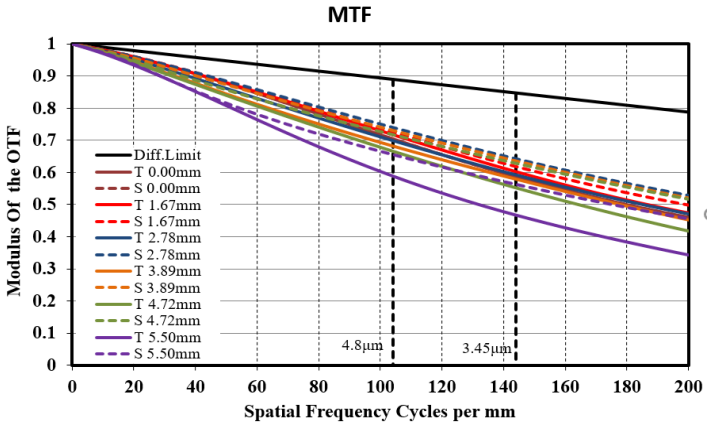
Key Feature

- 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.

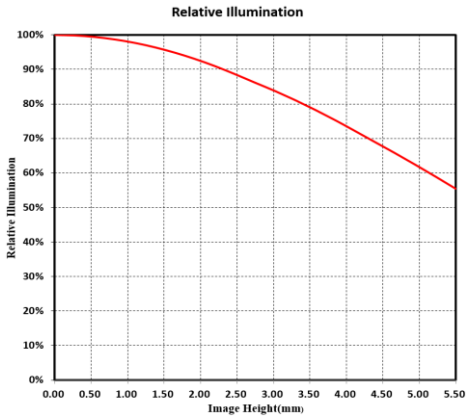
Distortion



MTF



Relative Illumination

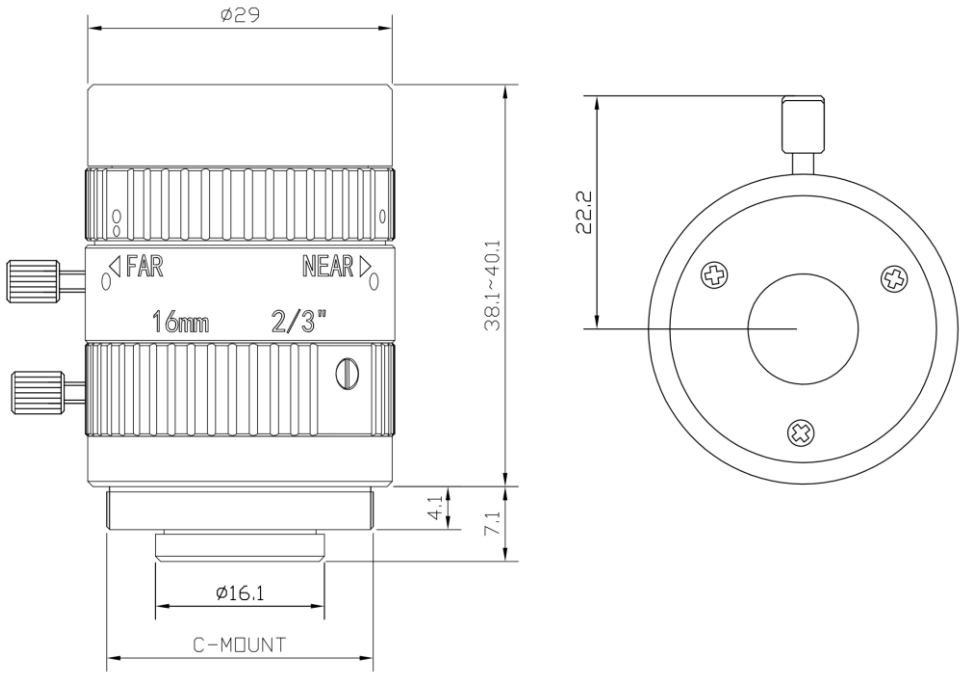


Note: The above curves are the simulate results based on F1.8, β=-0.032, WD=500 mm.

Specification

Model / Parameter	MVL-MF1618M-5MPE Fixed focal length, Manual iris, 5MP, FA Lens
Performance	
Focal length	16 mm
F-number	F1.8 to F16
Image size	Φ11 mm (2/3")
TV distortion	–0.55%
Min. object distance	0.2 m
Field of view	D (11.1 mm): 37.4° H (8.45 mm): 28.8° V (7.07 mm): 24.2°
Mechanical	
Iris control	Manual
Focus control	Manual
Filter thread	M27 × 0.5
Mount	C-mount
Flange focal length	17.526 mm
Dimension	Φ29 mm × 38.1 mm to 40.1 mm (Φ1.1" × 1.5" to 1.6")
Weight	68.0 g (0.1 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)
20	Near	2.1	-1.263	6.6	5.5	5.8	3.8	4.9	3.6
	Far	2.3	-1.215	6.9	5.7	6.0	4.0	5.1	3.8
15	Near	5.9	-0.967	8.6	7.2	7.6	5.0	6.4	4.8
	Far	6.5	-0.909	9.2	7.6	8.0	5.3	6.8	5.1
10	Near	13.2	-0.671	12.4	10.4	10.9	7.2	9.1	6.8
	Far	15.1	-0.605	13.8	11.5	12.1	8.0	10.1	7.6
5	Near	32.3	-0.375	22.3	18.6	19.4	12.9	16.3	12.2
	Far	41.6	-0.299	27.9	23.3	24.3	16.1	20.4	15.3
2	Near	71.9	-0.197	42.7	35.6	37.1	24.6	31.2	23.3
	Far	126.5	-0.115	73.0	60.9	63.2	42.0	53.1	39.8
1	Near	108.4	-0.137	61.4	51.2	53.3	35.4	44.8	33.5
	Far	288.7	-0.053	159.0	132.7	135.9	90.3	114.2	85.6
0	200		-0.078	108.4	90.5	94.5	62.8	79.5	59.6
	250		-0.063	134.7	112.5	117.5	78.1	98.9	74.2
	300		-0.052	161.0	134.5	140.6	93.5	118.3	88.7
	350		-0.045	187.4	156.5	163.7	108.8	137.8	103.3
	400		-0.039	213.8	178.6	186.7	124.2	157.2	117.8
	450		-0.035	240.2	200.6	209.8	139.5	176.6	132.4
	500		-0.032	266.5	222.6	232.8	154.8	196.0	146.9
	550		-0.029	292.9	244.7	255.9	170.2	215.4	161.5
	600		-0.026	319.3	266.7	279.0	185.5	234.8	176.1
	650		-0.024	345.7	288.7	302.0	200.9	254.2	190.6
	700		-0.023	372.0	310.8	325.1	216.2	273.6	205.2
	800		-0.020	424.8	354.8	371.2	246.9	312.5	234.3
	900		-0.018	477.5	398.9	417.3	277.6	351.3	263.4
	1000		-0.016	531.2	443.7	462.5	307.6	390.1	292.5

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