

MVL-LF8040M-F

Large Format $\Phi 43.2\text{mm}$ 80mm Focal Length FA LENS

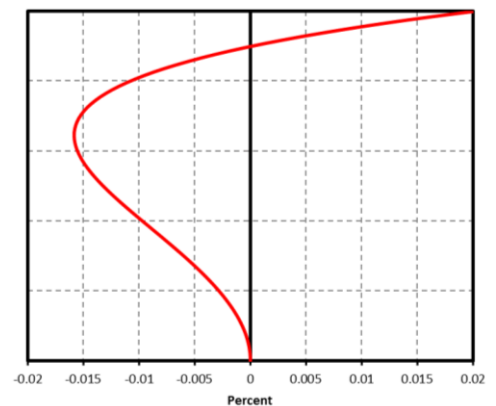
LF series large format FA Lens are optimized for machine vision light sources and sensors, with excellent imaging quality and high image uniformity, magnification range from 0.04x to 0.4x. It is suitable for high resolution machine vision industry applications.



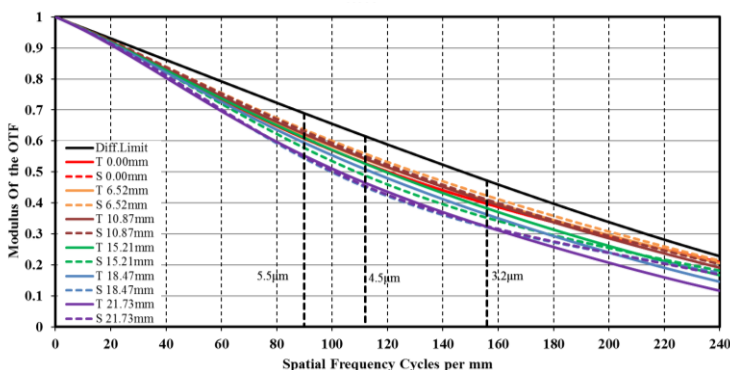
Key Features

- Higher resolution, compatible with $3.1\ \mu\text{m}$ pixel size
- Ultra-high resolution and consistency of image clarity
- Ultra-low distortion and high relative illumination
- Image circle $\phi 43.2\text{mm}$, applicable to large sensor area scan and 8K $5\ \mu\text{m}$ line scan cameras
- F-Mount can be extended to V-Mount

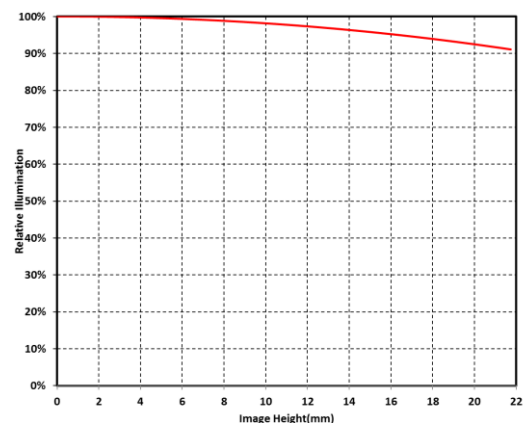
Distortion



MTF



Relative Illumination

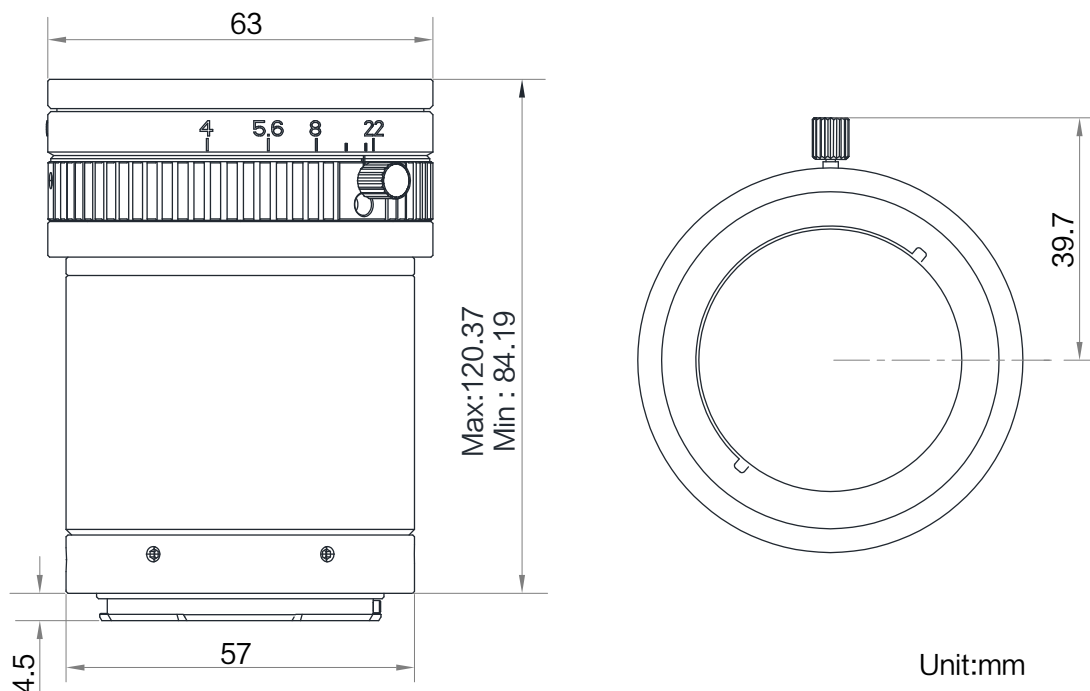


Note: The above curves are the simulate results based on F4.0, $\beta=-0.24\text{X}$, WD=365 mm.

Specification

Parameter	Model	MVL-LF8040M-F
	Fixed focal length, Manual iris, Large format lens	
Performance		
Focal Length	80 mm	
F-Number	F4.0 ~ F22	
Image Size	Φ43.2 mm	
Optical Distortion	0.04%	
Minimum Operation Distance	230 mm	
Magnification Range	0.04x ~ 0.4x	
Field of View	D (43.47 mm) : 30.41° H (36.17 mm) : 25.47° V (24.11 mm) : 17.13°	
Mechanical		
Iris Control	Manual	
Focus Control	Manual	
Filter Thread	M52*0.75	
Mount	F-Mount	
Flange Back Length	46.5 mm	
Dimension	Φ63×120.37 mm	
Weight	601.0 g	
Temperature	-10 ~ 50℃	
General		
Certification	RoHS2.0	

Dimension



Field of View

Working Distance (mm)	Magnification	Field of View (mm)				
		H(23mm)	V(23mm)	H(36.17mm)	V(24.11mm)	H(8K 5μm)
235	-0.400	57.60	57.60	90.42	60.28	102.40
250	-0.372	61.96	61.96	97.26	64.84	110.15
300	-0.300	76.80	76.80	120.56	80.37	136.53
350	-0.252	91.44	91.44	143.54	95.70	162.56
400	-0.217	106.18	106.18	166.68	111.12	188.77
450	-0.191	120.92	120.92	189.82	126.55	214.97
500	-0.170	135.69	135.69	213.00	142.00	241.23
550	-0.153	150.41	150.41	236.11	157.40	267.39
600	-0.140	165.16	165.16	259.27	172.85	293.62
700	-0.118	194.63	194.63	305.53	203.69	346.01
800	-0.103	224.13	224.13	351.83	234.55	398.44
900	-0.091	253.61	253.61	398.11	265.41	450.85
1000	-0.081	283.08	283.08	444.38	296.25	503.26
1100	-0.074	312.58	312.58	490.68	327.12	555.69
1200	-0.067	342.04	342.04	536.94	357.96	608.08
1300	-0.062	371.53	371.53	583.22	388.82	660.50
1400	-0.057	401.00	401.00	629.49	419.66	712.89
1500	-0.054	430.49	430.49	675.79	450.52	765.32