

# MVL-KF5028M-12MP

## 1.1" 50 mm 12 MP FA LENS

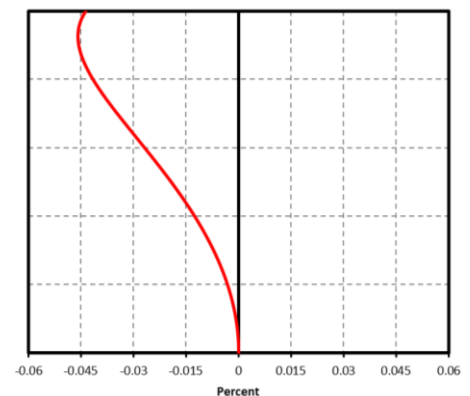
KF series FA Lens are optimized for machine vision light sources and sensors, with high resolution, excellent image uniformity, high transmittance and good stability. Featured with fixed focal length, manual aperture and compact size, it is suitable for machine vision industry applications.



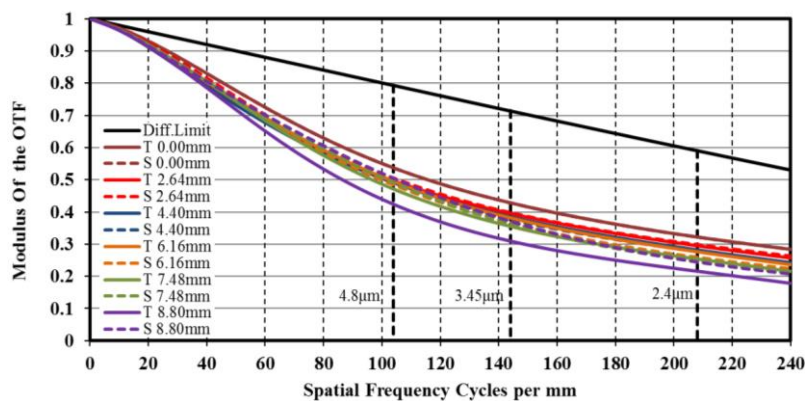
### Key Features

- High resolution, high definition of the whole image
- Low distortion, high illumination relative
- Maximum image circle of 1.1"
- Support ultra-short working distance, maintaining excellent optical properties at different object distances

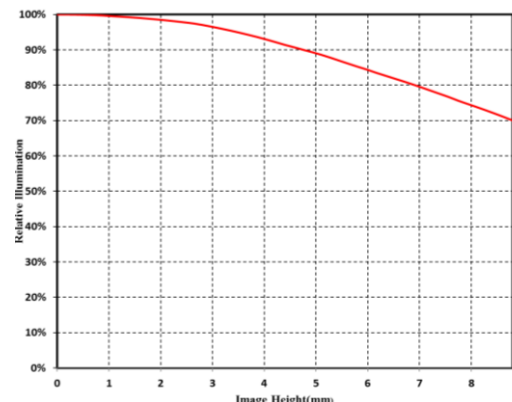
### Distortion



### MTF



### Relative Illumination

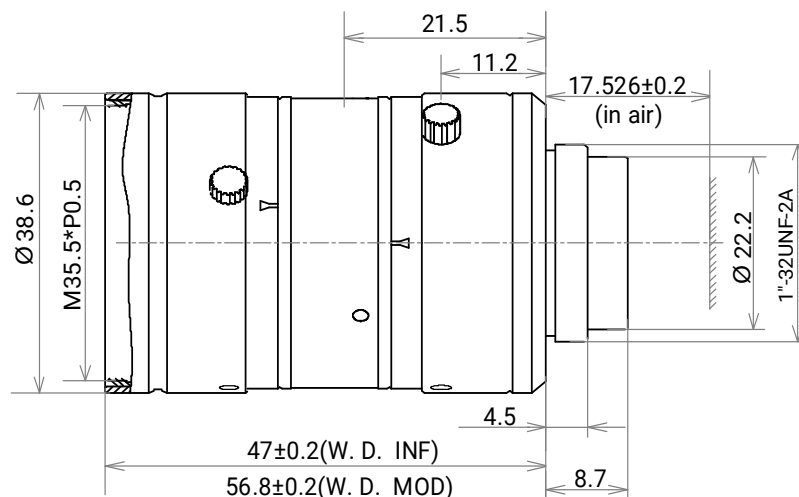


Note: The above curves are the simulate results based on F2.8,  $\beta=-0.128$ , WD=400 mm.

## Specification

Model	MVL-KF5028M-12MP
Parameter	Fixed focal length, Manual iris, 12 MP, FA Lens
<b>Performance</b>	
Focal length	50 mm
F-number	F2.8 to F16
Image size	Ø17.6 mm
Optical distortion	-0.05%
Minimum object distance	0.3 m
Field of view	D (17.52mm): 18.9° H (14.14mm): 15.1° V (10.35mm): 11.2°
<b>Mechanical</b>	
Iris control	Manual
Focus control	Manual
Filter thread	M35.5 × 0.5
Mount	C-mount
Flange back length	17.526 mm
Dimension	Ø38.6 × 56.8 mm (Ø1.5" × 2.2")
Weight	134 g (0.3 lb.)
Temperature	-10°C to 50°C (14°F to 122°F)
<b>General</b>	
Certification	RoHS 2.0

## Dimension



Unit: mm

## Field of View

Extension (mm)	Working Distance (mm)	Magnification	Field of View (mm)					
			1.1"		1"		2/3"	
			H (14.14mm)	V (10.35mm)	H (12.45mm)	V (9.83mm)	H (8.45mm)	V (7.07mm)
48	50	-1.179	12.00	8.78	10.56	8.34	7.17	6.00
27	75	-0.750	18.86	13.81	16.61	13.11	11.27	9.43
18	100	-0.546	25.88	18.94	22.79	17.99	15.47	12.94
9	150	-0.355	39.82	29.14	35.06	27.68	23.79	19.91
5	200	-0.262	53.90	39.46	47.46	37.47	32.21	26.95
0	250	-0.209	67.73	49.58	59.64	47.08	40.48	33.87
	300	-0.173	81.57	59.71	71.82	56.70	48.75	40.79
	350	-0.147	96.23	70.44	84.73	66.90	57.51	48.12
	400	-0.128	110.90	81.17	97.64	77.09	66.27	55.45
	450	-0.113	125.56	91.91	110.55	87.29	75.04	62.78
	500	-0.101	140.23	102.64	123.47	97.48	83.80	70.12
	550	-0.091	154.90	113.38	136.39	107.68	92.57	77.45
	600	-0.083	169.57	124.12	149.30	117.88	101.33	84.79
	650	-0.077	184.24	134.86	162.22	128.08	110.10	92.12
	700	-0.071	198.91	145.59	175.13	138.27	118.87	99.46
	750	-0.066	213.58	156.33	188.05	148.47	127.63	106.79
	800	-0.062	228.25	167.07	200.97	158.67	136.40	114.13
	850	-0.058	242.92	177.81	213.88	168.87	145.17	121.46
	900	-0.055	257.59	188.54	226.80	179.07	153.93	128.80
	950	-0.052	272.26	199.28	239.72	189.27	162.70	136.13
1000	-0.049	286.93	210.02	252.63	199.46	171.47	143.47	

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