

MVL-KF5040-25MP

1.2" 50 mm 25 MP FA Lens

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



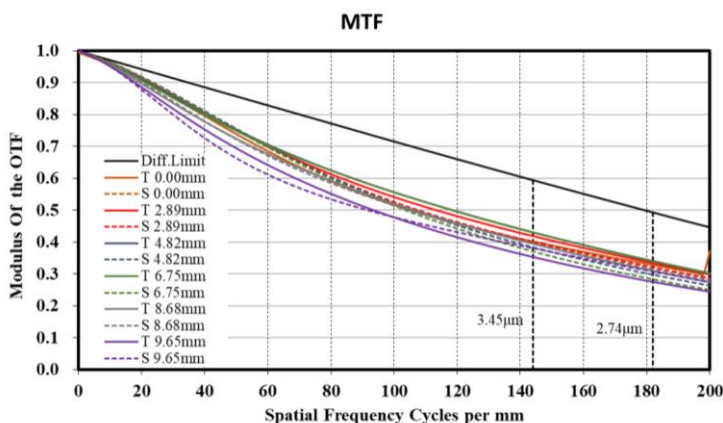
Key Features

- Ultra high resolution, high consistency in image center and edge clarity
- 1.2" image size, F4 fixed iris, structurally stable
- Ultra low distortion, high peripheral brightness ratio
- Maintain excellent optical properties at different object distances
- Excellent resistance to vibration, impact, and high and low temperature stability

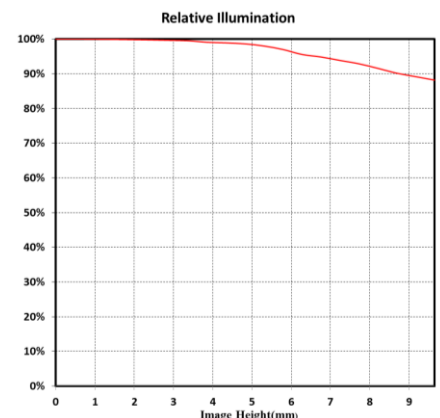
Distortion



MTF



Relative Illumination

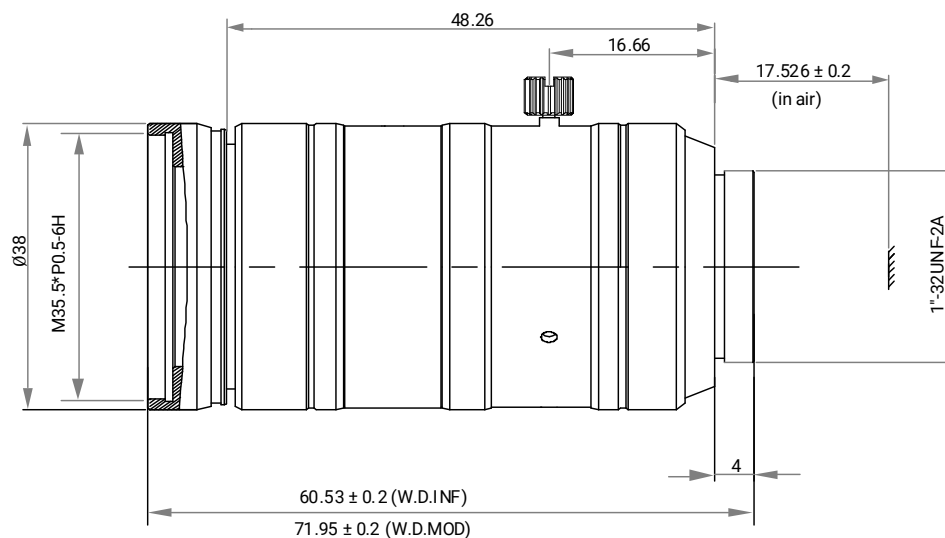


Note: The above curves are the simulate results based on F4, $\beta = -0.079$, WD=300 mm

Specification

Parameter	Model	MVL-KF5040-25MP
	Fixed Focal Length, Fixed Iris, 25 MP, FA Lens	
Performance		
Focal length	50 mm	
F-number	F4.0	
Image size	Ø19.3 mm (1.2")	
Distortion	0.05%	
Minimum object distance	0.15 m	
Field of view	D (19.3 mm): 20.6° H (14.6 mm): 15.7° V (12.63 mm): 13.6°	
Mechanical		
Iris control	Fixed	
Focus control	Manual	
Filter thread	M35.5 × P0.5	
Mount	C-mount	
Flange back length	17.526 mm	
Dimension	Ø38 mm × 56.53 mm to 67.95 mm (Ø1.5" × 2.2" to 2.7")	
Weight	187 g (0.4 lb.)	
Temperature	−10 °C to 50 °C (14 °F to 122 °F)	
General		
Certification	RoHS 2.0	

Dimension



Unit: mm

Field of View

Extension (mm)	Working Distance (mm)		Magnification	Field of View (mm)					
				1.2"		1.1"		1"	
				H (14.6mm)	V (12.63mm)	H (14.14mm)	V (10.35mm)	H (13.31mm)	V (8.76mm)
15	near	86	-0.656	21.7	18.8	21.0	15.4	18.5	14.6
	far	170	-0.305	47.5	41.1	46.0	33.7	40.5	32.0
10	near	99	-0.556	25.7	22.2	24.9	18.3	21.9	17.3
	far	250	-0.204	71.4	61.8	69.2	50.7	60.9	48.1
5	near	119	-0.456	31.4	27.2	30.4	22.3	26.8	21.2
	far	491	-0.102	143.0	123.7	138.5	101.5	121.9	96.3
2	near	136	-0.397	36.1	31.3	35.0	25.7	30.8	24.4
	far	1213	-0.041	357.4	309.2	346.1	253.7	304.8	240.7
1	near	143	-0.377	38.0	32.9	36.8	27.1	32.5	25.7
	far	2417	-0.020	714.4	618.1	691.9	507.2	609.3	481.3
0	150		-0.357	40.1	34.8	38.9	28.6	34.3	27.2
	200		-0.262	54.9	47.6	53.2	39.1	47.0	37.2
	250		-0.207	69.8	60.5	67.6	49.7	59.6	47.2
	300		-0.171	84.6	73.3	82.0	60.2	72.3	57.2
	350		-0.146	99.4	86.1	96.3	70.7	84.9	67.2
	400		-0.127	114.3	99.0	110.7	81.3	97.6	77.2
	450		-0.112	129.1	111.8	125.1	91.8	110.2	87.2
	500		-0.101	143.9	124.7	139.4	102.3	122.9	97.2
	550		-0.091	158.8	137.5	153.8	112.9	135.5	107.2
	600		-0.084	173.6	150.3	168.2	123.4	148.2	117.2
	650		-0.077	188.4	163.2	182.5	133.9	160.8	127.2
	700		-0.072	203.3	176.0	196.9	144.4	173.5	137.2
	800		-0.062	232.9	201.7	225.6	165.4	198.8	157.2
	900		-0.055	262.6	227.3	254.3	186.5	224.1	177.2
	1000		-0.050	292.2	253.0	283.0	207.5	249.4	197.1