

MVL-HF5024M-10MP

1/1.8" 50mm 10MP FA LENS

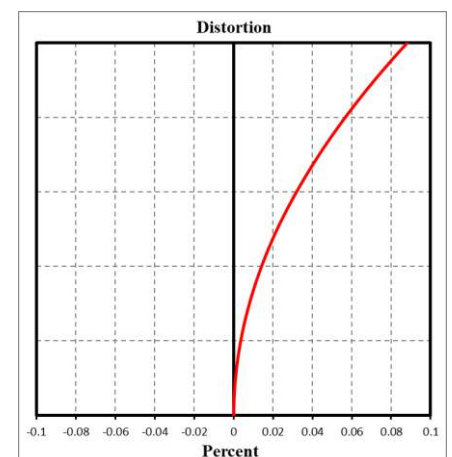
HF-P series FA Lens are optimized for machine vision light sources and sensor, with high resolution, excellent image quality, high transmittance and good stability. Featured with fixed focal length, manual aperture and compact size, it is suitable for machine vision industry applications and ideal for industrial cameras.



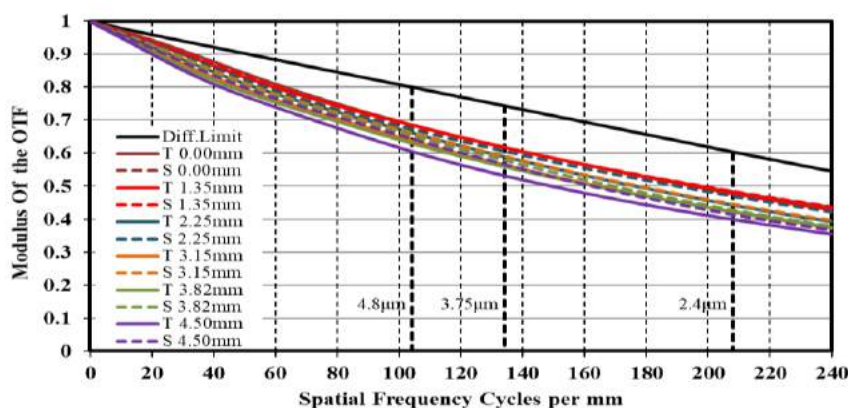
Key Features

- Ultra high resolution and consistency of image clarity
- Bigger aperture, lower distortion and higher relative illumination rate
- Achromatic optical system design, Better imaging performance with color camera
- Excellent vibration resistance performance, optical axis shifting within pixel level
- Good stability at high and low temperature
- Multilayer and broadband coating design, compatible with visible and near-infrared applications

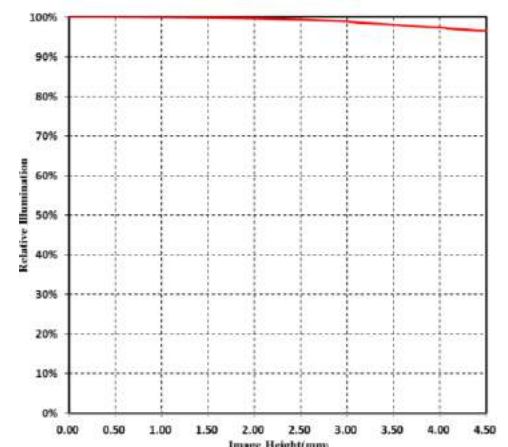
Distortion



MTF:



Relative Illumination :



Note: The above curves are the simulate results based on F2.4, $\beta = -0.109$, WD=500 mm.

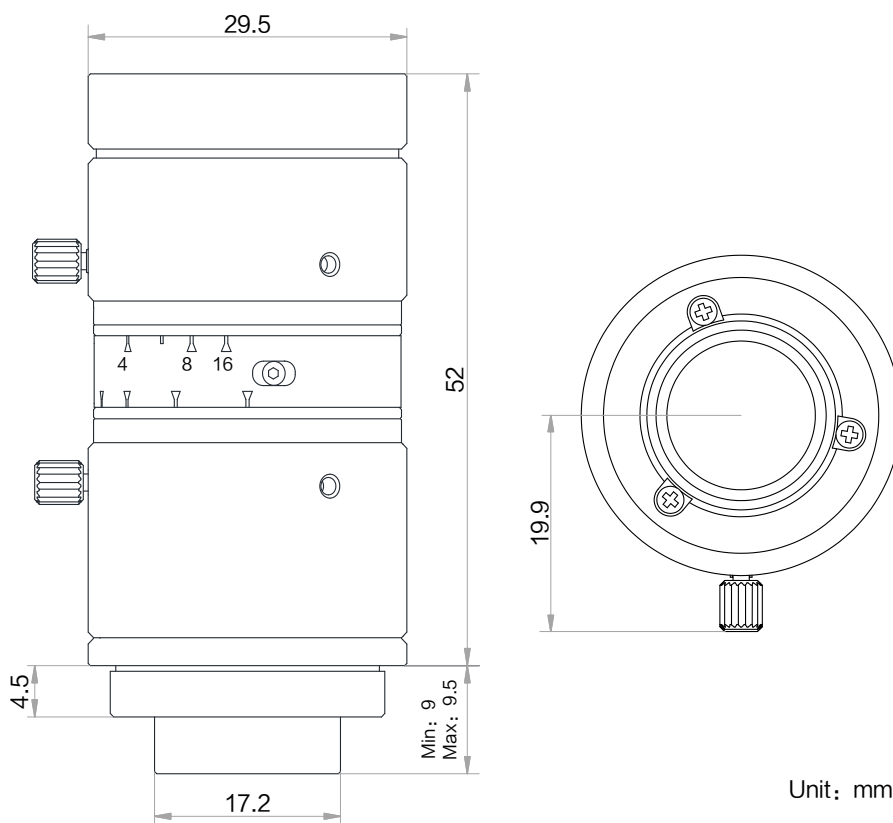
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Specification

Model		MVL-HF5024M-10MP
Parameter	Fixed focal length, Manual iris, 10MP, FA Lens	
Performance		
Focal Length	50 mm	
F-Number	F2.4~F16	
Image Size	Φ9 mm(1/1.8’')	
Distortion	0.03%	
Minimum Operation Distance	0.3 m	
Field of View	D (8.96mm) : 9.10° H (7.38mm) : 7.48° V (4.92mm) : 5.00°	
Mechanical		
Iris Control	Manual	
Focus Control	Manual	
Filter Thread	M27×0.5	
Mount	C-Mount	
Flange Back Length	17.526 mm	
Dimension	Φ29.5×52 mm	
Weight	85.9 g	
Temperature	-10 ~ 50℃	
General		
Certification	RoHS2.0	

Dimension



Unit: mm

Field of View

Extension (mm)	Working Distance (mm)		Magnification	Field of View (mm)			
				1/1.8"		1/2"	
				H(7.38mm)	H(4.92mm)	H(6.22mm)	V(4.67mm)
10	near	169.4	-0.400	18.49	12.33	15.58	11.70
	far	309	-0.193	38.33	25.55	32.30	24.25
5	near	211.8	-0.296	24.93	16.63	21.02	15.78
	far	578	-0.097	76.35	50.91	64.36	48.32
2	near	255.4	-0.234	31.55	21.04	26.60	19.97
	far	1383	-0.039	190.09	126.76	160.24	120.32
1	near	275.6	-0.213	34.61	23.09	29.18	21.91
	far	2720	-0.019	378.96	252.72	319.46	239.88
0	300		-0.193	38.32	25.56	32.30	24.26
	350		-0.162	45.64	30.44	38.47	28.89
	400		-0.139	52.90	35.28	44.59	33.49
	450		-0.123	60.11	40.09	50.67	38.05
	500		-0.110	67.30	44.88	56.73	42.60
	550		-0.099	74.46	49.65	62.76	47.13
	600		-0.090	81.61	54.42	68.79	51.66
	650		-0.083	88.74	59.18	74.80	56.17
	700		-0.077	95.87	63.93	80.81	60.68
	800		-0.067	110.09	73.42	92.80	69.69
	900		-0.059	124.30	82.89	104.77	78.68
	1000		-0.053	138.47	92.34	116.72	87.65

HIKROBOT

Hangzhou Hikrobot Technology Co., Ltd.
No.399 Danfeng Road, Binjiang District, Hangzhou 310051, China.
en.hikrobotics.com

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