

Nikon Rayfact 3.5X, 2X, 1X



High Resolution High Performance Line Sensor Lens Solution From Tochigi-Nikon

Developed specifically for high resolution CCD (line sensor) cameras, all Rayfact Machine Vision Lenses are distortion free (0.0%) at standard magnification. High resolution and the uniformity of efficiency are guaranteed from the center to the periphery. No vignetting (0%). Multi-layers of anti-glare film are applied to prevent the lens surface reflection. Eco-friendly glass is used in all lenses except for the 3.5X model, in which the non eco-friendly glass is partially used. The distance between the object and the lens is guaranteed for a wide range of controls including illumination intensity.



OFM35162MN 3.5X



OFM20119MN 2X



OFM10090MN 1X

These lenses are designed after the **Printing-Nikkor** Series and are ideal for inspection using high resolution line scan cameras such as detailed pattern inspection of the FPD substrates and the PCBs.

For chromatic aberration, the apochromatic color collection is used in the wide range from 400nm to 800nm.

	OFM35162MN	OFM20119MN		OFM10090MN
		-2.0 X use	-0.5X use	
Focal Length	127.0mm	95.0mm		104.5mm
Effective Focal Ratio	10.8 (at std. mag.)	8.4 (at std. mag)	4.2 (at std. mag)	5.5 (at std. mag.)
Standard Magnification	- 3.5X	-2.0X	-0.5X	-1.0X
Standard Wavelength Range	546.07nm(E-line)	546.07nm(E-line)		546.07nm(E-line)
Correction Wavelength Range	400nm ~ 700nm	400nm ~ 800nm		400nm ~ 800nm
Picture Angle	5.7°	12.8°	12.8°	16.3°
Vignetting	0% (at f/2.4)	0% (at f/3.5)		0% (at f/4)
Image Size	64mm ø	32mmø	64mmø	60mmø
Original Size	18.3mm ø	64mmø	32mmø	60mmø
Distortion	0.0% (at 64mm ø)	0.0%(at 64mmø)	0.0%(at 32mmø)	0.0% (at 60mmø)
Neighboring Illumination Ratio	More than 98% (at 64mm ø)	More than 70% (at 64mmø)	More than 70% (at 32mmø)	More than 62% (at 60mmø)
Diaphragm Dial	2.4, 4, 5.6, 8, 11 (9° interval *3, 1/2 dials w/a finger stop *4)	2.8, 4, 5.6, 8, 11 (18° interval, 1/2 dials w/a finger stop)		2.8, 4, 5.6, 8, 11 (18° interval, 1/2 dials w/a finger stop)
Overall Working Distance	651.3mm	397.6mm		388.1mm
Working Distance	70.8mm	87.0mm	212.4mm	140.1mm
Mount Size	M67mm P=0.75mm	M45mm P=0.75mm		M45mm P=0.75mm
Flange Focal Distance	505.0mm	220.4mm	124.9mm	189.8mm
Back Focus	437.9mm	222.0mm	90.3mm	147.7mm
Attachment Size	M46mm P=0.5mm	---	M43mm P=0.5mm	M43mm P=0.5mm
Diameter/length	73mm øx145.7mm *5	57mmø x 98.2mm		57mmøx107.3mm
Weight	Approximately 1.1Kg =2.43lbs	Approximately 360g= 0.79lbs		Approximately 400g=0.88lbs
Options	coaxial episcopic tube	---		---