

MWIR – ENHANCED SERIES

The Enhanced Series MWIR objective fore lenses are optimized for the mid-wave infrared wavelength region, 3 – 5 μm . They are optimized for the optics of the Enhanced Series spectrograph, ImSpector M50M.

When choosing between the two MWIR Enhanced Series lenses, consider the size of the samples and the desired magnification. For larger objects, the OLEM23 is most appropriate. The mounting of the MWIR lenses have a custom design for use with the MWIR spectrograph in this catalog.

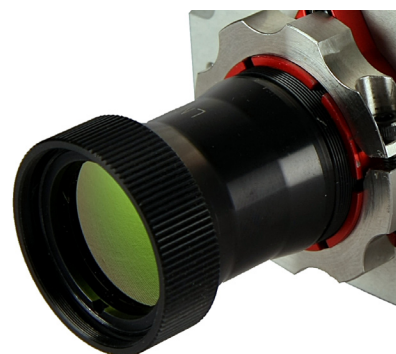
Optical Characteristics	OLEM23	OLEM43
Focal Length	23.4 mm	43 mm
F-number	3	3.8
Spatial Image Size (max)	19.5 mm	18.3 mm
RMS Spot Diameter	11.5 μm	19.0 μm
Transmission	> 94%	> 94%
Minimum Working Distance *	30 cm	30 cm

Mechanical Characteristics

Dimensions	29 mm x \varnothing 28 mm	50 mm x \varnothing 33 mm
Body Material	Stainless Steel / Anodized Aluminum	Stainless Steel / Anodized Aluminum
Mount	Custom	Custom

Dimensions of Imaged Line (LxW) at Select Working Distances (D)

Field of View angle (degrees) **	44.2	24.9
D = 300 mm [11.81 in]	L= 243.59 W= 1.54	132.56 0.84
D = 500 mm [19.69 in]	L= 405.98 W= 2.56	220.93 1.40
D = 750 mm [29.53]	L= 608.97 W= 3.85	331.40 2.09
D = 1000 mm [39.37]	L= 811.97 W= 5.13	441.86 2.79
D = 1500 mm [59.06]	L= 1217.95 W= 7.69	662.79 4.19
D = 2000 mm [78.74 in]	L= 1623.93 W= 10.26	883.72 5.58
D = 3000 mm [118.11 in]	L= 2435.90 W= 15.38	1325.58 8.37
D = 1 km [3280 ft] ***	L= 811.97 W= 5.13	441.86 2.79



* Full field of view angle and sharp focus may not be achieved if distance is shorter than the given minimum working distance.

** Default slit width (120 μm) and length (19 mm) for M50M ImSpector used for calculations. Note that standard detector sizes will limit the effective slit length and change these values.

*** Length and width at 1 km calculated in meters [m]

NOTE: The OLEM23 and OLEM43 have proprietary mounting and are designed to be used with the corresponding MWIR imaging spectrograph.

MWIR - Enhanced Series Lenses Ordering Information		
Part Number	Description	Product Name
MRC-308-005-01	MWIR Enhanced Lens. 23.4 mm f/3, custom mount, E-Series, 3000-5000nm	OLEM23
MRC-308-005-02	MWIR Enhanced Lens. 43 mm f/3.8, custom mount, E-Series, 3000-5000nm	OLESM43