

## OWL-IR MWIR

### F/2.0 FIXED FOCUS OBJECTIVES

#### Mid-Wave Infrared (Athermal)

II-VI Aerospace & Defense (II-VI A&D) offers a series of F/2.0 Mid-Wave Infrared (MWIR) fixed focus radiometric objectives in the 3-5  $\mu\text{m}$  spectral region. These MWIR objectives are designed to provide diffraction limited performance with low distortion, low stray light and excellent MTF performance. A wide range of standard fields of view are provided for various applications.

II-VI Aerospace & Defense also provides customized MWIR objectives, engineered and built to customer requirements. Optional camera integrations are available upon request.

## MWIR



#### KEY FEATURES

- | F-number: F/2.0
- | Wavelength: 3-5  $\mu\text{m}$
- | Athermalized
- | Narrow to Wide Field-Of-View
- | Optimized for 1280x1024 - 12/15  $\mu\text{m}$
- | FPA Image Diagonal: 24.6 mm
- | Manual Fine Focus Adjustment
- | Exterior AR Hard Coating (Optional)

#### OBJECTIVE SPECIFICATIONS

FOCAL LENGTH	25 mm	50 mm	75 mm	100 mm	150 mm <sup>^</sup>
Wavelength	3-5 microns	3-5 microns	3-5 microns	3-5 microns	3-5 microns
F Number	2.0	2.0	2.0	2.0	2.0
Image Diagonal (Max.)	24.6 mm	24.6 mm	24.6 mm	24.6 mm	12.3 mm
Full Field-of-View (for 15 micron pixel) (FFOV)*	52.4°	27.6°	18.6°	14.0°	9.4°
Full Field-of-View (for 12 micron pixel) (FFOV)*	43.0°	22.3°	14.9°	11.2°	7.5°
MTF @ 33.3 lp/mm (On-Axis)	> 0.4	> 0.40 @ 42 lp/mm	> 0.4	> 0.40 @ 42 lp/mm	> 0.4
Focus Range	7 m to infinity	3 m to infinity	18 m to infinity	3 m to infinity	20 m to infinity
Dewar Window (Nominal)	1.0 mm Ge	1.0 mm Ge	1.0 mm Ge	1.0 mm Ge	1.0 mm Ge
Cold Stop Aperture	12.7 mm	12.7 mm	12.7 mm	12.7 mm	9.85 mm
Cold Stop to FPA	25.0 mm	25.4 mm	25.0 mm	25.0 mm	19.4 mm
Flange to FPA	39.4 mm	39.22 mm	39.4 mm	39.4 mm	36.3 mm
Mount Type **	B	B	B	B	F
Athermal (Passive)	-40 to +60 °C	-40 to +60 °C	-40 to +60 °C	-40 to +60 °C	-40 to +60 °C
External Coating ***	Broadband AR Coating	Broadband AR Coating	Broadband AR Coating	Broadband AR Coating	Broadband AR Coating
Transmission (Ave.)	>80%	>85%	>85%	>85%	>85%
Back Working Distance (BWD)	34.00 mm	36.15 mm	34.75 mm	39.2 mm	48.37 mm
Weight	500 g (1.1 lbs) est	530 g (1.2 lbs)	618 g (1.4 lbs)	1.5 kg (3.4 lbs)	4.1 kg (9.0 lbs)



\* Full Field-of-View (FFOV) based on indicated FPA size. \*\* B= Bayonet Mount, F= Flange Mount. Custom mounts are available upon request. \*\*\* Custom Coatings Available Upon Request. <sup>^</sup> 150mm configuration has FPA: 640 x 512. OWL-IR and OWL-IRz are Trademarks of II-VI Inc.