

TECHNICAL DATA SHEET

GASIR[®] Infrared Lens

100 mm f/1.5

Umicore's GASIR[®] infrared lenses have been developed for an easy fit with a wide range of camera cores. Our catalog lenses provide a cost-effective solution for high-resolution thermal imaging and sensing applications.

This passively athermalized infrared lens is suitable for use with detectors up to 17 μm XGA detectors. Its narrow field of view makes it well-suited for thermal imaging applications.



OPTICAL SPECIFICATIONS


Effective focal length	100 mm
Radiometric f-number	f/1.5
Waveband	8 – 12 μm
Maximum field of view	9.8° × 7.4°
Image circle	22.0 mm

Fields of view (HFOV × VFOV)

Detector pixel pitch	Detector format		
	320 × 240	640 × 480	1024 × 768
17 μm	3.1° × 2.3°	6.2° × 4.6°	9.7° × 7.4°
25 μm	4.6° × 3.4°	8.9° × 6.8°	—
34 μm	6.2° × 4.6°	—	—

Other detectors may be possible. Please contact us for more information.

LENS VARIANTS

Mechanical variant	Fixed Focus 	
Mechanical interface	Standard M34	
Coating option	iDLC [™]	HEAR
Part number	11140_110	11179_110

COATING OPTIONS

	Transmission*	Lens coatings	Comments
iDLC [™]	> 87%	iDLC [™] on front surface HEAR on all other surfaces	Durable coating for unprotected exterior use. Salt fog rated.
HEAR	> 94%	HEAR on all surfaces	Maximum transmission performance.

HEAR: High Efficiency Anti-Reflection; DLC: Diamond-Like Carbon

Additional specifications are provided in the coatings Technical Data Sheets available on our website.

*average transmission over waveband

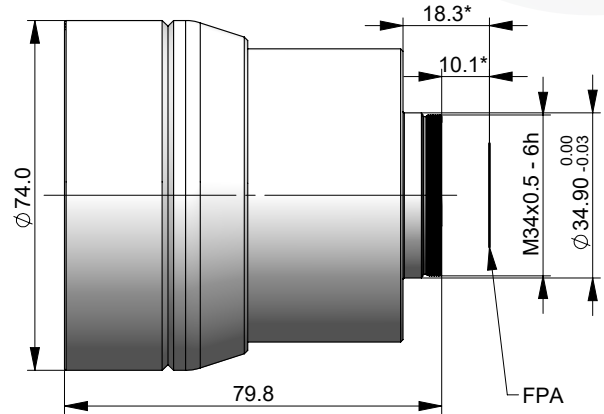


GASIR® Infrared Lens – 100 mm f/1.5

Fixed Focus

Part Number iDLC™ 11140_110 HEAR 11179_110

Focus range	17 m to ∞ with 0.59 mm refocus
Operating temperature	-40 °C to +80 °C
Storage temperature	-57 °C to +105 °C
Solar radiation	MIL-STD-810G Method 505.5
Vibration	MIL-STD-810E Method 514.4 / procedure I, Cat. 8
Mechanical shock	MIL-E-5400T
Sealing	IP67
Weight	366 g
Housing material	Black anodized aluminium



*dimensions valid with 1.0 mm Ge detector window

Electro-Optic Materials is ISO certified: ISO 9001 & ISO 14001

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