

TECHNICAL DATA SHEET

GASIR[®] Infrared Lens

10 mm f/1.2

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 25 μm QVGA detectors. Its medium-wide field of view makes it well-suited for thermal imaging applications.



OPTICAL SPECIFICATIONS


Effective focal length	10.3 mm
Radiometric f-number	f/1.2
Waveband	8 – 12 μm
Maximum field of view	55° × 41°
Image circle	12.0 mm

Fields of view (HFOV × VFOV)

Detector pixel pitch	Detector format	
	160 × 120	320 × 240
12 μm	10.7° × 8.0°	21° × 16.0°
17 μm	15.2° × 11.4°	30° × 23°
25 μm	22° × 16.7°	45° × 34°

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

LENS VARIANTS

Mechanical variant	Fixed Focus 	
Mechanical interface	Standard M25	
Coating option	HEAR	iDLC [™]
Part number	11164_100	11165_100

COATING OPTIONS

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

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

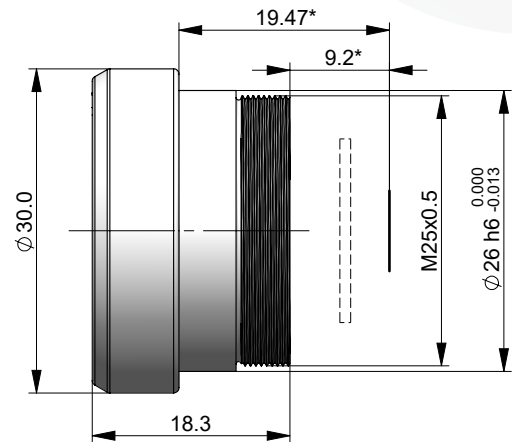


GASIR® Infrared Lens – 10 mm f/1.2

Fixed Focus

Part Number HEAR 11164_100 iDLC™ 11165_100

Focus range	0.5 m to ∞ with 0.19 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	28 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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