

TECHNICAL DATA SHEET

GASIR[®] Infrared Lens 55 mm f/1.0

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 12 μm VGA detectors. Its narrow field of view makes it well-suited for thermal imaging applications.



OPTICAL SPECIFICATIONS


Effective focal length	55 mm
Radiometric f-number	f/1.0
Waveband	8 – 12 μm
Maximum field of view	8.2° × 6.2°
Image circle	9.8 mm

Fields of view (HFOV × VFOV)

Detector pixel pitch	Detector format		
	160 × 120	320 × 240	640 × 480
12 μm	2.0° × 1.5°	4.0° × 3.0°	8.0° × 6.0°
17 μm	2.9° × 2.1°	5.7° × 4.3°	—

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

LENS VARIANTS

Mechanical variant	Fixed Focus 	
Mechanical interface	12 μm mount M34	
Coating option	LWP	iDLC [™] -LWP
Part number	18060_100	22012_100

COATING OPTIONS

	Transmission*	Lens coatings	Comments
LWP	> 89%	LWP on one internal surface HEAR on all other surfaces	Sunlight filter coating for use with uncoated detectors.
iDLC [™] -LWP	> 83%	iDLC [™] on front surface LWP on one internal surface HEAR on all other surfaces	Durable coating, salt fog rated, together with a sunlight filter coating for unprotected exterior use.

HEAR: High Efficiency Anti-Reflection; DLC: Diamond-Like Carbon; LWP: Long Wave Pass
Additional specifications are provided in the coatings Technical Data Sheets available on our website.

*average transmission over waveband

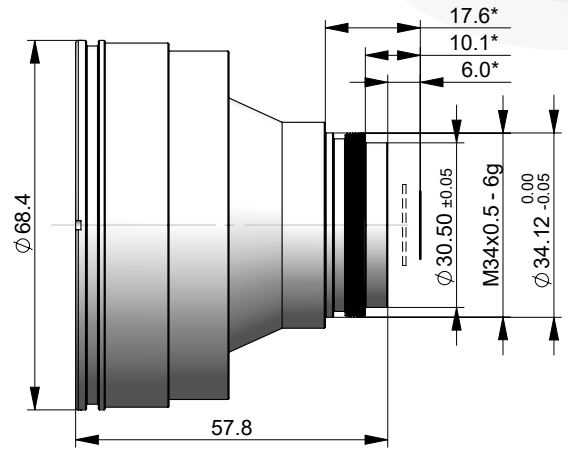


GASIR® Infrared Lens – 55 mm f/1.0

Fixed Focus

Part Number LWP 18060_100 iDLC™-LWP 22012_100

Focus range	6 m to ∞ with 0.48 mm refocus
Operating temperature	-40 °C to +80 °C
Storage temperature	-57 °C to +105 °C
Solar radiation	MIL STD 810H Method 505.7 Procedure I-A1
Vibration	MIL STD 810H Method 514.8 / Procedure-I Cat. 20
Sealing	IP67
Weight	179 g
Housing material	Black anodized aluminium



*dimensions valid with 0.63 mm Si detector window

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

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