

TECHNICAL DATA SHEET

GASIR[®] Infrared Lens

42 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 lens may be offered with other coating variants upon request. Its **lightweight and cost-effective design** makes it a prime choice for your application.

This lens is compatible with **12 μm VGA** detectors and smaller.



OPTICAL SPECIFICATIONS

Effective focal length	42 mm
Radiometric f-number	f/1.0
Waveband	8 – 12 μm
Maximum field of view	10.8° × 8.1°
Image circle	10.0 mm

Fields of view (HFOV × VFOV)

Detector pixel pitch	Detector format		
	160 × 120	320 × 240	640 × 480
12 μm	2.6° × 2.0°	5.2° × 3.9°	10.4° × 7.8°
17 μm	3.7° × 2.8°	7.4° × 5.6°	—

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	iDLC [™]
Part number	18027_100

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: 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



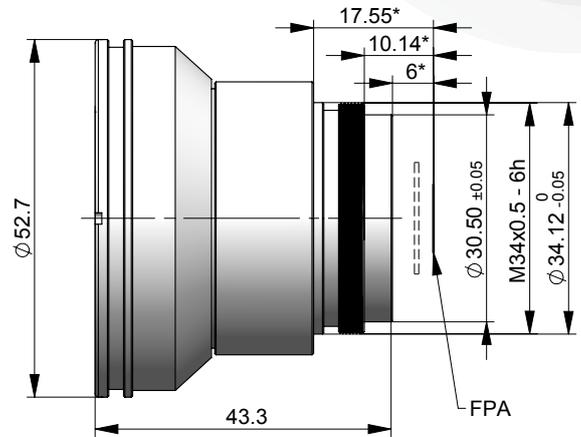
GASIR® Infrared Lens – 42 mm f/1.0

Fixed Focus

Part Number **iDLC™ 18027_100**

Focus range	5 m to ∞ with 0.33 mm refocus
Operating temperature	-40 °C to +80 °C
Storage temperature	-57 °C to +105 °C
Weight	91 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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