

TECHNICAL DATA SHEET

GASIR[®] Infrared Lens

18 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	18.0 mm
Radiometric f-number	f/1.06
Waveband	8 – 12 μm
Maximum field of view	25° × 19.1°
Image circle	10.0 mm

Fields of view (HFOV × VFOV)

Detector pixel pitch	Detector format		
	160 × 120	320 × 240	640 × 480
12 μm	6.1° × 4.6°	12.2° × 9.2°	24° × 18.3°
17 μm	8.7° × 6.5°	17.3° × 13.0°	—

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

LENS VARIANTS

Mechanical variant	Fixed Focus 		
Mechanical interface	12 μm mount M24		
Coating option	LWP	HEAR	iDLC [™]
Part number	18058_100	20077_100	23003_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.
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; LWP: Long Wave Pass
Additional specifications are provided in the coatings Technical Data Sheets available on our website.

*average transmission over waveband

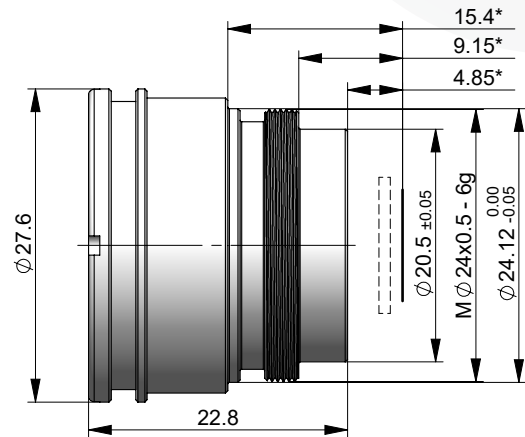


GASIR® Infrared Lens – 18 mm f/1.0

Fixed Focus

Part Number LWP 18058_100 HEAR 20077_100 iDLC™ 23003_100

Focus range	0.4 m to ∞ with 0.67 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	25 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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