TECHNICAL DATA SHEET

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Electro-Optic Materials

GASIR® Infrared Lens 14 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 distortion-free design** makes it a prime choice for your application. The **ultralight variant** offers an extremely lightweight lens, ideal for airborne and all applications where weight and size are critical.

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

OPTICAL SPECIFICATIONS

Effective focal length	13.7 mm
Radiometric f-number	f/1.0
Waveband	8 – 12 µm
Maximum field of view	33° × 25°
Image circle	10.0 mm

Fields of view (HFOV × VFOV)

Detector pixel pitch	Detector format		
	160 × 120	320 × 240	640 × 480
12 µm	8.0° × 6.0°	15.9° × 11.9°	31° × 24°
17 µm	11.3° × 8.5°	22° × 16.9°	—

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

LENS VARIANTS

Mechanical variant	Fixed Focus 	Fixed Focus Ultralight 
Mechanical interface	12 µm mount M24	12 µm mount M18
Coating option	iDLC™-LWP	iDLC™-LWP
Part number	19003_100	19018_100

COATING OPTIONS

	Transmission*	Lens coatings	Comments
iDLC™-LWP	> 89%	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

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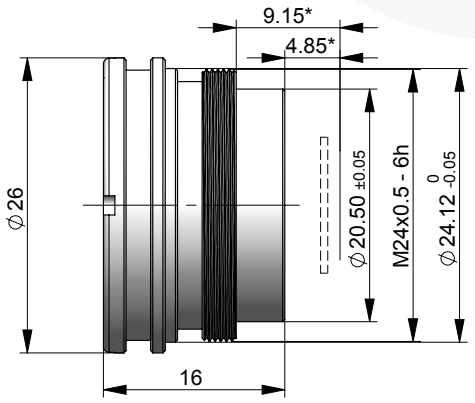
Fixed Focus

Part Number	iDLC™-LWP 19003_100

Focus range	0.5 m to ∞ with 0.36 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	15 g
Housing material	Black anodized aluminium

*dimensions valid with 0.63 mm Si detector window

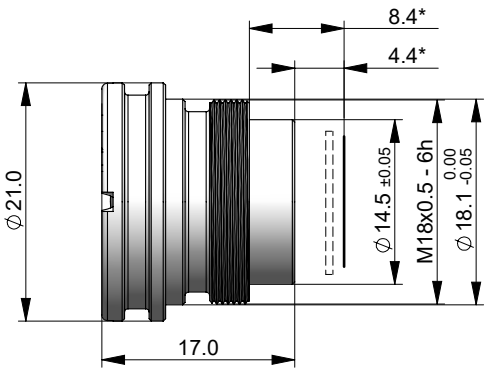


Fixed Focus Ultralight

Part Number	iDLC™-LWP 19018_100

Focus range	0.5 m to ∞ with 0.36 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	8.9 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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