

GASIR® Infrared Lens
FL 50 mm f/1.0 MFX
Manual focus
P/N: 16020_120



Introduction



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 **manual focus lens** offers superior performance from 4 m out to infinity. Its **lightweight and intuitive design** make it a prime choice for your application. This lens is compatible with **17 µm VGA** detectors and smaller.

Optical Specifications

Focal length	50.0 mm
Aperture-based f-number	f/1.02
Waveband	8-12 µm
Transmission	> 94% average over waveband
Focus range	4 m to infinity over 258° focus movement
Lateral magnification at 4 m	1:120
Assembly weight	178 g

Field of view

1024 x 768	12 µm	XGA	13.5° (H) x 10.3° (V) - 16.5° (diagonal)
640 x 512	17 µm		12.0° (H) x 9.7° (V) - 15.1° (diagonal)
640 x 480	17 µm	VGA	12.0° (H) x 9.2° (V) - 14.8° (diagonal)
640 x 480	12 µm	VGA	8.6° (H) x 6.5° (V) - 10.7° (diagonal)
320 x 240	12 µm	qVGA	4.4° (H) x 3.3° (V) - 5.5° (diagonal)

Environmental Specifications

Operating temperature	-40 °C to +80 °C
Storage temperature	-57 °C to +105 °C
Vibration	MIL-STD-810G Method 514.6C-II / Cat. 4
Mechanical shock	MIL-E-5400T
Solar radiation	MIL-STD-810G Method 505.5
Sealing	IP67

Electro-Optic Materials is ISO certified: ISO 9001 & ISO 14001
Umicore IR Glass
Z.A. du Boulais
35690 Acigné
FRANCE

Tel: +33 2 99 04 32 26
Fax: +33 2 99 04 32 29
optics@umicore.com

Tel: +1 918 673 1650
Fax: +1 918 673 2121
optics.na@umicore.com

Document revision 03
Umicore Optical Materials USA
2976 South 614 Road, PO Box 737
Quapaw, OK 74363
USA

Coating

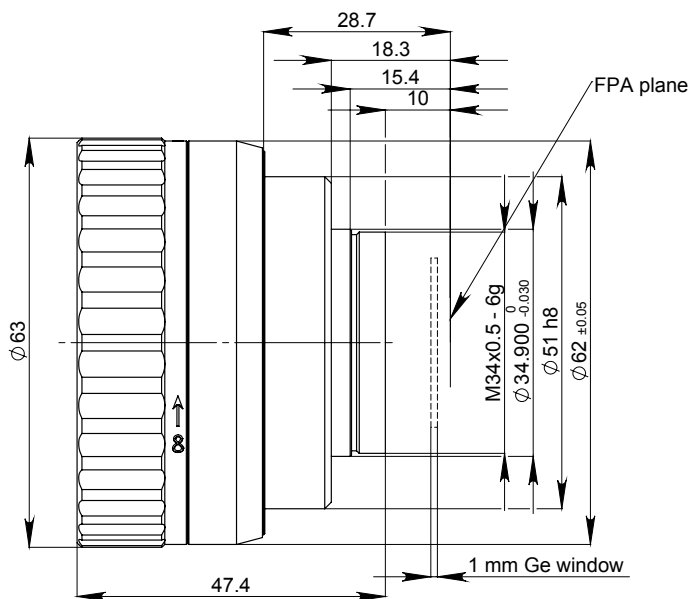
All surfaces

High efficiency anti-reflective coating @ 8-12 μm

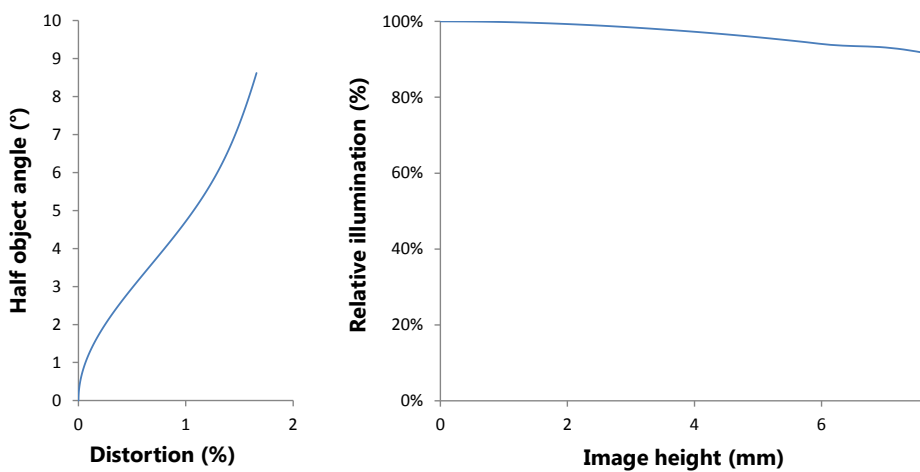
Assembly & Interface Specifications

Black anodized aluminium

Image plane-related dimensions valid with 1 mm Ge window (not included)



Distortion and Relative Illumination



Electro-Optic Materials is ISO certified: ISO 9001 & ISO 14001
 Umicore IR Glass
 Z.A. du Boulais
 35690 Acigné
 FRANCE

Tel: +33 2 99 04 32 26
 Fax: +33 2 99 04 32 29
optics@umicore.com

Tel: +1 918 673 1650
 Fax: +1 918 673 2121
optics.na@umicore.com

Document revision 03
 Umicore Optical Materials USA
 2976 South 614 Road, PO Box 737
 Quapaw, OK 74363
 USA