

**GASIR® Infrared Lens**  
**FL 50 mm f/1.0 MFX**  
**Manual focus**  
 P/N: 16021\_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	> 87% average over waveband
Focus range	4 m to infinity over 258° focus movement
Lateral magnification at 4 m	1:120
Assembly weight	179 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 +85 °C
Storage temperature	-57 °C to +105 °C

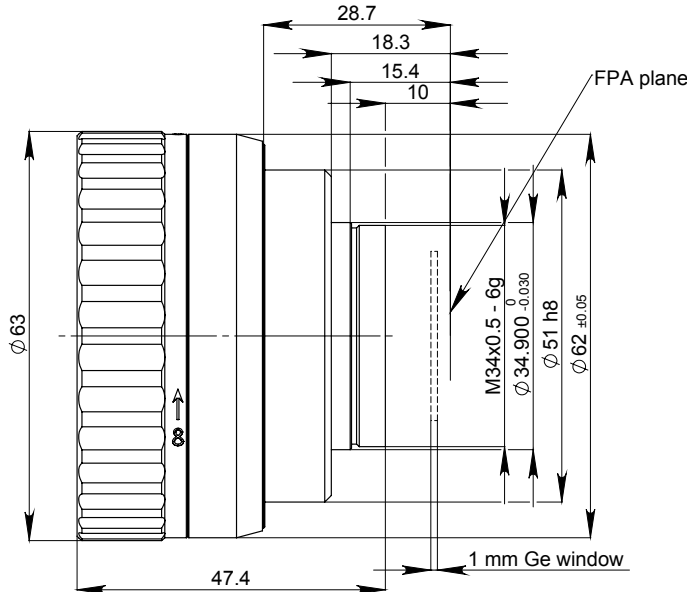
Coating

Front surface  
Internal surfaces

iDLC @ 8-12 μm  
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

