

**GASIR® Infrared Lens  
FL 50 mm f/1.0**

**Fixed focus**

**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 **athermalized lens** offers superior performance over a wide temperature range. Its **lightweight and intuitive design** make it a prime choice for your application. This lens is compatible with **12 µm XGA** 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	5.0 m to infinity with 0.48 mm refocus
Assembly weight	136 g

**Field of view**

1024 x 768	12 µm	XGA	13.9° (H) x 10.4° (V) - 17.2° (diagonal)
640 x 512	17 µm		12.3° (H) x 9.9° (V) - 15.7° (diagonal)
640 x 480	17 µm	VGA	12.3° (H) x 9.3° (V) - 15.3° (diagonal)
640 x 512	12 µm		8.7° (H) x 7.0° (V) - 11.1° (diagonal)
640 x 480	12 µm	VGA	8.7° (H) x 6.6° (V) - 10.9° (diagonal)
320 x 240	17 µm	qVGA	6.2° (H) x 4.7° (V) - 7.7° (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

Front surface  
Internal surfaces

iDLC @ 8-12  $\mu\text{m}$   
High efficiency anti-reflective coating @ 8-12  $\mu\text{m}$

### Assembly & Interface Specifications

Black anodized aluminium

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

