



**GASIR® Infrared Lens  
FL 75 mm f/1.1**

**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 **ultralight, passively athermalized infrared lens** offers superior performance and is suitable for use with **17 μm VGA** and **12 μm XGA** detectors or smaller. Its **low distortion** makes it ideally suited for use in thermal imaging applications.

**Optical Specifications**

Focal length	75.0 mm
Aperture-based f-number	f/1.13
Waveband	8-12 μm
Transmission	> 94% average over waveband
Focus range	7.5 m to infinity with 0.75 mm refocus
Assembly weight	274 g

**Field of view**

640 x 480	25 μm	VGA	11.9° (H) x 9.0° (V) - 14.7° (diagonal)
640 x 480	17 μm	VGA	8.2° (H) x 6.2° (V) - 10.2° (diagonal)
384 x 288	25 μm	qVGA+	7.2° (H) x 5.4° (V) - 9.0° (diagonal)
320 x 240	25 μm	qVGA	6.0° (H) x 4.5° (V) - 7.5° (diagonal)
640 x 480	12 μm	VGA	5.8° (H) x 4.4° (V) - 7.2° (diagonal)
384 x 288	17 μm	qVGA+	4.9° (H) x 3.7° (V) - 6.2° (diagonal)
320 x 240	17 μm	qVGA	4.1° (H) x 3.1° (V) - 5.1° (diagonal)
384 x 288	12 μm	qVGA+	3.5° (H) x 2.6° (V) - 4.4° (diagonal)

**Environmental Specifications**

Operating temperature	-40 °C to +80 °C
Storage temperature	-57 °C to +105 °C

## Coating

All surfaces

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 window (not included)

