

**GASIR® Infrared Lens  
FL 13 mm f/1.0**



**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 **high-speed, passively athermalized infrared lens** fits the latest **17 µm qVGA** and **25 µm qqVGA** uncooled detectors and smaller.

**Optical Specifications**

Focal length	12.8 mm
Aperture-based f-number	f/1.00
Waveband	8-12 µm
Transmission	> 86% average over waveband
Focus range	0.4 m to infinity with 0.39 mm refocus
Assembly weight	23 g

**Field of view**

384 x 288	17 µm	qVGA+	28.8° (H) x 21.7° (V) - 35.7° (diagonal)
320 x 240	17 µm	qVGA	24.1° (H) x 18.2° (V) - 30.0° (diagonal)
160 x 120	25 µm	qqVGA	17.8° (H) x 13.4° (V) - 22.2° (diagonal)
160 x 120	17 µm	qqVGA	12.1° (H) x 9.1° (V) - 15.2° (diagonal)

**Environmental Specifications**

Operating temperature	-40 °C to +80 °C
Storage temperature	-57 °C to +105 °C
Vibration	MIL-STD-810E Method 514.4 Proc I Cat 8
Mechanical shock	MIL-E-5400T
Solar radiation	MIL-STD-810G Method 505.5
Sealing	IP67

## Coating

Front surface  
Internal surfaces

DLC @ 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 window (not included)

