



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** and **12 μm VGA** detectors or smaller. Its **low distortion** makes it ideally suited for use in thermal imaging applications.

Optical Specifications

Focal length	14.2 mm
Aperture-based f-number	f/1.24
Waveband	8-12 μm
Transmission	> 87% average over waveband
Focus range	1.3 m to infinity with 0.14 mm refocus
Assembly weight	25 g

Field of view

640 x 480	17 μm	VGA	42.1° (H) x 31.9° (V) - 52.2° (diagonal)
384 x 288	25 μm	qVGA+	37.4° (H) x 28.3° (V) - 46.3° (diagonal)
320 x 240	25 μm	qVGA	31.3° (H) x 23.7° (V) - 38.9° (diagonal)
640 x 480	12 μm	VGA	30.1° (H) x 22.7° (V) - 37.4° (diagonal)
384 x 288	17 μm	qVGA+	25.7° (H) x 19.4° (V) - 31.9° (diagonal)
320 x 240	17 μm	qVGA	21.5° (H) x 16.2° (V) - 26.7° (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

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 detector window (not included)

