

**GASIR® Infrared Lens  
FL 10 mm f/1.2**



Product number:  
11164\_100  
**Athermalized  
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 **passively athermalized infrared lens** is suited for **25 µm qVGA+** uncooled detectors and smaller. Its **athermalized** design ensures performance over a very wide temperature range.

**Optical Specifications**

|                         |  |
|-------------------------|--|
| Focal length            | 10.3 mm                                |
| Aperture-based f-number | f/1.25                                 |
| Waveband                | 8-12 µm                                |
| Transmission            | > 94% average over waveband            |
| Focus range             | 1.2 m to infinity with 0.07 mm refocus |
| Assembly weight         | 28 g                                   |

**Field of view**

|           |       |       |  |
|-----------|-------|-------|--|
| 384 x 288 | 25 µm | qVGA+ | 55.1° (H) x 40.5° (V) - 71.8° (diagonal) |
| 320 x 240 | 25 µm | qVGA  | 45.3° (H) x 33.6° (V) - 57.7° (diagonal) |
| 640 x 480 | 12 µm | VGA   | 43.3° (H) x 32.2° (V) - 55.1° (diagonal) |
| 320 x 240 | 17 µm | qVGA  | 30.3° (H) x 22.7° (V) - 38.1° (diagonal) |
| 160 x 120 | 25 µm | qqVGA | 22.2° (H) x 16.6° (V) - 27.8° (diagonal) |
| 320 x 240 | 12 µm | qVGA  | 21.3° (H) x 15.9° (V) - 26.7° (diagonal) |
| 160 x 120 | 17 µm | qqVGA | 15.0° (H) x 11.3° (V) - 18.8° (diagonal) |

**Environmental Specifications**

|                       |  |
|-----------------------|--|
| Operating temperature | -40 °C to +60 °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

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 detector window (not included)

