**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 Super-Tele infrared lens** fits the latest 17 µm XGA and 25 µm VGA uncooled detectors and smaller. Its **very compact** design makes it ideal for use in situations where weight is an important factor.

**Optical Specifications**

- **Focal length**: 100 mm
- **Aperture-based f-number**: f/1.50
- **Waveband**: 8-12 µm
- **Transmission**: > 94% average over waveband
- **Focus range**: 14.0 m to infinity with 0.75 mm refocus
- **Assembly weight**: 366 g

**Field of view**

<table>
<thead>
<tr>
<th>Resolution</th>
<th>µm</th>
<th>Waveform</th>
<th>H</th>
<th>V</th>
<th>Diagonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1024 x 768</td>
<td>17</td>
<td>XGA</td>
<td>9.7°</td>
<td>7.4°</td>
<td>11.9°</td>
</tr>
<tr>
<td>640 x 480</td>
<td>25</td>
<td>VGA</td>
<td>8.9°</td>
<td>6.8°</td>
<td>11.0°</td>
</tr>
<tr>
<td>640 x 480</td>
<td>17</td>
<td>VGA</td>
<td>6.2°</td>
<td>4.6°</td>
<td>7.7°</td>
</tr>
<tr>
<td>384 x 288</td>
<td>25</td>
<td>qVGA+</td>
<td>5.5°</td>
<td>4.1°</td>
<td>6.8°</td>
</tr>
<tr>
<td>320 x 240</td>
<td>25</td>
<td>qVGA</td>
<td>4.6°</td>
<td>3.4°</td>
<td>5.7°</td>
</tr>
<tr>
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<td>2.3°</td>
<td>3.9°</td>
</tr>
</tbody>
</table>

**Environmental Specifications**

- **Operating temperature**: -40 °C to +80 °C
- **Storage temperature**: -55 °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 µm

Assembly & Interface Specifications

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

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### Drawing

1. **FPA plane**
2. **22 mm image circle**

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**Dimensions**

- Ø47.1 ± 0.000
- 18.3
- 14.1
- 32.8
- 10.1
- M34x0.5
- Ø34.90 ± 0.00
- Ø62.68 ± 0.00

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**Notes**

- Surface roughness Ra 0.8
- X = 0.1
- XX = 0.05
- XXX = 0.025
- Angular = 0.5
- Edges DIN6784

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**Additional Information**

- Electro-Optic Materials is ISO certified: ISO 9001 & ISO 14001
- Document revision 10
- optics.umicore.com – Umicore Infrared Optics reserves the right to amend or withdraw specifications without prior notice.