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

<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>384 x 288</td>
<td>25</td>
<td>qVGA+</td>
<td>55.1°</td>
<td>40.5°</td>
<td>71.8°</td>
</tr>
<tr>
<td>320 x 240</td>
<td>25</td>
<td>qVGA</td>
<td>45.3°</td>
<td>33.6°</td>
<td>57.7°</td>
</tr>
<tr>
<td>640 x 480</td>
<td>12</td>
<td>VGA</td>
<td>43.3°</td>
<td>32.2°</td>
<td>55.1°</td>
</tr>
<tr>
<td>320 x 240</td>
<td>17</td>
<td>qVGA</td>
<td>30.3°</td>
<td>22.7°</td>
<td>38.1°</td>
</tr>
<tr>
<td>160 x 120</td>
<td>25</td>
<td>qqVGA</td>
<td>22.2°</td>
<td>16.6°</td>
<td>27.8°</td>
</tr>
<tr>
<td>320 x 240</td>
<td>12</td>
<td>qVGA</td>
<td>21.3°</td>
<td>15.9°</td>
<td>26.7°</td>
</tr>
<tr>
<td>160 x 120</td>
<td>17</td>
<td>qqVGA</td>
<td>15.0°</td>
<td>11.3°</td>
<td>18.8°</td>
</tr>
</tbody>
</table>

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 µm

Assembly & Interface Specifications

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