**Indium-Gallium-Arsenide (InGaAs) - matrix detector**

**320x256-C-VIS**

**Applications:**
- Near-infrared Imaging
- Multi-/Hyperspectral Imaging
- Covered Surveillance
- Semiconductor Inspection
- Astronomy and Science
- Industrial Thermal Imaging
- Imaging Spectroscopy
- Medical-, Live Science and Biology
- Temperature Analysis and Moisture Mapping

**VIS-extended spectral range 0,5 µm - 1,7 µm**

Quantum Efficiency ≥ 70 % broadband

Reduced No. of detection channels for broadband imaging (Image Fusion)

Uncooled Sensor

**Typical Parameters:**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Typical Value</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectral Range</td>
<td>0,5 - 1,7 µm</td>
<td></td>
</tr>
<tr>
<td>Typical Pixel Operability</td>
<td>&gt; 99,5 %</td>
<td>Dark current ≤ 20 % of full well capacity and response nonuniformity ≤ 20 %</td>
</tr>
<tr>
<td>Dark Current</td>
<td>≤ 1 pA</td>
<td>25 °C, 1 V diode reverse bias</td>
</tr>
<tr>
<td></td>
<td>≤ 0,2 pA</td>
<td>0,1 V diode reverse bias</td>
</tr>
<tr>
<td>Quantum Efficiency</td>
<td>≥ 70 %</td>
<td>λ = 0,5 µm - 1,6 µm</td>
</tr>
<tr>
<td>Response Nonuniformity</td>
<td>&lt; 10 %</td>
<td>at 50 % saturation, 25 °C</td>
</tr>
<tr>
<td>Nonlinearity</td>
<td>≤ 2 %</td>
<td>Over range of 10 % ... 90 % of full well capacity</td>
</tr>
<tr>
<td>(maximum deviation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Pixel Rate</td>
<td>10 MHz</td>
<td>Max. data rate 5 MHz</td>
</tr>
<tr>
<td>Fill Factor</td>
<td>&gt; 99 %</td>
<td></td>
</tr>
</tbody>
</table>
Indium-Gallium-Arsenide (InGaAs) - matrix detector 320x256-C-VIS

Spectral Quantum Efficiency:

![Graph showing spectral quantum efficiency for different InGaAs detectors.](image)

- Standard InGaAs with ARC no window
- VIS-InGaAs with ARC no window

ARC - Anti - Reflection - Coating

Resolution 320 (H) x 256 (V) Pixels
30 µm Pixel Size
Image Area 9.6 mm (H) x 7.68 mm (V)
Gain High 13.3 µV/e-, Gain Low 0.7 µV/e-, 25 °C

Hermetic 44-pin Ceramics Package (CLCC = “Ceramic Leadless Chip Carrier”), uncooled
Weight 1.6 g
Power Dissipation 175 mW