AXIR MW is the new generation InSb VGA 15 µm pitch MWIR offer. It is designed for very demanding applications requiring optimal stability, uniformity and operability, in severe environmental conditions.

AXIR MW takes full advantage of Sofradir InSb technology. It provides simplified interfaces for an easy and quick integration in your systems. The proxy board offers management and correction of the detector as well as digital output.

**ARRAY FEATURES**

- **Format**: 640 x 512
- **Pixel pitch**: 15 µm x 15 µm
- **Detector spectral response**: 3.7 µm – 4.8 µm
- **FPA Operating Temperature**: 80 K typical

**ROIC (READ-OUT INTEGRATED CIRCUIT)**

- **Selection**: Serial electrical interface
- **ROIC architecture**: Snapshot operation, direct injection input circuit, selectable read mode (IWR or ITR)
- **ROIC functionalities**: Programmable integration time, anti-blooming
- **Window modes**: 640 x 512 / 640 x 480 / 512 x 512 or programmable
- **Charge Handling capacity**: From 5.5 x 10⁶ e- @ 3.3 V up to 12 x 10⁶ e- @ 5.5 V (for 100% well fill and IWR mode)
- **Electrical dynamic range**: From 1.4V @ 3.3V up to 3.3V @ 5.5 V
- **Readout noise**: < 160 µs @ FPA operating temperature 80 K
- **Signal outputs**: 2 or 4
- **Pixel output rate**: Up to 20 MHz per output
- **Frame rate**: Up to 230 Hz full frame rate
ELECTRO-OPTICAL TYPICAL PERFORMANCES

Typical NETD < 18 mK (293 K, 50% well fill, 100 Hz)
Array operability > 99.8%
Non uniformity < 2.5% RMS (σ/mean, 293 K uncorrected performance)

<table>
<thead>
<tr>
<th></th>
<th>RM2</th>
<th>RM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOV</td>
<td>f/2; f/4</td>
<td>f/2; f/4</td>
</tr>
<tr>
<td>Regulated input power [*]</td>
<td>3 W&lt;sub&gt;AC&lt;/sub&gt;</td>
<td>5.2 W&lt;sub&gt;DC&lt;/sub&gt;</td>
</tr>
<tr>
<td>Cooldown input power [*]</td>
<td>10 W&lt;sub&gt;AC&lt;/sub&gt;</td>
<td>14 W&lt;sub&gt;DC&lt;/sub&gt;</td>
</tr>
<tr>
<td>Power supply</td>
<td>34 V</td>
<td>24 V</td>
</tr>
<tr>
<td>Cooldown time</td>
<td>4 min</td>
<td>5 min</td>
</tr>
<tr>
<td>Cooler dimensions (mm)</td>
<td>Ø 30 x L 82</td>
<td>Ø 46 x L 71</td>
</tr>
<tr>
<td>IDCA height (optical axis, mm)</td>
<td>H &lt; 123.5</td>
<td>H &lt; 144</td>
</tr>
<tr>
<td>Weight</td>
<td>&lt; 0.45 kg</td>
<td>&lt; 0.57 kg</td>
</tr>
<tr>
<td>Operating temperatures</td>
<td>− 40°C / + 71°C</td>
<td>− 40°C / + 71°C</td>
</tr>
</tbody>
</table>

[*] W<sub>AC</sub> = at cooler pins AC input - W<sub>DC</sub> = at cooler C&CE DC input

OPTIONS

- AXIR OEM version delivered with digital video output and first level of correction, in order to facilitate integration in customers’s system
- Technical training and support
- Cooler driving electronics for RM2

APPLICATIONS

Technical characteristics described in this data sheet are for information only.
They are not contractual and may change without prior notice.

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PRELIMINARY