LEO-LP is a “Low Power” LEO thanks to an improved HgCdTe material enabling operating temperature +30K above the standard LEO product.

LEO MW digital output detectors are a family specially designed for SWAP (optimized size, weight and power) MWIR (3 - 5 µm) applications and take full advantage of Sofradir’s state of the art technologies.

Compared to standard LEO, the improved cooler performances will have the following direct benefits for your systems:

-20% on IDCA Power
  Increased battery autonomy;
  Higher system compactness & lower system weight (with smaller battery size)

-20% on Cool Down Time
  Lower time to operation; Decreased “blind” period after turn-ON

+30% on cooler MTTF
  Enlarged periods between maintenance operations;
  Better answer for 24/7; Reduced Life Cycle Cost; Reduced cooler acoustic noise

**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 110 K typical

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

- Selection Serial electrical interface (driven by the proxy board)
- ROIC architecture Snapshot operation, direct injection input circuit, selectable read mode (IWR or ITR)
- ROIC functionalities Programmable integration time, anti-blooming, image invert / revert / inverse
- Window modes 640 x 512 / 640 x 480 / 512 x 512 or programmable
- Charge handling capacity 6.5 $10^6$ e- (ITR mode), 5 $10^6$ e- (IWR mode)
- Signal outputs Digital, 14 bits, Cameralink
- Frame rate Up to 60 Hz full frame rate
**LEO-LP MW**
640 x 512 - 15 µm pitch - improved MCT

**THE LOW POWER VGA 15 µM PITCH MWIR DETECTOR WITH A DIGITAL INTERFACE.**

## Typical [**](*) Performances

<table>
<thead>
<tr>
<th></th>
<th>RM2</th>
<th>K563</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NETD</strong></td>
<td>20 mK [293 K, f/5.5, 50% well fill, 60 Hz]</td>
<td></td>
</tr>
<tr>
<td><strong>Array operability</strong></td>
<td>99.9%</td>
<td></td>
</tr>
<tr>
<td><strong>Non uniformity</strong></td>
<td>2.5% RMS (σ/mean, 300 K uncorrected performance)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>FOV</strong></th>
<th>f/4, f/5.5</th>
<th>f/4, f/5.5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulated input power (all included)</strong></td>
<td>4.4 Wdc [**]</td>
<td>4.4 Wdc [**]</td>
</tr>
<tr>
<td><strong>Cooldown input power</strong></td>
<td>12.4 Wdc [**]</td>
<td>11.8 Wdc [**]</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>9 V</td>
<td>12 V</td>
</tr>
<tr>
<td><strong>Cooldown time</strong></td>
<td>3 min 20 s</td>
<td>3 min 20 s</td>
</tr>
<tr>
<td><strong>Cooler dimensions (mm)</strong></td>
<td>Ø 30.5 x L 82</td>
<td>Ø 37.8 x L 59</td>
</tr>
<tr>
<td><strong>IDCA height (optical Axir, mm)</strong></td>
<td>119.2</td>
<td>119.2</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.40 kg</td>
<td>0.36 kg</td>
</tr>
<tr>
<td><strong>Operating Temperatures</strong></td>
<td>- 40° C / + 71° C</td>
<td>- 40° C / + 71° C</td>
</tr>
</tbody>
</table>

[**] Wdc = at cooler C&CE DC input  
[**] Typical = Expected production mean value

## Options
- Technical training and support

## Applications

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

SOFRADIR EC, INC.  373 US Hwy 46W, Fairfield, NJ 07004 USA  
Phone: 973-882-0211  Fax: 973-882-0997

www.sofradir-ec.com