ZephIR™ 2.9 is the only scientific-grade short-wave infrared HgCdTe (MCT) camera, ranging from 0.85 to 2.9 µm. A four-stage TE cooler, air-deep-cooling at -80°C, provides unrivalled low-noise levels at a 340 frame-per-second rate. Either it is for borehole samples analysis, pipeline gas detection, astronomy, space observation or material sorting, ZephIR™ 2.5 extends the boundaries of laboratory and industrial imaging.

* Export licence may be required for this item.
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>ZEPHIR 1.7 V</th>
<th>ZEPHIR 1.7 S</th>
<th>ZEPHIR 2.5</th>
<th>ZEPHIR 2.9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focal Plane Array (FPA)</strong></td>
<td>InGaAs</td>
<td>InGaAs</td>
<td>HgCdTe</td>
<td>HgCdTe</td>
</tr>
<tr>
<td><strong>Pixel size</strong></td>
<td>15 µm</td>
<td>15 µm</td>
<td>30 µm</td>
<td>30 µm</td>
</tr>
<tr>
<td><strong>Spectral range</strong></td>
<td>0.5 - 1.7 µm</td>
<td>0.5 - 1.69 µm @ 25 °C (&gt;70% 0.95 - 1.62µm)</td>
<td>- 0.9 - 1.69 µm @ 25 °C (&gt;70% 1 - 1.6 µm)</td>
<td>- 0.9 - 1.62 µm @ 80 °C (&gt;70% 0.9 - 1.5 µm)</td>
</tr>
<tr>
<td><strong>Dark Current</strong></td>
<td>150 e/p/s (No thermal emission from target and sensor at -80 °C)</td>
<td>300 e/p/s (target at room temperature and sensor at -80 °C)</td>
<td>4.8 pA or 30 Me/p/s (measured with a target at room temperature and sensor at -80 °C)</td>
<td>54 pA or 340 Me/p/s (measured with a target at room temperature and sensor at -80 °C)</td>
</tr>
<tr>
<td><strong>Gain Setting</strong></td>
<td>High Gain, Med Gain, Low Gain</td>
<td>High Gain, Med Gain, Low Gain</td>
<td>High Gain, Med Gain, Low Gain</td>
<td>High Gain, Med Gain, Low Gain</td>
</tr>
<tr>
<td><strong>Full Well Capacity</strong></td>
<td>12 ke, 900 e, 42 Me</td>
<td>39 ke, 131 ke, 1 Me</td>
<td>150 e, 350 e</td>
<td>150 e, 350 e</td>
</tr>
<tr>
<td><strong>Peak responsivity</strong></td>
<td>1.1 A/W @ 1660 nm</td>
<td>1.0 A/W @ 1550 nm</td>
<td>1.8 A/W @ 2450 nm</td>
<td>1.56 A/W @ 2700 nm</td>
</tr>
<tr>
<td><strong>Operability (typical)</strong></td>
<td>&gt; 99%</td>
<td>&gt; 99.5%</td>
<td>&gt; 98.5%</td>
<td>&gt; 98.5%</td>
</tr>
<tr>
<td><strong>Digitization</strong></td>
<td>13 bits, 15 bits, 15 bits</td>
<td>14 bits, 14 bits, 14 bits</td>
<td>14 bits, 14 bits, 14 bits</td>
<td>14 bits, 14 bits, 14 bits</td>
</tr>
<tr>
<td><strong>Full Frame Rate</strong></td>
<td>220 fps</td>
<td>170 fps</td>
<td>Up to 340 fps</td>
<td>Up to 340 fps</td>
</tr>
<tr>
<td><strong>Integration Time Range</strong></td>
<td>1 µs to 19 minutes</td>
<td>1 µs to 19 minutes</td>
<td>1 µs to 100 ms</td>
<td>1 µs to 10 ms</td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
<td>TEC 4 stages, forced air</td>
<td>TEC 4 stages, forced air</td>
<td>TEC 4 stages, forced air</td>
<td>TEC 4 stages, forced air</td>
</tr>
<tr>
<td><strong>FPA Operating Temperature</strong></td>
<td>-80 °C</td>
<td>-80 °C</td>
<td>-80 °C</td>
<td>-80 °C</td>
</tr>
<tr>
<td><strong>Cool Down Time</strong></td>
<td>&lt; 7 minutes</td>
<td>&lt; 10 minutes</td>
<td>10 minutes</td>
<td>10 minutes</td>
</tr>
<tr>
<td><strong>Ambient Temperature Range</strong></td>
<td>10 °C to 35 °C</td>
<td>10 °C to 35 °C</td>
<td>10 °C to 35 °C</td>
<td>10 °C to 35 °C</td>
</tr>
<tr>
<td><strong>Cold Shield</strong></td>
<td>#1/1.5</td>
<td>#1/1.5</td>
<td>#1/1.5</td>
<td>#1/1.5</td>
</tr>
<tr>
<td><strong>Computer Interface</strong></td>
<td>CameraLink™</td>
<td>CameraLink™</td>
<td>CameraLink™</td>
<td>CameraLink™</td>
</tr>
<tr>
<td><strong>External Control</strong></td>
<td>On demand</td>
<td>On demand</td>
<td>On demand</td>
<td>On demand</td>
</tr>
<tr>
<td><strong>Power Supply Requirement</strong></td>
<td>12 VDC @ 5A</td>
<td>12 VDC @ 5A</td>
<td>12 VDC @ 5A</td>
<td>12 VDC @ 5A</td>
</tr>
<tr>
<td><strong>Physical Dimensions</strong></td>
<td>169 x 130 x 97.25 mm</td>
<td>169 x 130 x 97.25 mm</td>
<td>169 x 130 x 97.25 mm</td>
<td>169 x 130 x 97.25 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>2.6 kg</td>
<td>2.6 kg</td>
<td>2.6 kg</td>
<td>2.6 kg</td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td>CE</td>
<td>CE</td>
<td>CE</td>
<td>CE</td>
</tr>
</tbody>
</table>

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