ImageIR® 9400
High-performance Thermography Camera

Europe’s leading specialist for infrared sensors and measurement technology

- Cooled FPA photon detector with (1,280 × 1,024) IR pixels
- Opto-mechanical MicroScan with (2,560 × 2,048) IR pixels
- Available with high-speed mode thanks to binning technology
- Snapshot detector, integrated trigger interface
- Thermal resolution up to 0.02 K
- Extremely short integration times in the microsecond range
- Pixel size with microscopic lens up to 1.3 μm
- Made in Germany

1) ImageIR® 9400 with interchangeable lenses from InfraTec
2) Lock-in thermography of an electronic device with the thermographic software IRBIS® 3 active
3) Impact of a drop of water on a soldering iron, recorded with high-speed mode

www.InfraTec.eu
www.InfraTec-infrared.com
To analyse the thermal behavior of objects and processes from a wide variety of perspectives InfraTec introduces ImageIR® 9400. The camera is equipped with a new generation cooled focal-plane array photon detector that provides a format of (1,280 × 1,024) IR pixels. Besides the standard mode users can choose a high-speed mode utilising binning technology. Due to a reduced number of pixels but the same field of view (FOV) this enables very high frame rates up to 622 Hz and an excellent thermal resolution at the same time.

ImageIR® 9400 was developed for demanding operations in research and development, non-destructive testing and process monitoring. Its modular structure, which consists of optical, detector and interface modules, makes it easily adaptable to the respective application.

An integrated trigger interface guarantees a repeatable high-precision triggering of quick procedures. Multiple configurable digital in- and outputs serve as control ports for the camera or as generator of control signals for external devices. The optical channel consists of exchangeable infrared lens systems as well as application-specific apertures, filters and optical elements. The exchangeable radiometric precision lenses of the ImageIR® 9400 can be combined with a motorised focus unit, which is operated from the camera's application software. It allows quick, precise and remotely controllable motorised focusing.

<table>
<thead>
<tr>
<th>Lenses</th>
<th>Focal length (mm)</th>
<th>FOV (°)</th>
<th>IFOV (mrad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard lens</td>
<td>25</td>
<td>(29 × 23)</td>
<td>0.4</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>50</td>
<td>(15 × 12)</td>
<td>0.2</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>100</td>
<td>(7.3 × 5.9)</td>
<td>0.1</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>200</td>
<td>(3.7 × 2.9)</td>
<td>0.05</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Macro and microscopic lenses</th>
<th>Object distance (mm)</th>
<th>Object size (mm)</th>
<th>Pixel size (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close-up for telephoto lens 50 mm</td>
<td>300</td>
<td>(77 × 61)</td>
<td>60</td>
</tr>
<tr>
<td>Close-up for telephoto lens 100 mm</td>
<td>500</td>
<td>(64 × 51)</td>
<td>50</td>
</tr>
<tr>
<td>Microscopic lens M=1.0x</td>
<td>40</td>
<td>(13 × 10)</td>
<td>10</td>
</tr>
<tr>
<td>Microscopic lens M=8.0x</td>
<td>14</td>
<td>(1.6 × 1.3)</td>
<td>1.3</td>
</tr>
</tbody>
</table>

* Depending on model, ** expectedly available in July 2019

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