IR camera for the detection of slightest temperature differences

Features:
• Smallest camera in its class (46 x 56 x 90 mm)
• Interchangeable lenses and industrial accessories
• Superb thermal sensitivity of 40 mK
• Licence-free analysis software and full SDK included

Technical specifications

- Optical resolution: 382 x 288 pixels
- Detector: FPA, uncooled (25 µm x 25 µm)
- Spectral range: 7.5 - 13 µm
- Temperature ranges: –20 ... 100 °C, 0 ... 250 °C, (20) 150 ... 900 °C
  - optional temperature range: 200 ... 1500 °C
- Frame rate: 80 Hz switchable to 27 Hz
- Optics (FOV):
  - 13° x 10° / f = 41 mm or
  - 29° x 22° / f = 18.7 mm or
  - 53° x 40° / f = 10.5 mm or
  - 80° x 56° / f = 7.7 mm
- Thermal sensitivity (NETD):
  - 0.04 K with 29° x 22° FOV / F = 0.8
  - 0.04 K with 53° x 40° FOV / F = 0.8
  - 0.04 K with 80° x 56° FOV / F = 0.8
  - 0.06 K with 13° x 10° FOV / F = 1.0
- System accuracy: ±2 °C or ±2 %, whichever is greater
- PC interfaces: USB 2.0 / optional USB to GigE (PoE) interface
- Standard process interface (PIF):
  - 0 – 10 V input, digital input (max. 24 V),
  - 0 – 10 V output
- Industrial process interface (PIF):
  - 2x 0 – 10 V input, digital input (max. 24 V),
  - 3x 0 – 10 V output,
  - 3x relay (0 – 30 V/ 400 mA), fail-safe relay
- Cable length (USB):
  - 1 m (standard), 5 m, 10 m, 20 m
  - 5 m and 10 m available as high temperature USB cable (180 or 250 °C)
- Ambient temperature:
  - 0 ... 70 °C
- Storage temperature:
  - –40 ... 85 °C
- Relative humidity:
  - 20 – 80 %, non condensing
- Enclosure (size / protection):
  - 46 x 56 x 90 mm/ IP 67 (NEMA 4)
- Weight:
  - 320 g, incl. lens
- Schock / Vibration:
  - IEC 60068-2
- Tripod mount:
  - ¼ – 20 UNC
- Power supply:
  - via USB
- Scope of supply (standard):
  - • USB camera, incl. lens
  - • USB cable (1 m)
  - • Table tripod
  - • PIF cable, incl. terminal block (1 m),
  - • Software package optris PIX Connect,
  - • Rugged outdoor case

1) Accuracy effective starting at 150 °C
2) Not available for 80° optics
3) For further information see operator’s manual

For further information als well as the product configurator please visit
www.optris.global/
thermal-imager-optris-pi400-pi450

Optris GmbH · Ferdinand-Buisson-Str. 14 · 13127 Berlin · Germany
Phone: +49 (0)30 500 197-0 · Fax: +49 (0)30 500 197-10 · Email: info@optris.global · www.optris.global
Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
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<tbody>
<tr>
<td>Diameter</td>
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<td>Width</td>
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<tr>
<td>Height</td>
<td>58 mm</td>
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<tr>
<td>Bolthead Diameter</td>
<td>12 mm</td>
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<tr>
<td>Depth</td>
<td>15 mm</td>
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<tr>
<td>Centering Diameter</td>
<td>42 mm</td>
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</table>

Process integration

- **optris® USB Server Gigabit 2.0**
  - Network connection via Gigabit Ethernet
  - Full TCP/IP support incl. routing and DNS
  - Two independent USB ports
  - Power over PoE or external voltage supply at 24 - 48 V DC
  - Galvanic isolation 500 V\text{RMS}
  - Remotely configurable via web based management

  For further information please visit [www.optris.global/usb-server-gigabit](http://www.optris.global/usb-server-gigabit)

- **optris® Industrial process interface**
  - Use of camera for process monitoring in industrial environments
  - Continuous fail safe monitoring of imager, software and cable connections
  - 3 analog / alarm outputs, 2 analog inputs, 1 digital input, 3 alarm relay, 1 fail-safe relay

  For further information please visit [www.optris.global/neu-industrial-process-interface](http://www.optris.global/neu-industrial-process-interface)

- **optris® PI NetBox**
  - Miniature PC as add-on to the PI series for stand-alone system
  - Integrated hardware and software watchdog
  - Connections: 2x USB 2.0, 1x USB 3.0, 1x Mini-USB 2.0, Micro-HDMI, Ethernet (Gigabit Ethernet), micro SDHC / SDXC card

  For further information please visit [www.optris.global/pi-netbox](http://www.optris.global/pi-netbox)