Thermal imaging solution for the glass industry

Features:
- Line scan function through license-free analysis software optris® PIX Connect
- Compact in size of 46 x 56 x 76 - 100 mm
- Frame rate of 80 Hz
- Withstands ambient temperatures of up to 70 °C without additional cooling

Technical specifications

- Optical resolution: 382 x 288 pixels
- Detector: FPA, uncooled (25 µm x 25 µm)
- Spectral range: 7.9 µm
- Measurement ranges: 200 ... 1500 °C
- 150 ... 900 °C
- Sighting range: 0 ... 250 °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
- Max. FOV: 98° / 478 pixels (diagonal scanline / 80° optics)
- Thermal sensitivity (NETD) at TObj = 650 °C: 130 mK
- Accuracy: ±2 °C or ±2 %, whichever is greater
- PC interface: USB 2.0 / optional USB to GigE (PoE) interface
- Process interface (PIF), standard: 0 – 10 V input, digital input (max. 24 V), 0 – 10 V output
- Process interface (PIF), industrial: 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 also 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 / rating): 46 x 56 x 76 - 100 mm (depending on lens + focus position) / IP 67 (NEMA 4)
- Weight: 320 g, incl. lens
- Shock / Vibration: IEC 60068-2
- Tripod mount: ¼ – 20 UNC
- Power supply: via USB
- Scope of supply (standard):
  - USB camera with 1 lens
  - USB cable (1 m)
  - Table tripod
  - PIF cable (1 m) incl. terminal block
  - Software package optris® PIX Connect
  - Hard transport case

For further information on non-contact temperature measurement in the glass industry, please visit www.optris.com/temperature-measurement-glass-industry

1) For more details see operator's manual.
# optris® PI 450 G7

## Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>48 mm</td>
</tr>
<tr>
<td>Height</td>
<td>35 mm</td>
</tr>
<tr>
<td>Depth</td>
<td>56 mm</td>
</tr>
</tbody>
</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 via PoE or external voltage supply at 24 – 48 V DC
- Galvanic isolation 500 V 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 relais, 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)