Compact infrared camera for laser applications

**Features:**
- Wide measurement range from 575 °C to 1900 °C without sub-ranges
- Special narrow-band spectral response at 800 nm ideal for almost all NIR and CO₂ laser processing applications
- High dynamic CMOS detector with up to 764 x 480 pixels resolution
- Up to 1 kHz frame rate for fast processes
- Real-time analog output with 1 ms response time
- Extensive software package and SDK included

**Technical specifications**

**Optical resolution**
- 764 x 480 pixels @ 32 Hz
- 382 x 288 pixels @ 80 Hz (switchable to 27 Hz)
- 72 x 56 pixels @ 1 kHz
- 764 x 8 pixels @ 1 kHz (fast linescanning mode)

**Detector**
- CMOS (15 μm x 15 μm)

**Spectral range**
- 780 – 820 nm

**Temperature range**
- 575 °C ... 1900 °C (27 Hz mode)
- 625 °C ... 1900 °C (32 / 80 Hz mode)
- 750 °C ... 1900 °C (1 kHz mode)

**Optics**
- FOV @ 764 x 480 px:
  - 20° x 15° (f = 16 mm)
  - 26° x 16° (f = 25 mm)
- FOV @ 382 x 288 px:
  - 39° x 25° (f = 16 mm)
  - 13° x 10° (f = 25 mm)

**Thermal sensitivity (NETD)**
- < 2 K (< 1000 °C / 27 Hz to 1 kHz)

**Accuracy**
- +/- 1 % of reading (< 1500 °C) / +/- 1.5 % of reading (> 1500 °C)

**PC interface**
- USB 2.0 / optional USB to GigE (PoE) conversion

**High speed analog output**
- 0 – 10 V real time output of 8x8 pixel (1 ms response time)

**Standard process interface (PIF)**
- 0 – 10 V input, digital input (max. 24 V), 0 – 10 V output

**optional Industrial process interface (PIF)**
- 2x 0 – 10 V inputs, digital input (max. 24 V), 3x 0/4 – 20 mA outputs, 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 available as high temperature USB cable (180 or 250 °C)

**Ambient temperature**
- 5 °C ... 50 °C

**Storage temperature**
- – 40 °C ... 70 °C

**Relative humidity**
- 20 – 80 %, non-condensing

**Enclosure (size/ rating)**
- 46 x 56 x 88 - 129 mm (depending on lens + focus position) / IP 67 (NEMA 4)

**Weight**
- 245 - 311 g (depending on lens)

**Shock / Vibration**
- IEC 60068-2-27 (25G and 50G) / IEC 60068-2-6 (sinus shaped), IEC 60068-2-64 (broadband noise)

**Tripod mount**
- ¼ – 20 UNC

**Power supply**
via USB

**Software**
optris PIX Connect / IRmobile Android App

**Scope of supply (standard)**
- USB camera with 1 lens
- Lens protection tube incl. protective window
- USB cable (1 m)
- Table tripod

**For further information as well as the product configurator, please visit:**
www.optris.global/thermal-imager-pi-08m

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1) Can be placed anywhere within the full FOV
2) < 4 K (>1000 °C / 27 Hz to 1 kHz)
3) for 1 kHz mode: +/- 1.5 % of reading (< 1500 °C) / +/- 2 % of reading (>1500 °C)
4) Only applies when lens protection tube is used
5) For more details see operator’s manual
**Dimensions**

- **Dimensions in mm**
  - 46 x 33 x 56
  - 6 mm deep

- **Dimensions (depending on lens variation)**
  - 36.5 / 45.5 / 68.5 / 45 / 54 / 77

**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 Ethernet or external voltage supply at 24 - 48 V DC
  - Galvanic isolation 500 V
  - 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 relays,
  - 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)