OPTRIS® PI 400i
TECHNICAL DATA

optris
infrared measurements
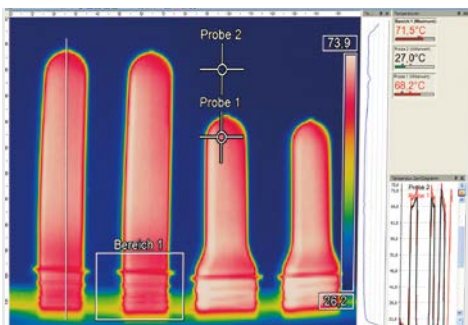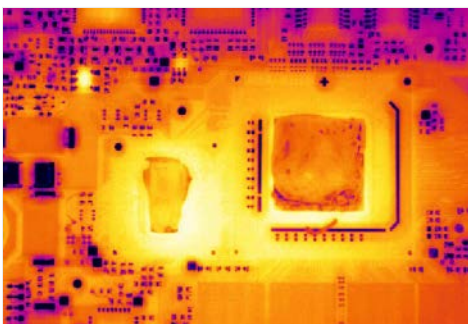
Compact high resolution infrared camera

Features:
- Smallest camera in its class (45 x 45 x 60 – 75 mm)
- Interchangeable lenses and industrial accessories
- Switchable Framerate 80Hz
- License-free analysis software and full SDK included

Technical specifications

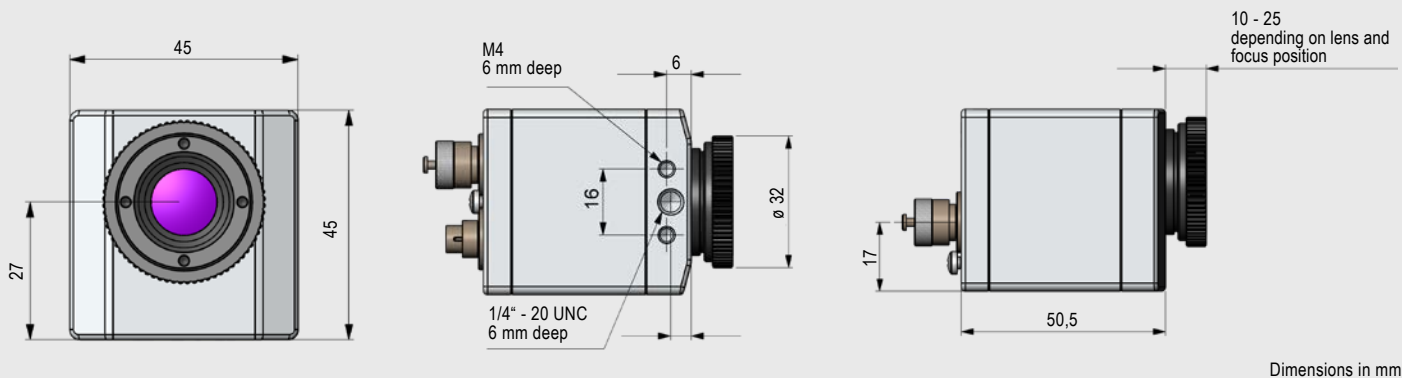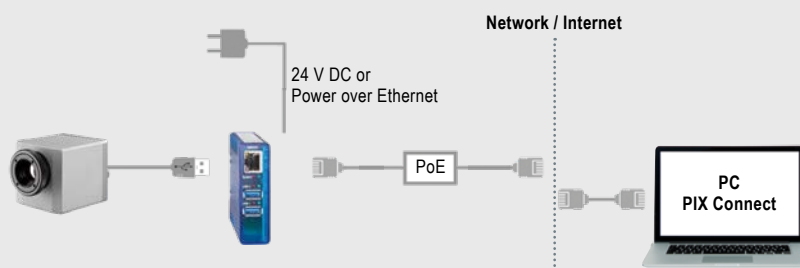|	
Optical resolution	382 x 288 pixels
Detector	FPA, uncooled (17 μm x 17 μm)
Spectral range	8 – 14 μm
Temperature range	–20 ... 100 °C, 0 ... 250 °C, (20) 150 ... 900 °C[1], optional temperature range: 200 ... 1500 °C
Frame rate	80 Hz / switchable to 27 Hz
Optik (FOV)	18° x 14° / f = 20 mm or 29° x 22° / f = 12.7 mm or 53° x 38° / f = 7.7 mm or 80° x 54° / f = 5.7 mm
Thermal sensitivity (NETD)	75 mK with 29° x 22° FOV / F = 0.9 75 mK with 53° x 38° FOV / F = 0.9 75 mK with 80° x 54° FOV / F = 0.9 0.1 K with 18° x 14° FOV / F = 1.1
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 0/4 – 20 mA output, 3x relays (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 ... 50 °C
Storage temperature	– 40 ... 70 °C
Relative humidity	20 – 80 %, non condensing
Enclosure (size / protection)	45 x 45 x 60 – 75 mm (depending on lens + focus position) / IP 67 (NEMA 4)
Weight	195 g, incl. lens
Shock / Vibration[2]	IEC 60068-2
Tripod mount	¼ – 20 UNC
Power supply	via USB
Scope of supply (standard)	• USB camera, incl. 1 lens • USB cable (1 m) • Table tripod • PIF cable, incl. terminal block (1 m) • Software package optris PIX Connect • Aluminum case

[1] Accuracy for the (20) 150 ... 900 °C range effective starting at 150 °C
[2] For further details see operator's manual

For further information as well als the product configurator, please visit
www.optris.global/
thermal-imager-optris-pi450i

optris® **PI 400i**

Dimension

45

M4
6 mm deep

6

16

27

45

ø 32

10 - 25
depending on lens and
focus position

17

1/4" - 20 UNC
6 mm deep

50,5

Dimensions in mm

Process integration

Network / Internet

24 V DC or
Power over Ethernet

PoE

PC
PIX Connect
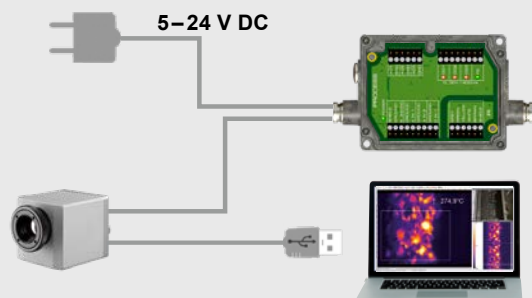
optris® **USB-Server Gigabit 2.0**

- 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}
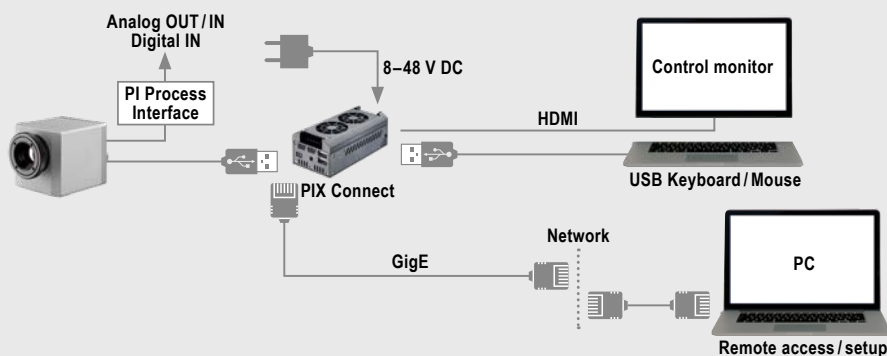- Remotely configurable via web based
  management

For further information please visit
www.optris.global/usb-server-gigabit

5 – 24 V DC

optris® **Industrial Process Interface**

- Use of camera for process monitoring in
  industrial environments
- Continous 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

Analog OUT / IN
Digital IN

PI Process
Interface

8 – 48 V DC

Control monitor

HDMI

USB Keyboard / Mouse

PIX Connect

Network

GigE

PC

Remote access / setup

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