

Short wavelength and ultra compact infrared camera



Features:

- Wide measurement range from 900 °C to 2450 °C without sub-ranges
- Ideal for almost all NIR and CO2 laser processing applications due to spectral response at 540 nm
- Special wavelength range of 500-540 nm minimizes errors due to uncertainty of emissivity
- 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

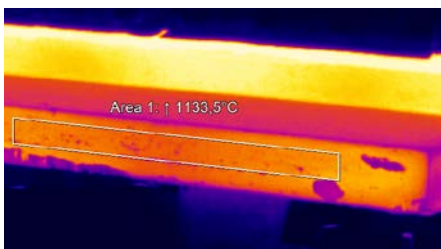
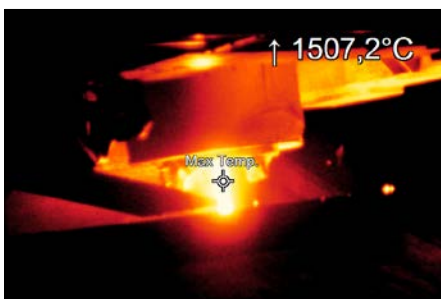
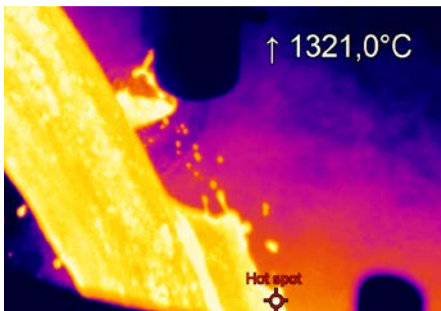
Technical specifications

Optical resolution (switchable)/ Frame rate	764 x 480 pixels @ 32 Hz 382 x 288 pixels @ 80 Hz (switchable to 27 Hz) 72 x 56 pixels @ 1 kHz ¹⁾ 764 x 8 pixels @ 1 kHz (fast linescanning mode) ¹⁾
Detector	CMOS (15 µm x 15 µm)
Spectral range	500 – 540 nm
Temperature range	900 °C (950 °C for f=50mm - optics) ... 2450 °C (27 Hz mode) 950 °C (1000 °C for f=50mm - optics) ... 2450 °C (32 / 80 Hz mode) 1100 °C (1150 °C for f=50mm - optics) ... 2450 °C (1 kHz mode)
Optics	FOV @ 764 x 480 px: 27° x 17° (f = 25 mm) 13° x 8° (f = 50 mm) FOV @ 382 x 288 px: 14° x 11° (f = 25 mm) 7° x 5° (f = 50 mm)
Thermal sensitivity (NETD)	< 2 K (1400 °C/ 27 Hz to 1 kHz) ²⁾
Accuracy	For object temperature < 2000 °C: ±1 % of reading for 27/32/80 Hz / ±1.5 % of reading for 1 kHz For object temperature > 2000 °C: ±2 % of reading for 27/32/80 Hz / ±2.5 % of reading for 1 kHz
PC interface	USB 2.0 / optional USB to GigE (PoE) conversion
High speed analog output (@ 1 kHz mode)	0–10 V real time output of 8x8 pixels (1 ms response time)
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 inputs, digital input (max. 24 V), 3x 0/4 – 20 mA outputs, 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 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 ³⁾	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 incl. 1 lens • USB cable (1 m) • PIF cable (1 m) incl. terminal block • Table tripod • Aluminum case • Software package optris PIX Connect • Optional: CoolingJacket; High temperature cable, protective window

¹⁾ Can be placed anywhere within the full FOV

²⁾ < 4 K (>1400 °C/ 27 Hz to 1 kHz)

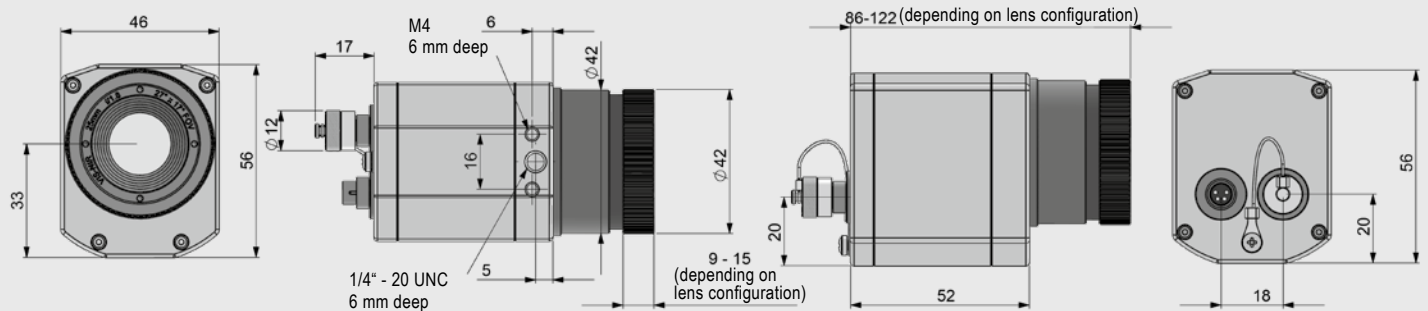
³⁾ For more details see operator's manual



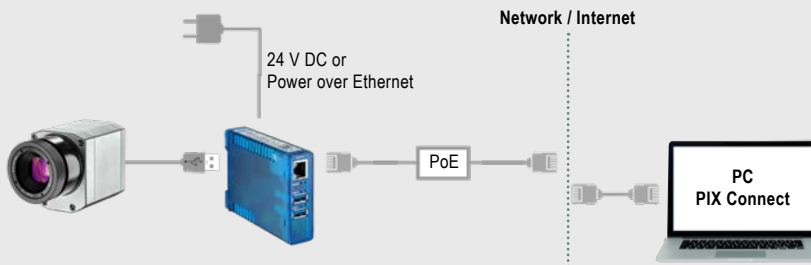
자세한 설명과 측정 사이즈 계산은 아래의
사이트를 참조하십시오.

<https://ondo24.com/m3s5.html>

Dimensions in mm



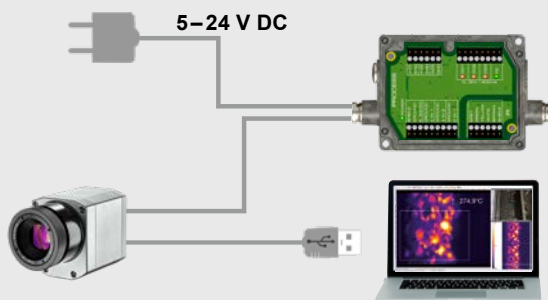
Process integration



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_{RMS}
- Remotely configurable via web based management

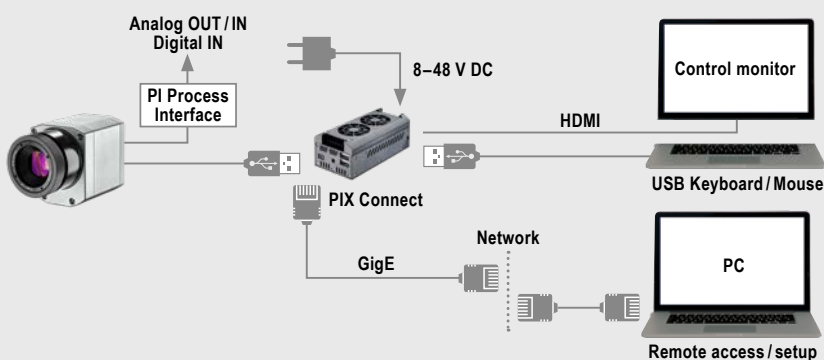
For further information please visit
www.optris.com/products/infrared-cameras/accessories-for-ir-cameras/usb-server-gigabit-2-0



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.com/products/infrared-cameras/accessories-for-ir-cameras/industrial-process-interface-for-usb-native-optris-infrared-cameras



optris PI NetBox

- Miniature PC as add-on to the PI series for stand-alone system
- Integrated hardware and software watchdog
- Connections: 3x USB 2.0, 1x Mini-USB 2.0, Micro-HDMI, Ethernet (Gigabit Ethernet), micro SDHC / SDXC card

For further information please visit
www.optris.com/products/infrared-cameras/accessories-for-ir-cameras/pi-netbox