New
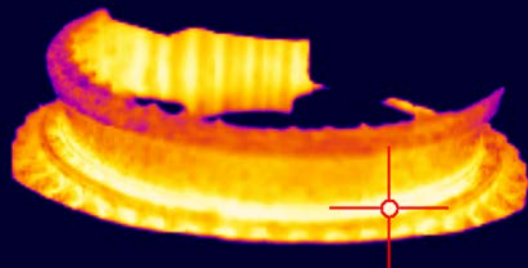
PI 1M

Short wavelength and ultra compact infrared camera for non-contact temperature measurement of metallic surfaces

innovative infrared technology
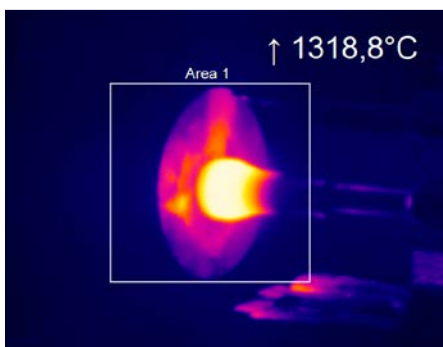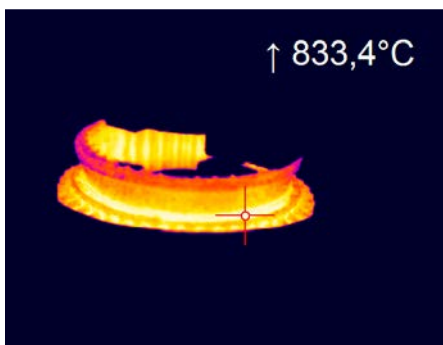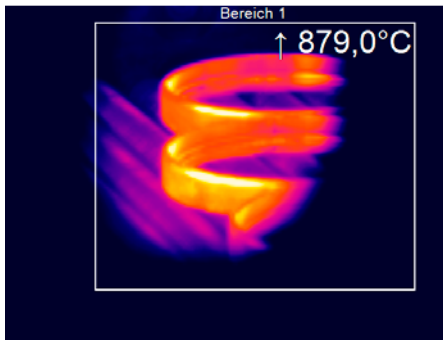
↑ 833,4°C

optris® **PI 1M**
TECHNICAL DATA

Short wavelength and ultra compact infrared camera

Features:
- High dynamic CMOS detector with up to 764 x 480 pixels resolution
- Wide measurement ranges from 450 °C to 1800 °C without sub-ranges
- Up to 1 kHz frame rate for fast processes
- Real-time analog output with 1 ms response time
- Extensive software package and SDK included

PI 1M
2.690 €
incl. software & driver

Bereich 1 ↑ 879,0°C

↑ 833,4°C

↑ 1318,8°C
Area 1

Typ	PI 1M
Optical resolution (switchable)/ Frame rate	764 x 480 pixels @ 32 Hz 382 x 288 pixels @ 80 Hz (swichable to 27 Hz) 72 x 56 pixels @ 1 kHz
Detector	CMOS (15 µm x 15 µm)
Spectral range	0.92 – 1.1 µm
Temperature ranges	450 ... 1800 °C (32 and 27 Hz mode) 500 ... 1800 °C (80 Hz mode) 600 ... 1800 °C (1 kHz mode)
Optics	**FOV @ 382 x 288 px:** 51° x 39° (f = 6 mm) 26° x 20° (f = 12 mm) 20° x 15° (f = 16 mm) 13° x 10° (f = 25 mm) 6,2° x 4,7° (f = 50 mm) 4,0° x 3,0° (f = 75 mm)
Thermal sensitivity (NETD)	< 1 K (700 °C), < 2 K (1000 °C)
Accuracy	±2 % of reading (object temperature < 1500 °C)
PC interface	USB 2.0
High speed analog output (@ 1 kHz mode)	0 – 10 V real time output of the center pixel (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 – 10 V outputs, 3x relay (0 – 30 V/ 400 mA), fail-safe relays
Cable length (USB)	1 m (standard), 5 m, 10 m 5 m and 10 m also available as HT cable (180 °C)
Ambient temperature	0 ... 50 °C
Storage temperature	− 40 ... 70 °C
Relative humidity	20 – 80 %, non-condensing
Enclosure (size/ rating)	46 mm x 56 mm x 90 mm/ IP 67 (NEMA 4)
Weight	320 g, incl. lens
Shock [1]	IEC 60068-2-27 (25 g and 50 g)
Vibration [1]	IEC 60068-2-6 (sinus-shaped)/ IEC 60068-2-64 (broadband noise)
Tripod mount	¼ – 20 UNC
Power supply	USB powered
Scope of supply (standard)	USB camera with 1 lens, lens protection tube incl. protective window, USB cable (1 m), Table tripod, PIF cable (1 m) incl. terminal block, Software package optris® PI Connect, Aluminum case, Optional: CoolingJacket, High temperature cable

[1] For more details see operator's manual

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