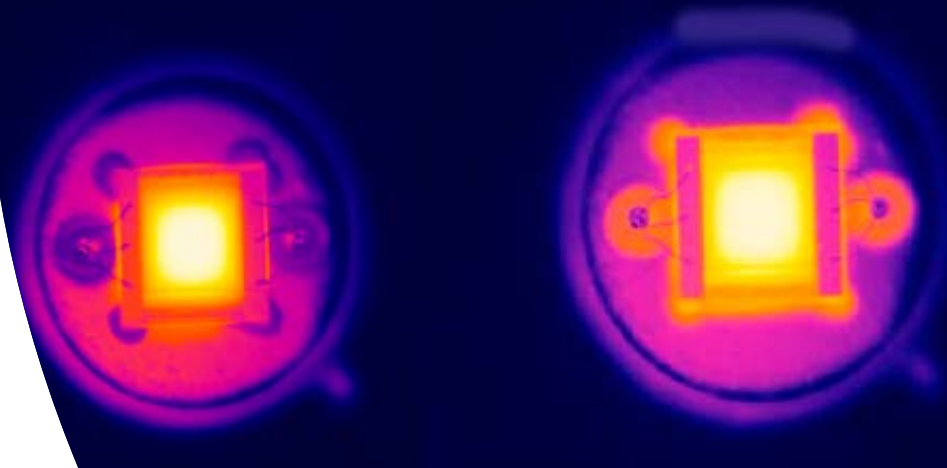




Microscope Optics

For PI 640 infrared cameras

when temperature matters



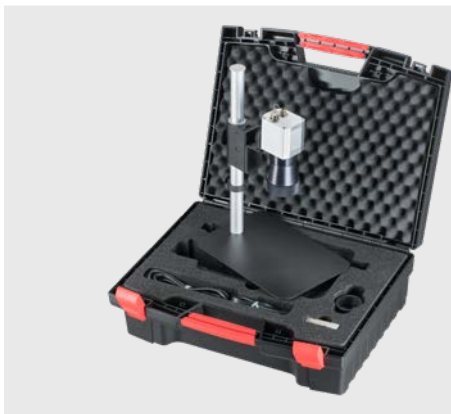
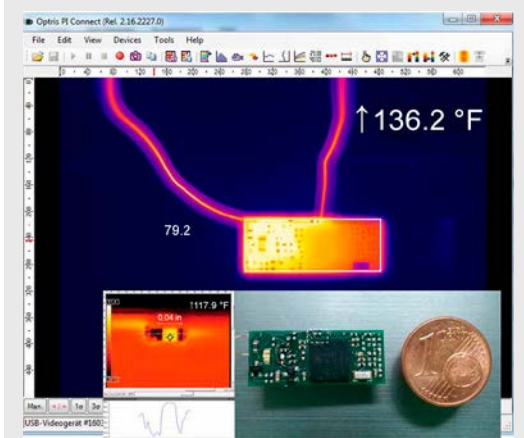
optris PI 640 Microscope optics

TECHNICAL DATA

Microscope optics for the inspection of electronic boards

Features:

- Exchangeable, focusable lenses for most flexible use of the camera
- Analysis of small chip level components down to 28 µm
- Hands-free operation for simultaneous testing and IR imaging
- Frame rates up to 125 Hz allow inspection of fast processes (like pulsed laser diodes)
- Radiometric video or tiff recording with +/- 2 °C (+/- 3.6 °F) measurement accuracy
- License-free analysis software and complete SDK included



Typ	Technical Specifications
Temperature range (scalable)	-20 ... 100 °C, 0 ... 250 °C, (20) 150 ... 900 °C ¹⁾ (-4 ... 212 °F, 32 ... 482 °F, (4) 302 ... 1652 °F) ¹⁾
Detector	FPA, 640 x 480 pixels @ 32 Hz 640 x 120 pixels @ 125 Hz
Spectral range	8 – 14 µm
Microscope optics (FOV)	12° x 9° (F=1.1) / f= 44 mm (f= 1.73 in)
Minimum spot size	28 µm
MFOV	85 µm ²⁾
Working distance	80 – 100 mm (3.15 – 3.94 in)
System accuracy	±2 °C or ±2 %, whichever is greater (±3.6 °F or ±2 %, whichever is greater)
Temperature resolution (NETD)	120 mK
PC interface	USB 2.0
Standard process interface (PIF)	0–10 V input, digital input (max. 24 V), 0–10 V output
Industrial process interface (IPF)	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), 3 m, 5 m, 10 m, 20 m (3.3 ft [standard], 9.8 ft, 16.4 ft, 32.8 ft, 65.6 ft)
Ambient temperature	0 ... 50 °C (32 ... 122 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)
Relative humidity	20–80 %, non condensing
Enclosing ³⁾ (size / rating)	46 x 56 x 130 mm (1.81 x 2.20 x 5.12 in) / IP 67 (NEMA 4)
Weight	370 g (13.1 oz), incl. lense
Shock/Vibration ³⁾	IEC 60068-2-27 (25G and 50G) / IEC 60068-2-6 (sinus shaped), IEC 60068-2-64 (broadband noise)
Tripod mount	1/4 – 20 UNC
Power supply	via USB
Emissivity	0.100...1.100
Software	optris PIX Connect / Windows and Linux SDKs
Scope of supply (PI camera + Microscope accessory kit)	<ul style="list-style-type: none"> • PI camera (PI 640) • Microscope optics (MO44) • Standard USB cable (1 m [3.3 ft]) • Rugged outdoor transport case • Software package optris PIX Connect on USB flash drive • Standard lens (O33) • Microscope stand • Standard PIF • Manual PI camera

¹⁾ Accuracy statement effective from 150 °C (302 °F)

²⁾ MFOV on PI 640 3 x 3 px

³⁾ For more information see operator's manual