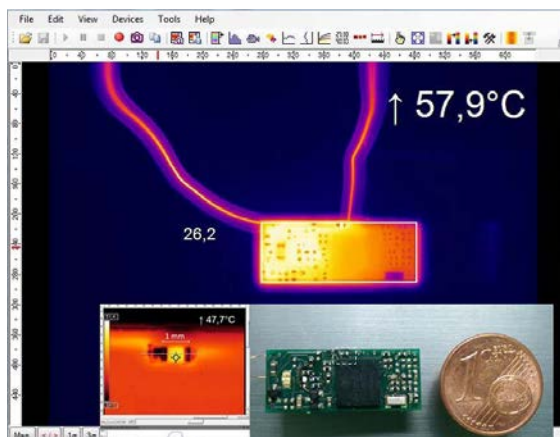


Microscope optics for the inspection of electronic boards



Features:

- Exchangeable, focusable optics 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 $\pm 2^\circ\text{C}$ measurement accuracy
- License-free analysis software and complete SDK included



Typ	Specification
Temperature range (scalable)	-20 ... 100 °C, 0 ... 250 °C, (20)150 ... 900 °C ¹⁾ , 200 ... 1500 °C (optional)
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
Minimum spot size (IFOV)	28 μm
MFOV	85 μm^2
Working distance	80 – 100 mm
System accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$, whichever is greater
Temperature resolution (NETD)	80 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 (IPIF)	2x 0–10 V inputs, digital input (max. 24 V), 3x 0/4 – 20 mA outputs, 3x relais (0–30 V / 400 mA), fail-safe relay
Cable length (USB)	1 m (standard), 3 m, 5 m, 10 m, 20 m
Ambient temperature	0 ... 50 °C
Storage temperature	-40 ... 70 °C
Relative humidity	20–80 %, non condensing
Enclosing ³⁾ (size / rating)	46 x 56 x 119 - 126 mm (depending on focus position) / IP 67 (NEMA 4)
Weight	370 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	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)	• PI camera (PI 640i) • Microscope optics (MO44) • Standard USB cable (1 m) • Rugged outdoor transport case • Software package optris PIX Connect on USB flash drive • Microscope stand • Standard PIF • Manual PI camera

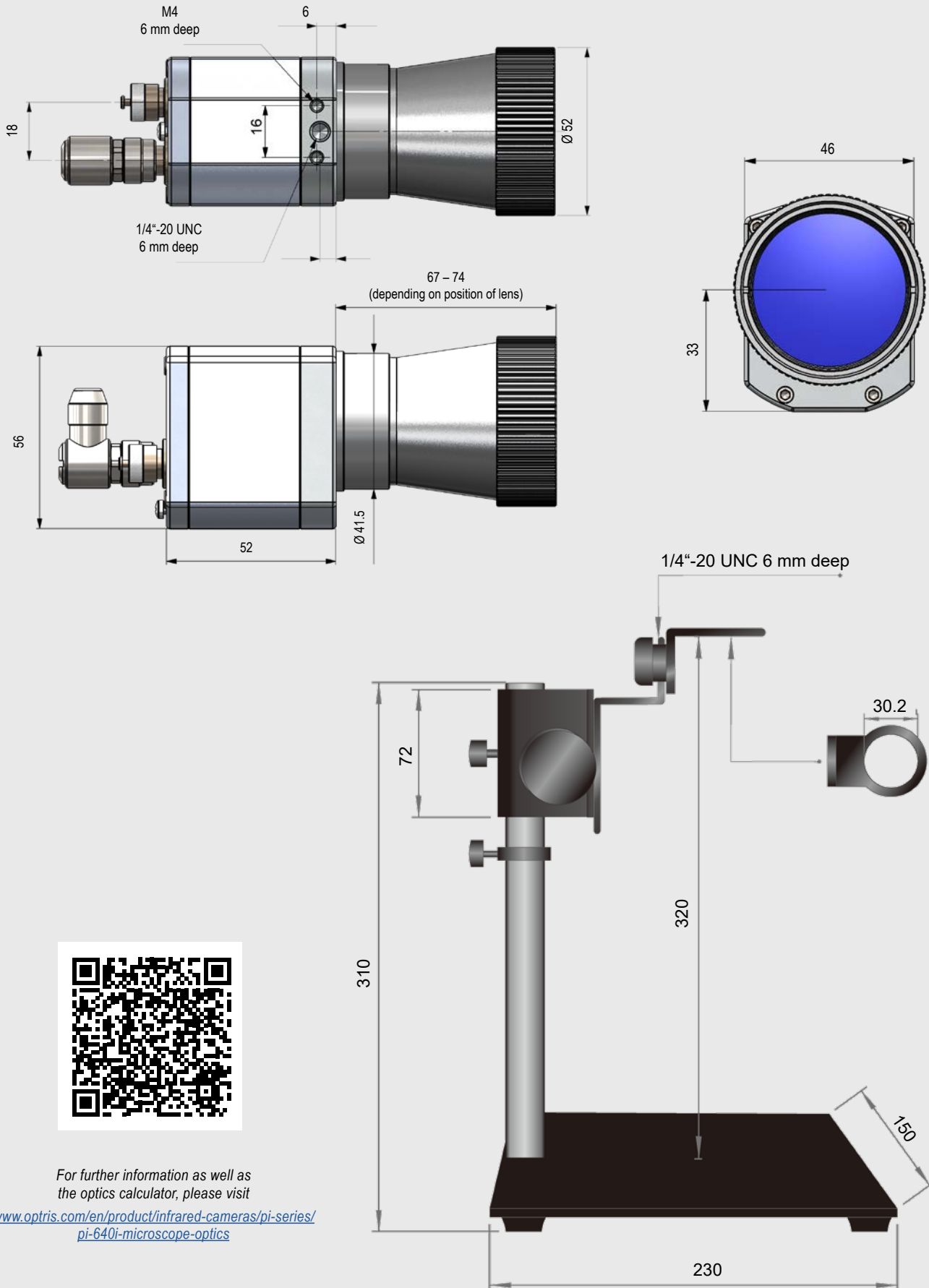
¹⁾ Accuracy statement effective from 150 °C

²⁾ MFOV on PI 640i 3 x 3 px

³⁾ For more details see operator's manual

optris PI 640i Microscope optics

Dimensions in mm



For further information as well as
the optics calculator, please visit

[www.optris.com/en/product/infrared-cameras/pi-series/
pi-640i-microscope-optics](http://www.optris.com/en/product/infrared-cameras/pi-series/pi-640i-microscope-optics)