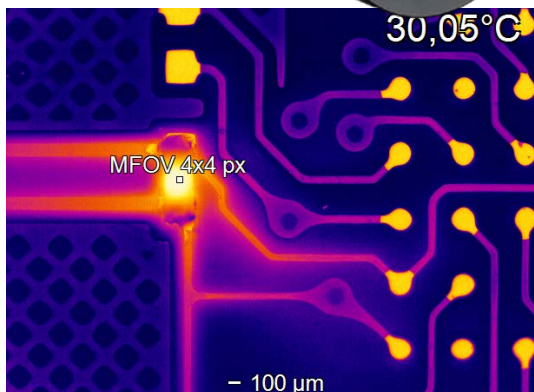
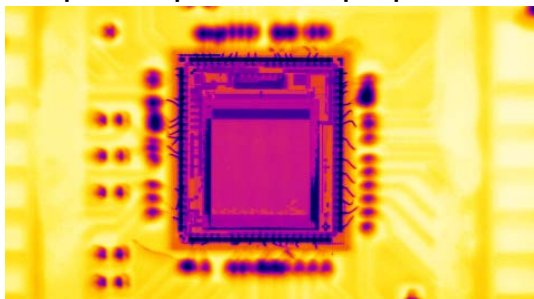


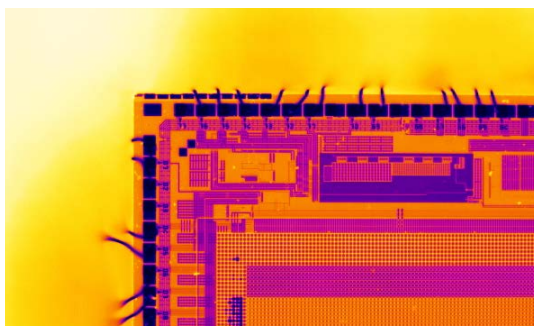
Microscope optics for chip-level thermal imaging of electronic components and boards



Comparison optris microscope optics:



PI 640i with standard microscope optics and 28 µm resolution (MO44)



PI 640i with microscope optics with 2x magnification and 8 µm resolution (MO2x)

Features:

- Thermal analysis of tiny 8 µm chip-level structures on electronic components
- Exchangeable, focusable optics for most flexible use of the camera
- Microscope stand included for hands-free simultaneous operation / testing
- Frame rates up to 125 Hz allow inspection of fast processes (like pulsed laser diodes)
- Radiometric video or tiff recording with +/- 2 °C measurement accuracy
- License-free analysis software and complete SDK included

Typ	Technical Specifications
Temperature range (scalable)	-20 ... 100 °C, 0 ... 250 °C, (20) 150 ... 500 °C ¹⁾ -4 ... 212 °F, 32 ... 482 °F, (4) 302 ... 932 °F ¹⁾
Detector	FPA, 640 x 480 pixels @ 32 Hz 640 x 120 pixels @ 125 Hz
Spectral range	8 – 14 µm
Microscope optics (FOV)	5.4 mm (0.21 in) x 4.0 mm (0.16 in) (F=1.3) / f = 60 mm (2.36 in)
Minimum spot size	8 µm
MFOV	34 µm ²⁾
Working distance	15 mm (0.59 in)
System accuracy	±2 °C or ±2 %, whichever is greater (±3.6 °F or ±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 (IPF)	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), 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)	52 x 59 x 139 mm (2.05 x 2.32 x 5.47 in) / IP 67 (NEMA 4)
Weight	410 g (14.46 oz)
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 (MO2x) • Standard USB cable (1 m) • Rugged outdoor transport case • Software package optris PIX Connect on USB flash drive • Premium microscope stand with coarse & fine drive & adapter for PI cam. • Standard PIF • Manual PI camera • Base plate with ESD pad

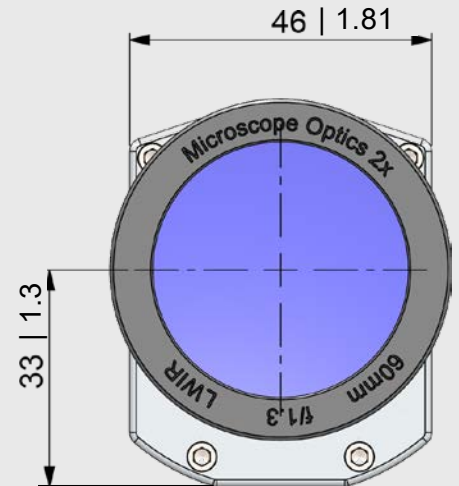
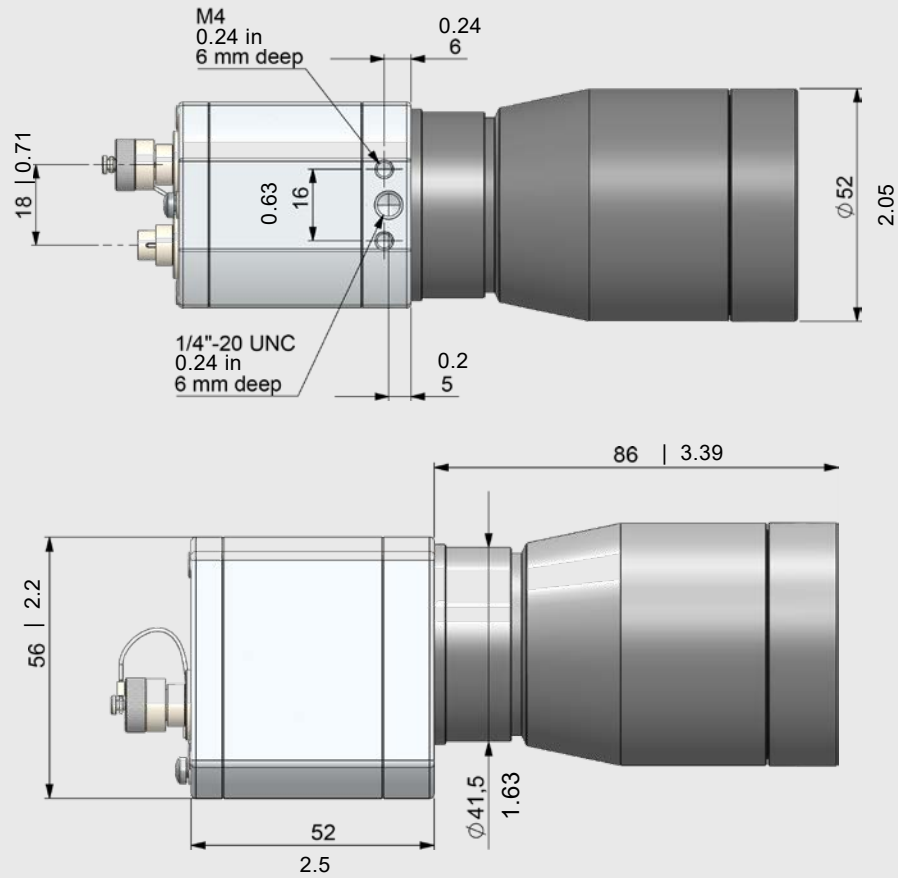
¹⁾ Accuracy statement for this temperature range effective from 150 °C (302 °F)

²⁾ Measurement field of view (MFOV) on MO2x optics: 4x4 px

³⁾ For more information see operator's manual

optris PI 640i 2x Microscope optics

Dimensions in mm (in)



For further information as well as
the optics calculator, please visit
www.optris.com/microscope-optics