

Microscope Optics

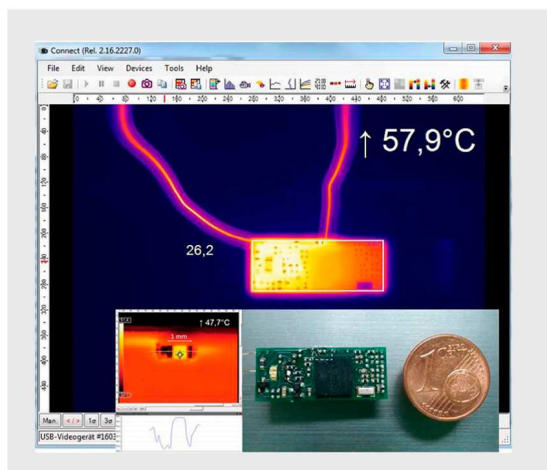
TECHNICAL DATA

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 $\pm 1-2^\circ\text{C}$ measurement accuracy
- License-free analysis software and complete SDK included



	Technical Specifications	
Camera type	IR 450	IR 640
Temperature range (scalable)	-20 ... 100 °C, 0 ... 250 °C, 150 ... 900 °C	
Detector	FPA, 382 x 288 pixels @ 80 Hz (switchable to 27 Hz)	FPA, 640 x 480 pixels @ 32 Hz 640 x 120 pixels @ 125 Hz
Spectral range	7.5 – 13 μm	
Microscope optics (FOV)	10° x 8° (F=1.1) / f= 44 mm	12° x 9° (F=1.1) / f= 44 mm
Minimum spot size	42 μm	28 μm
Working distance	80 – 100 mm	
System accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$, whichever is greater	
Temperature resolution (NETD)	90 mK	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 input, digital input (max. 24 V), 3x 0–10 V output, 3x relay (0–30 V / 400 mA), fail safe relay	
Cable length (USB)	1 m (standard), 5 m, 10 m	
Ambient temperature	0 ... 70 °C	0 ... 50 °C
Storage temperature	-40 ... 70 °C	
Relative humidity	20–80 %, non condensing	
Enclosing ¹⁾ (size / rating)	46 mm x 56 mm x 130 mm / IP 67 (NEMA 4)	
Weight	370 g, incl. lense	
Shock/Vibration ¹⁾	IEC 60068-2	
Tripod mount	1/4 – 20 UNC	
Power supply	via USB	
Emissivity	0.100...1.100	
Software	IR Connect / Windows and Linux SDKs	
Scope of supply (IR camera + Microscope accessory kit)	<ul style="list-style-type: none"> • IR camera (IR 450 or IR 640) • Standard lens (IR 450: O29; IR 640: O33) • Microscope optics (MO44) • Microscope stand • Standard USB cable (1 m) • Standard PIF • Manual IR camera • Rugged outdoor transport case • Software package IR Connect on USB flash drive 	

¹⁾ For more information see operator's manual



Specifications subject to change without notice