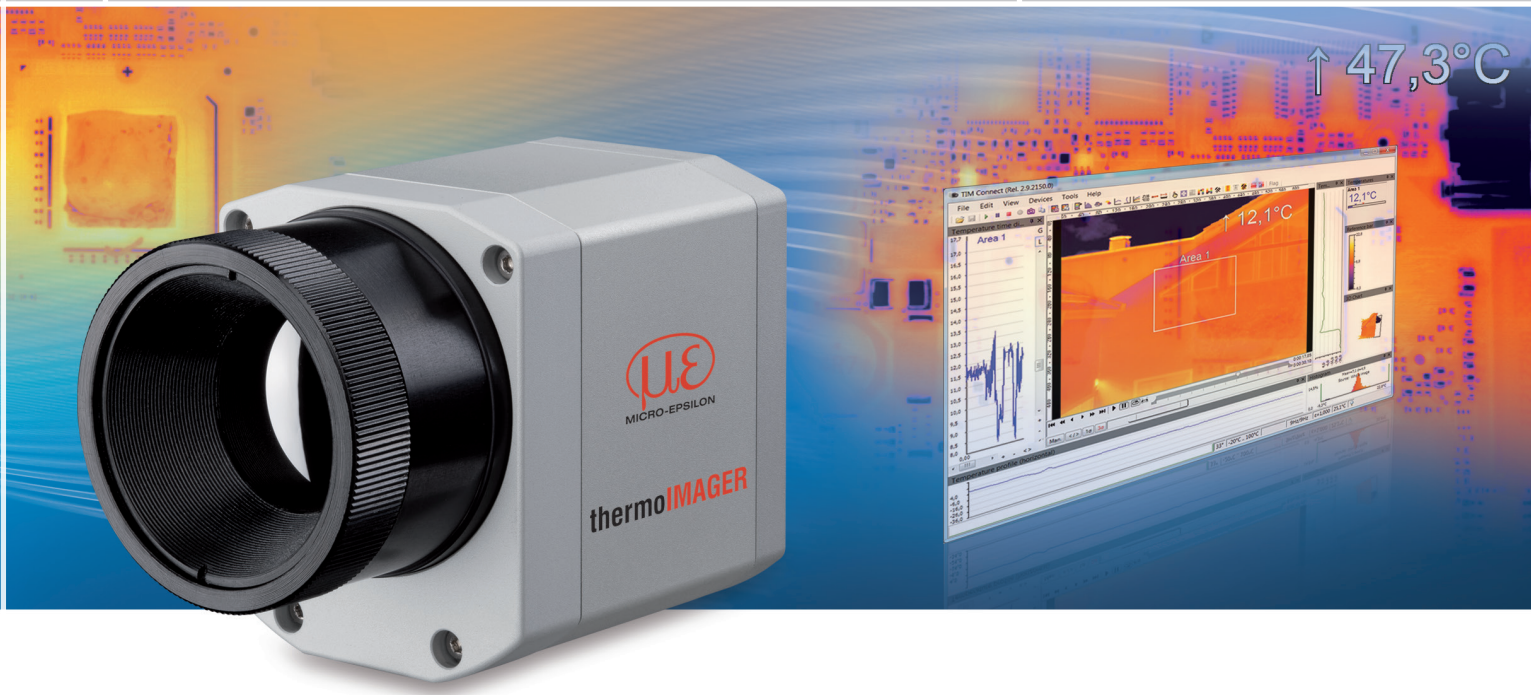




# More Precision

thermo**IMAGER** TIM VGA // Compact thermal imaging cameras





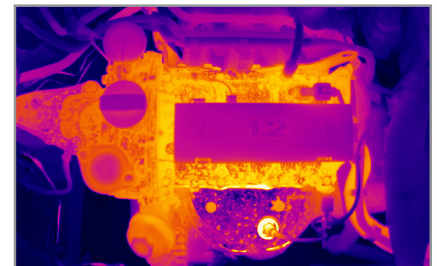
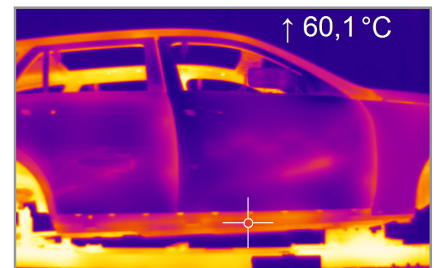
### thermoIMAGER TIM VGA

Miniature infrared camera with VGA resolutions

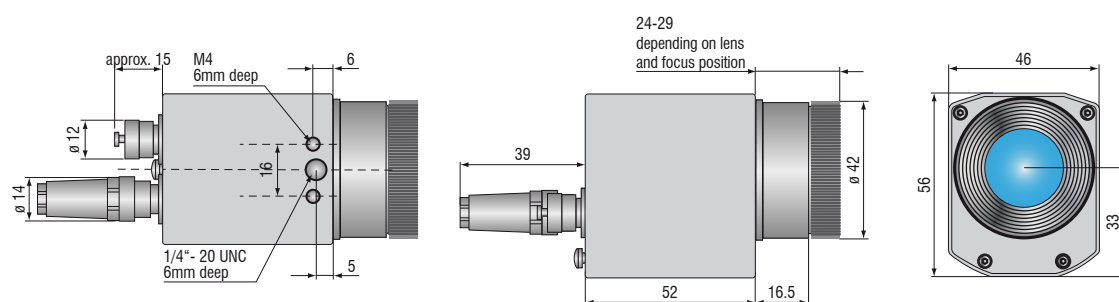
- Thermography in VGA resolution
- 640 x 480 pixels
- Measuring range from -20 °C to 900 °C
- Radiometric video recording with 32 Hz, 125 Hz in the subframe mode (640 x 120 pixels)
- Compact design (46 mm x 56 mm x 76 - 100 mm) with USB interface
- Lightweight (269 - 340 g, incl. lens)
- TIMConnect software delivered with Software Developer Kit

### Software

- Display of the thermal image in real time (32 Hz) with recording function (video, snapshot)
- Complete set up of parameters and remote control of the camera
- Detailed analysis of fast, thermodynamic processes
- Output of analog temperature or alarm values via the process interface
- Digital communication via RS232 or DLL for software integration



Razor-sharp infrared pictures and videos for process optimization, e.g., in the automotive industry



Model	TIM VGA
Optical resolution	640 x 480 pixels
Temperature ranges	-20 ... 100 °C, 0 ... 250 °C, (20) 150 ... 900 °C <sup>1)</sup>
Spectral range	8 to 14 μm
Frame rate	32 Hz / 125 Hz in the subframe mode (640 x 120 pixels)
System accuracy	±2 °C or ±2 %, whichever is greater
Lenses	33° x 25° FOV / f = 18.7 mm or 90° x 64° FOV / f = 7.7 mm
Thermal sensitivity (NETD)	40 mK with 33°, 60° and 90°
Detector	FPA, uncooled (17 μm x 17 μm)
Outputs/digital	USB 2.0 / optional interface USB to GigE (PoE)
Standard process interface (PIF)	0 - 10 V input, digital input (max. 24 V), 0 - 10 V output
Industry process interface (PIF)	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), 5 m, 10 m
Power supply	USB powered
Tripod mount	¼-20 UNC
Protection class	IP67
Ambient temperature	0 ... 50 °C
Storage temperature	-40 ... 70 °C
Relative humidity	20 to 80 %, non-condensing
Vibration	IEC 60068-2-6 (sinus-shaped) / IEC 60068-2-64 (broadband noise)
Shock	IEC 60068-2-27 (25 g and 50 g)
Housing (size)	46 mm x 56 mm x 76 - 100 mm (depending on lens and focus position)
Weight	269 - 340 g

<sup>1)</sup> For the range (20)150 up to 900 °C, the accuracy specification applies from 150 °C

## Scope of supply

### TIM VGA

- TIM process camera  
incl. a selectable lens
- Operating instructions
- USB cable 1 m
- Software for real-time processing  
and analyzing thermal images
- Tripod mount
- PIF cable incl. terminal block (1 m)
- Transport case
- Test certificate

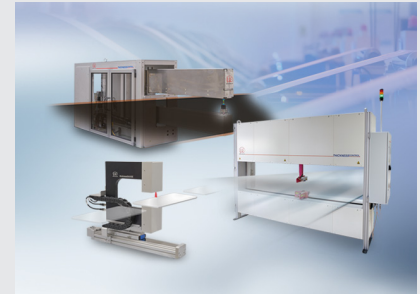
## Sensors and Systems from Micro-Epsilon



Sensors and systems for displacement, distance and position



Sensors and measurement devices for non-contact temperature measurement



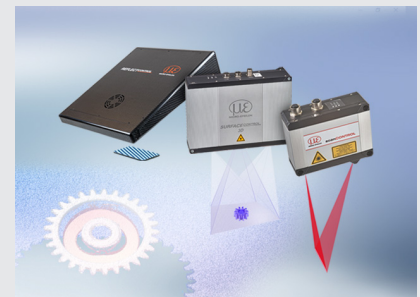
Measuring and inspection systems for metal strips, plastics and rubber



Optical micrometers and fiber optics, measuring and test amplifiers



Color recognition sensors, LED analyzers and inline color spectrometers



3D measurement technology for dimensional testing and surface inspection