

PSC-Ti80LT / PSC-Ti41LT

INDUSTRIAL THERMAL IMAGING CAMERA SERIES

OVERVIEW

The PSC-Ti80LT and PSC-Ti41LT are industrial imagers providing accurate temperature measurement from -20 °C to 1500 °C (-4 °F to 2732 °F). Their standalone operation with automatic hot spot finder and direct analog and digital RS485 outputs make them ideal for a multitude of manufacturing process applications.

Offering a variety of lenses to match the observation area with high resolution distance-to-spot-ratio of up to 190:1 (PSC-Ti80LT) and 390:1 (PSC-Ti41LT), enables these cost effective cameras to be applied to most non-contact temperature sensing applications. The PSC-Ti80LT thermal imaging camera provides a 50 Hz frame rate when interfacing to a PC via USB or Ethernet connection, while the PSC-Ti41LT operates at a 25 Hz frame rate via ethernet for monitoring faster thermal processes, and in autonomous mode, provides a 1.5 Hz frame rate.

The compact size and rugged stainless steel camera housing makes it ideal for OEM requirements. Each camera variety comes standard with free nonlicensed PSC-Camera Connect software and connection cables.

APPLICATIONS

- Painted/coated metals
- Paper and packaging
- Building materials
- Ovens
- Dryers
- Plastics
- Composites
- Wood
- Minerals
- Ceramics
- Textiles
- Rubber
- Gypsum board
- Glass



PSC-Ti80LT & PSC-Ti41LT FEATURES

- Wide temperature ranges:
 - PSC-Ti80LT: -20 °C to 900 °C (-4 °F to 1652 °F)
 - PSC-Ti41LT: -20 °C to 900 °C (-4 °F to 1652 °F)
 - Optional: 200 °C to 1500 °C (392 °F to 2732 °F)
- Stand-alone operation
- 4-20 mA output for process control
- Direct Ethernet/USB connection
- Narrow and wide angle lenses
- Compact size for OEMs
- Rugged stainless steel housing
- Intuitive user-friendly software
- Automatic hot/cold spot finder
- Protective cooling and air purging

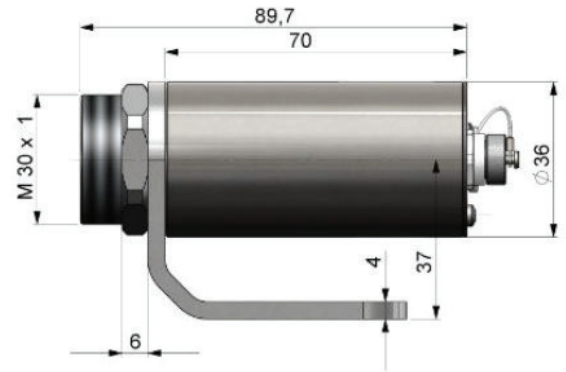


PSC-Ti80LT / PSC-Ti41LT

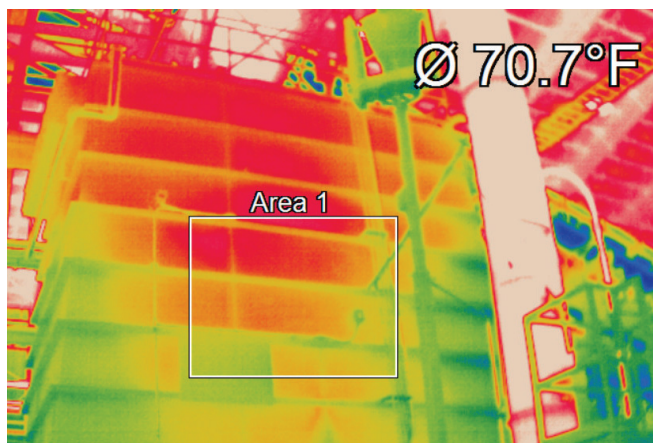
TECHNICAL DATA: PSC-Ti80LT

Optical Resolution	80 x 80 pixels
Detector	FPA, uncooled (34 μ m x 34 μ m)
Spectral Range	8 – 14 μ m
Temperature Ranges (3) User Selectable	-20 °C - 100 °C (-4 °F- 212 °F) 0 °C - 250 °C (32 °F - 482 °F) 150 °C - 900 °C ¹ (302 °F- 1652 °F) ¹
Frame Rate	50 Hz
Optics (FOV)	12° x 12° 30° x 30° 55° x 55° 80° x 80°
Focus	Motorized via software
Optical Resolution D:S	190:1 (12° optics)
Thermal Sensitivity (NETD)	100 mK / 0.1 °C
Accuracy	\pm 2 %
PC Interface	USB 2.0 / Ethernet (100 Mbit/s) / PoE / RS 485
Direct Output/Input	1x analog output (0/4-20 mA) / 1x input (analog or digital); optically isolated
Process Interface (PIF), Industrial	3x analog outputs (0/4–20 mA or 0–10 V) or alarm OUT (relais) / 3x inputs (analog or digital) / fail-safe (LED and relay); stackable up to 3 PIFs; optically isolated
Cable Length (USB)	USB: 1 m (3.3 ft) (standard), 3 m (9.8 ft), 5 m (16.4 ft), 10 m (32.8 ft), 20 m (65.6 ft) Ethernet: 100 m (328.1 ft) / RS485
Ambient Temperature	0 °C to 50 °C (32 °F to 122 °F)
Enclosure (Size/Rating)	\varnothing 36 mm x 90 mm (\varnothing 1.42 in. x 3.54 in.) (M30x1 thread) / IP 67 (NEMA 4)
Weight	201 - 210 g (7 - 7.5 oz)
Shock/Vibration ²	IEC 60068-2-27 (25G and 50G) / IEC60068-2-6 / IEC60068-2-64 (broadband noise)
Power Supply	USB / PoE / 8–30 VDC
Scope of Delivery	<ul style="list-style-type: none"> • PSC-Ti80LT • Cable for output/input (1 m) incl. terminal block • Mounting bracket with nut • Software package PSC-Camera Connect

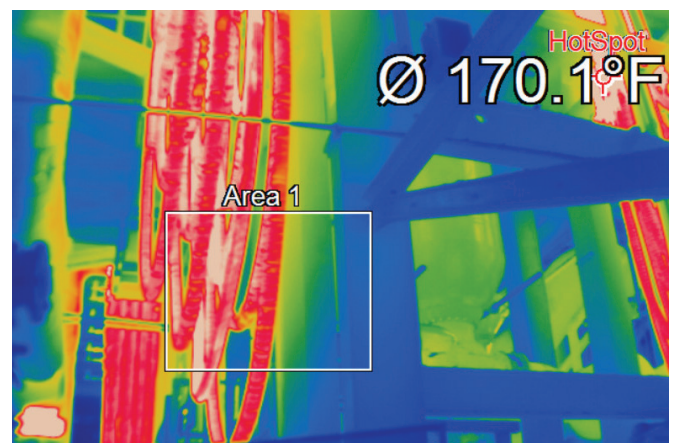
DIMENSIONS (IN MM)



¹Accuracy statement effective from 150 °C; ²For more details see operator's manual



Melting bin - OSB plant



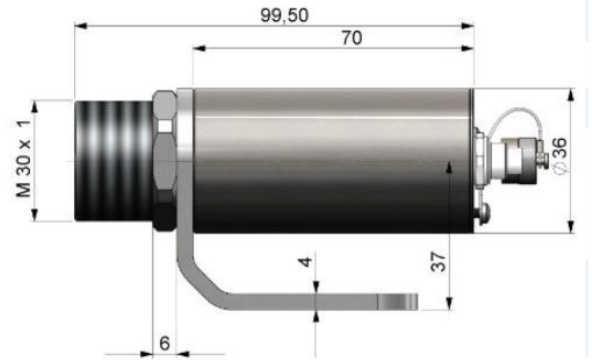
Thermal hoses - OSB plant

PSC-Ti80LT / PSC-Ti41LT

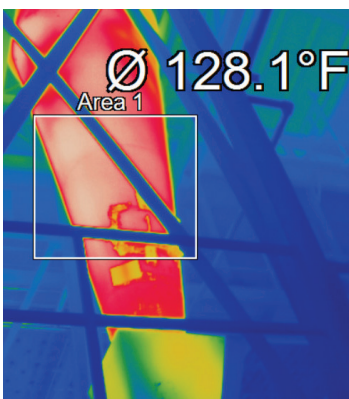
TECHNICAL DATA: PSC-Ti41LT

Optical Resolution	384 x 240 pixels
Detector	FPA, uncooled (17 µm pitch)
Spectral Range	8 – 14 µm
Temperature Ranges (3) User Selectable	-20 °C - 100 °C (-4 °F- 212 °F) ¹ 0 °C - 250 °C (32 °F - 482 °F) 150 °C - 900 °C ¹ (302 °F- 1652 °F) Optional: 200 - 1500 °C (392 °F to 2732 °F) ³
Frame Rate	Ethernet: 384 x 240 pixels @ 25 Hz USB: 384 x 240 pixels @ 4 Hz Autonomous operation: 384 x 240 pixels @ 1.5 Hz
Optics (FOV)	18° x 12° 29° x 18° 53° x 31° 80° x 44°
Focus	Motorized via software
Optical Resolution D:S	390:1 (18° optics)
Thermal Sensitivity (NETD)	80 mK / 0.08 °C
Accuracy	± 2 %
PC Interface	Fast Ethernet / USB 2.0 / PoE / RS485 ²
Direct Output/Input	1x analog output (0/4-20 mA) / 1x input (analog or digital); electrically isolated
Process Interface (PIF), Industrial	3x analog outputs (0/4–20 mA or 0–10 V) and 3x alarm outputs (relais) / 3x inputs (analog or digital) / fail-safe (LED and relay) stackable up to 3 PIFs; electrically isolated
Cable Length (USB)	Ethernet: 1 m (standard), 5 m, 10 m, 20 m (up to 100 m); USB: 1 m, 3 m, 5 m
Ambient Temperature	0 °C - 50 °C (32 °F to 122 °F)
Enclosure (Size/Rating)	Ø 36 mm x 100 mm (M30x1 thread) / IP 67 (NEMA 4)
Weight	216 - 220 g, depending on lens
Shock/Vibration ³	IEC 60068-2-27 (25G and 50G) / IEC 60068-2-6, IEC 60068-2-64 (broadband noise)
Power Supply	8 - 30 V DC / PoE / USB
Scope of Delivery	<ul style="list-style-type: none"> • PSC-Ti410LT • Ethernet/ PoE cable (1 m)/ USB cable (1 m) • IN/OUT cable incl. terminal block (1 m) • Mounting bracket with tripod thread, mounting nut • Software package PSC-Camera Connect

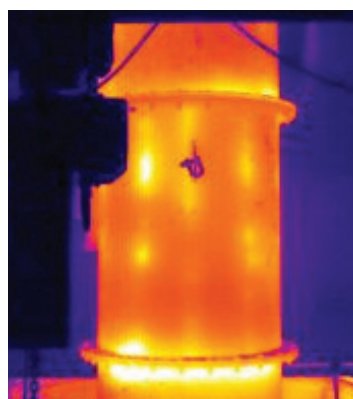
DIMENSIONS (IN MM)



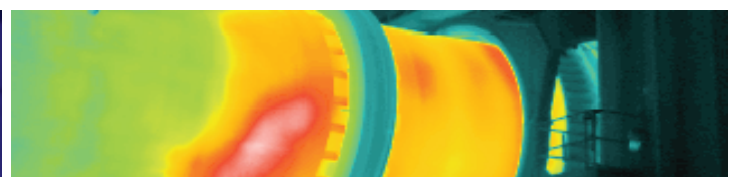
¹Accuracy statement effective from 150 °C; ²Direct out- and inputs are not available while using the RS485 interface; ³If this option is ordered the 150 - 900 °C range is not available



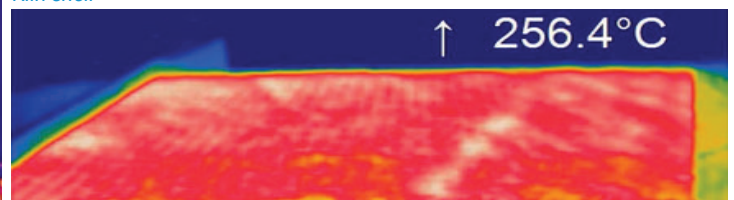
Feeder pipes - OSB plant



Vessel



Kiln shell



Cereal on a conveyor

PSC CAMERA CONNECT SOFTWARE

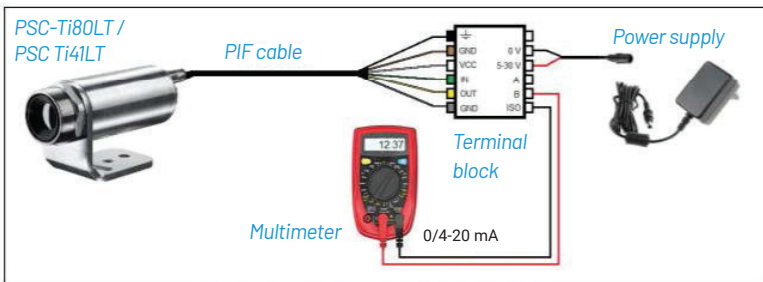
Extensive infrared camera software

- No additional costs
- No software licensing required
- Modern software with intuitive user interface
- Remote control of camera
- Display images in multiple windows
- Compatible with Windows 8, 10, 11, and Linux
- Extensive license-free analysis and complete SDK inclusive
- Various color pallets to highlight thermal contrasts

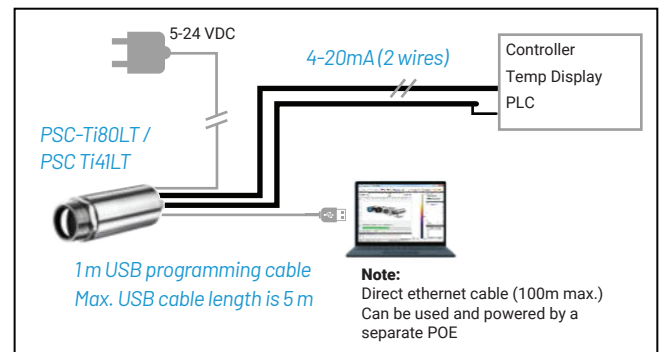
Extensive online and offline data analysis

- Real-time temperature information within main window as digital or graphic display
- Analysis supported by measurement fields, automatic hot and cold spot searching
- Logic operation of temperature information (measurement fields and image subtraction)
- Slow motion repeat of radiometric files and analysis without camera connection
- Editing of sequences such as cutting and saving of individual images

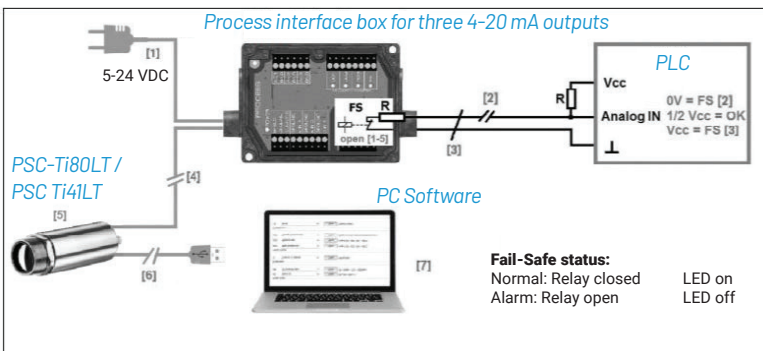
WIRING DIAGRAMS Configurations and process interface (PIF) with multiple outputs for process control.



Electrical Installation for Autonomous Operation



Connection to PC via USB



Optional PIF Box with Multiple Outputs



Rear Panel of Camera



PSC-Ti Thermal Imager Camera Series outdoor enclosure with heater, fan and IR window



Outdoor camera enclosure with air purge