PSC-640-79

HIGH RESOLUTION THERMAL IMAGING CAMERA FOR THE GLASS & PLASTICS INDUSTRY

PROCESS SENSORS CORPORATION
a KPM brand

OVERVIEW

The compact, high-resolution PSC-640-79 thermal imaging camera is radiometric and offers line scanning capability designed to continuously monitor thousands of temperature points or user selectable areas of interest for ultra-thin glass production. Measuring temperature ranges start from 150°C to 1500°C (302°F to 2732°F), with calibration extending the range up to 3000°C (5432°F).

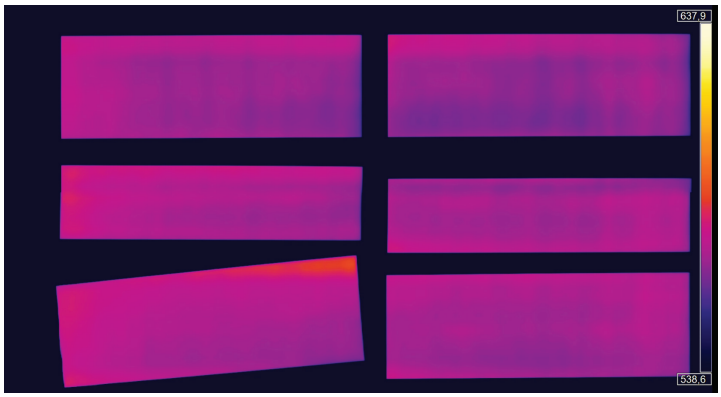
This camera system can be remotely triggered to respond to fast occurring events (8ms), initiating alarms, outputs or capturing and recording data to a network for later retrieval and analysis. Focusable interchangeable lenses further enhance the camera's spatial adaptability. Installation and set-up is quick, with free licensed PC camera connect software which records and graphs based on user selectable parameters.

APPLICATIONS FOR ULTRA-THIN GLASS AND PLASTICS

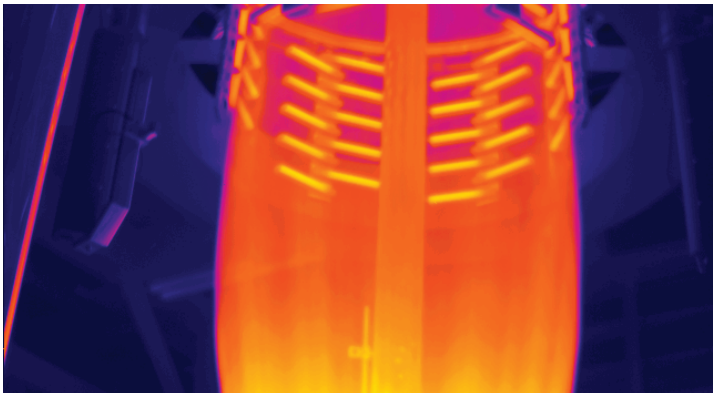
- Curved panel OLED displays
- Semiconductor glass wafers
- Touch panel displays
- Light bulbs
- Smart phone screens (including foldable)
- Large flat panel displays
- Blow molding
- Thin plastic webs
- PTFE and polymide film extrusion
- Photovoltiac PV modules

PSC-640-79 FEATURES

- Thermal Imaging with 34,133 points of actual temperature measurement (3 x 3 pixels)
- Line scan function
- License-free analysis software
- Compact in size: 46 x 56 x 76 – 100 mm
- Frame rate of up to 125 Hz
- Max. scan angle of 145º with 800 pixels per line



Line scan



Blow molding temperature image

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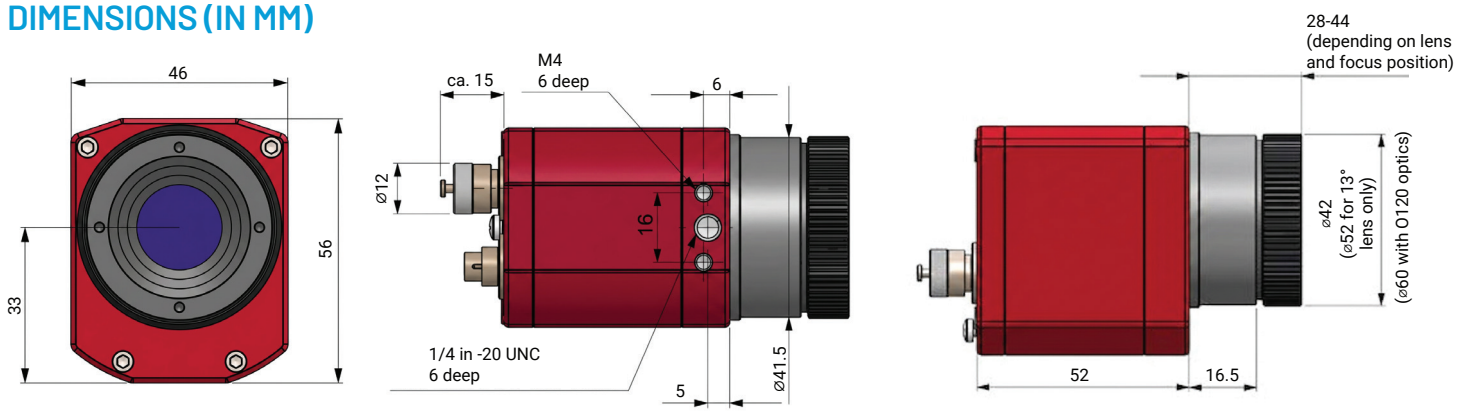
TECHNICAL SPECIFICATIONS

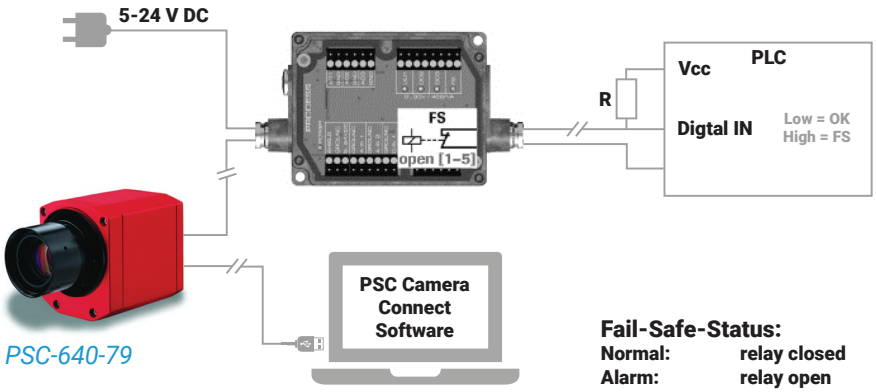
Optical Resolution	640 x 480 pixels
Detector	FPA, uncooled (17 µm x 17 µm)
Spectral Range	7.9 µm
Measurement Ranges	150°C to 1500°C (392°F to 2732°F) (optional 200°C to 3000°C (392°F to 5432°F))
Sighting Range	0°C to 250°C (32°F to 483°F) - only for sighting purposes
Thermal Imaging Frame Rate	32 Hz / 125 Hz @ 640 x 120 pixels
Optics (FOV)	33° x 25° (f = 18.7 mm) / 15° x 11° (f = 41.5 mm) / 60° x 45° (f = 10.5 mm) / 90° x 64° (f = 7.7 mm) / 120° x 100° (f = 3.5 mm) / max. FOV: 145° / 800 pixels (diagonal scan line / 120° lens)
Thermal sensitivity (NETD) at T_{obj} = 650 ºC	80mK
Accuracy	±2% of measured value
PC Interface	USB 2.0 / optional USB to GigE (PoE) interface
Process Interface Standard (PIF), Standard	2x 0-10 V input, 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, 20 m
Ambient Temperature	0°C to 70°C (32°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Relative Humidity	20-80% non-condensing
Housing Size / Rating	46 x 56 x 76 – 100 mm (depending on lens + focus position) / IP67 (NEMA 4)
Weight	269 – 300 g (depending on lens) (0.59 – 0.66 lbs.)
Tripod Mount	¼ - 20 UNC
Power Requirement	via USB
Scope of Supply	USB camera with 1 lens, USB cable (1 m), table tripod, PIF cable (1 m) including terminal block, PSC Camera Connect software, rugged outdoor carrying case (IP67)

DIMENSIONS (IN MM)



WIRING DIAGRAMS

Process Interface (PIF) with Three 4-20mA outputs and Three relays



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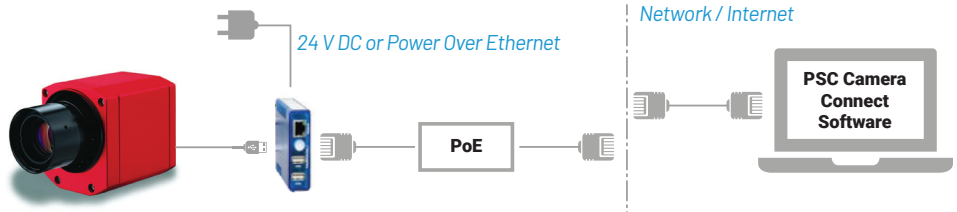
Fail-Safe-Status:

Normal:	**relay closed**	**LED on**
Alarm:	**relay open**	**LED off**

Process Interface Box

- Provides multiple outputs
- 3 analog / alarm outputs
- 2 analog inputs
- 1 digital input
- 3 alarm relays
- 1 fail-safe relay

USB SERVER GIGABIT



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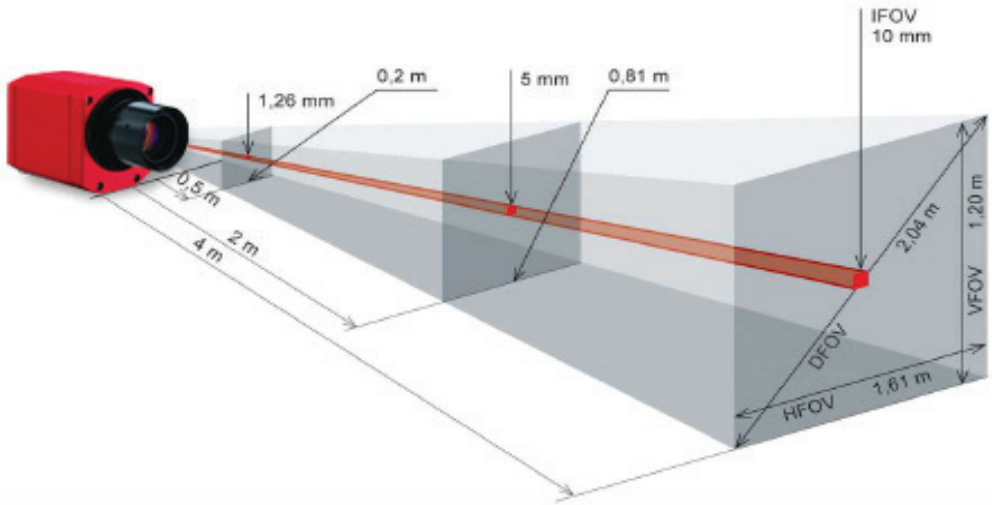
USB Server Gigabit 2.0 / USB to Ethernet Connection

- Network connection via Gigabit Ethernet
- Full TCP / IP support inc. routing and DNS
- Two independent USB ports
- Power over PoE or external voltage supply at 24 – 48 V DC
- Remotely configurable via web-based management



Measurement field of the Surveyor Series Thermal Imaging Camera representing 23 degree x 17 degree lens.

IFOV = Instaneous Field of View - Single Pixel Size
MFOV = Measurement Spot Size within Field of View

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