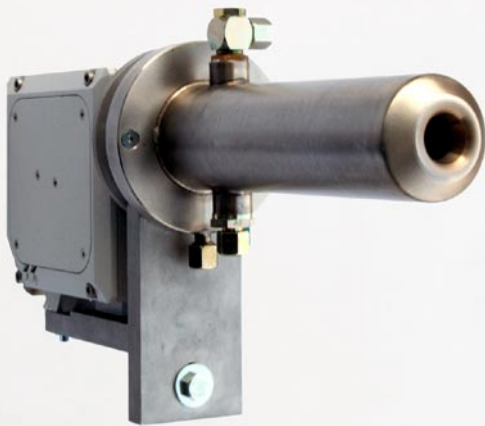


# PYROINC 320

## Infrared 2D Camera with Furnace Probe



### Features

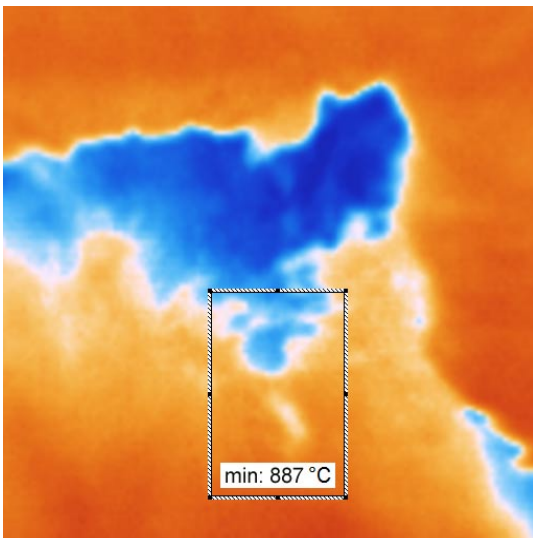
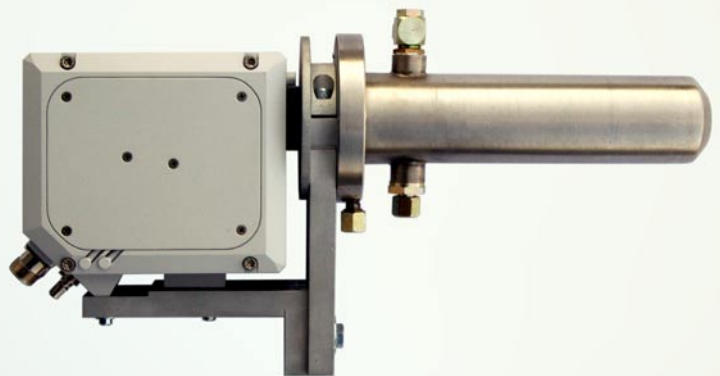
- Temperature measurement range 600 °C to 1500 °C
- Measurement frequency 50 frames per second
- Uncooled microbolometer with 320 × 240 pixels
- Furnace probe lens with air purge and water-cooling system for combustion chambers
- Lenses with different probe lengths and various fields of view, optional with inclination
- Robust housing (IP 65) with optional water-cooling system
- Real-time data acquisition via Fast Ethernet
- Triggered measurements, Alarm and threshold monitoring
- Large dynamic range and 16 bit A/D converter
- Customized system solutions with automatic retract and rotation units, control cabinet for monitoring of cooling media and purging air, modified software

### Applications

PYROINC 320 cameras provide non-contact measurement of temperature in combustion chambers or furnaces.

Different spectral ranges are designed for measurements through flames (3.9  $\mu\text{m}$ ) or measurements on different materials like glass (4.8  $\mu\text{m}$  to 5.2  $\mu\text{m}$ ) or metal (3  $\mu\text{m}$  to 5  $\mu\text{m}$ ).

Typical applications for the camera include thermal process optimization and the slag and deposit detection.



### Software

The powerful online software PYROSOFT for Windows® allows you to control the camera and record, view, manipulate and store the measured data. Specific features are:

- Real-time data recording
- Definition of zones and monitoring of alarm thresholds
- Analysis of trends
- Data export (text, bitmap, video)
- Process control via PROFIBUS, analog and digital inputs, outputs, and other interfaces

A programming interface (Windows®-DLL) is available for system integration.

# PYROINC 320

## Infrared 2D Camera with Furnace Probe

Model	Spectral Range <sup>1</sup>	Temperature Measurement Range <sup>1</sup>
PYROINC 320M	3 $\mu\text{m}$ to 5 $\mu\text{m}$	range 1: 100 °C to 300 °C, range 2: 200 °C to 500 °C
PYROINC 320G	4.8 $\mu\text{m}$ to 5.2 $\mu\text{m}$	range 1: 200 °C to 500 °C, range 2: 400 °C to 1250 °C
PYROINC 320F	3.9 $\mu\text{m}$	600 °C to 1250 °C

### Furnace Probe Lens with Cooling Jacket<sup>1</sup>

FOV (diameter, free length)

28° × 21° (∅ 70 mm, 200 mm), 43° × 33° (∅ 70 mm, 200 mm), 67° × 52° (∅ 89 mm, 430 mm),  
61° × 48° (∅ 104 mm, 900 mm, with inclination 60° to the left), 48° × 61° (∅ 104 mm, 900 mm, with inclination 60° downward)

### Measurement Uncertainty<sup>2</sup>

2 % of the measured value in °C

### Measurement Frequency

internal 50 Hz, selectable: 50 Hz, 25 Hz, 12.5 Hz, ...

### Response Time

internal 40 ms, selectable: 2/measurement frequency

### Interfaces

Fast Ethernet, optional fibre optics  
electrically isolated digital inputs (trigger) or digital outputs (alarm)

### Camera Housing

Protection to IP 65 Standard. Options include integrated water cooling system and air purge.

### Camera Operating Temperature Range

0 °C to 50 °C (without water-cooling), -25 °C to 150 °C (with water-cooling)

### Storage Conditions

-20 °C to 70 °C, rel. humidity 95 % max

### Accessories (optional)

Traversing unit for camera with furnace optics, boiler auto-closure device, rotation unit, control and supply cabinet

### Software

Control and imaging software PYROSOFT for Windows®, customized modifications on request

<sup>1</sup> Other available. <sup>2</sup> Specification for black body reference and ambient temperature 25 °C. Technical details are subject to change without notice. April 2008.

