AST ★ Accurate Sensors Technologies

Highly Accurate On-Line Infrared Non-Contact Pyrometer in Two Wire Technology

CE **250°C to 2500°C**

• T3-250 PL • T3-450 PL

T3-250 PL and **T3-450 PL** are specially designed IR Pyrometers of T3 Series family for non contact temperature measurement in demanding industrial environments. The Pyrometers are highly accurate and compact by nature with stainless steel housing to provide high operational safety for harsh industrial environments. The Pyrometers are designed for high temperature applications between 250°C….2500°C.

The parameters like Emissivity can be adjusted directly at device. Other parameter like Analog Sub Range, Response Time, Peak Picker, Valley Picker etc. can be preset ex-works or adjustable via Software Infrasoft. T3 Series is provided with TTL output. Using the USB interface *Infralink* and Software pyrometer can be connected to PC for parameter setting and data logging.

Technical specifications

Model	T3-250 PL	T3-450 PL
Temperature Range (Analog sub-range adjustable)	250°C….1000°C 300°C….1300°C 350°C….2500°C	600°C….2500°C
Spectral Range	1.6 µm	1.0 µm
Photodetector Type	InGaAs	Si
Distance to Spot Size Ratio	50:1 (250°C….1000°C) 100:1 (300°C….1300°C) 200:1 (350°C….2500°C)	200:1 (600°C….2500°C)
Emissivity (ε)	0.1….1.0 adjustable at device	
Response Time	10 msec adjustable upto 10 sec	
Accuracy	± 0.3% of the measured value + 1°C	
Repeatability	0.1% of reading in °C + 1°C	
Sighting Options	Laser Pilot Light (PL)	
Analog Output	2 wire….4-20mA, Load Independent Current, Linear Temperature Output Load : Max 500Ω at 24V DC, Max 200Ω at 18V DC	
Digital Output	TTL	
Operating Temp. Range	0°C…….70°C 0°C…..200°C (With water cooling jacket)	
Storage Temp. Range	-20°C…70°C	
Adjustable Parameters and Features via Software	Emissivity, Response Time, Analog Scale (Sub Range), Unit of Temperature (°C/°F), Peak Picker, Valley Picker	
Power Supply	24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA)	
Power Consumption	For Laser Targeting Max 0.65 watt For Device Max 0.6 watt	
Laser Power	<1 m watt	
Protection Class	IP65	
Housing	Stainless Steel	
Operating Humidity	10-95%, Non-Condensing Conditions	
Weight & Dimensions	250g Dia=Ø40mm; Length=113.5mm	

Features

- Two wire technology for easy electrical connection
- Wide temperature range 250°C….2500°C
- Spectral range 1.0 µm….1.6 µm
- Laser Light for precison targeting of the measuring object
- 10 ms response time adjustable upto 10 sec
- Analog output 2 wire….4-20 mA
- Digital TTL output & Infrasoft software
- Small spot sizes
- Emissivity can be adjusted directly at device
- Accessories for mounting and cooling options

Standard Scope of Supply

- Pyrometer with 3 mtr. long connection cable
- Analog output 2 wire….4-20 mA
- Emissivity adjustable switch
- TTL output
- Calibration certificate, Operation manual

Optional

- Extra cable lengths
- Mechanical and Electrical Accessories
- USB Interface card & PC Software

Applications

- Induction Heating
- Casting
- Annealing
- Welding
- Forging
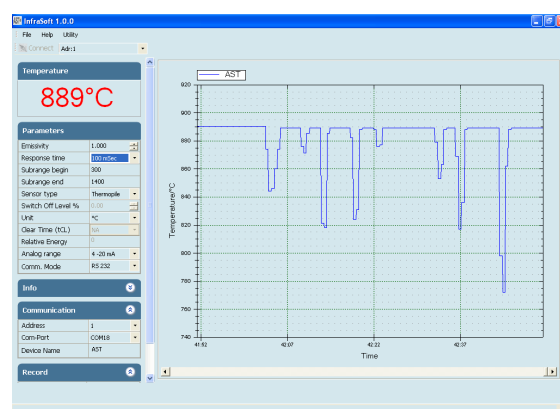- Sintering
- Melting
- Rolling Mills
- Hardening

We measure accurate temperature in extreme conditions

Spot Sizes

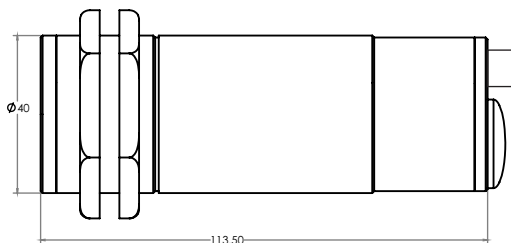| Manufactured working distances WD (mm)	Spot Sizes(mm)			
	T3-250 250°C - 1000°C (50:1)	T3-250 300°C - 1300°C (100:1)	T3-250 350°C - 2500°C (200:1)	T3-450 600°C - 2500°C (200:1)
350	7	3.5	1.75	1.75
500	10	5	2.5	2.5
700	14	7	3.5	3.5
800	16	8	4	4
1000	20	10	5	5
1500	30	15	7.5	7.5
2000	40	20	10	10
2500	50	25	12.5	12.5
3000	60	30	15	15
5000	100	50	25	25
Aperture (A)	11	11	11	12

Software "Infrasoft"

AST "Infrasoft " software is provided with Infralink USB Interface accessory. It offers parameter setting, view real time graph, offline graph and to evaluate measuring data. Communication between the pyrometer and the software is implemented via USB dongle. It comes with record feature, spot size calculator and parameter settings features.

Some of the parameters adjustable via software are

- Response Time
- Picker
  - Peak
  - Valley
- Sub Range
- Unit of Temperature (°C/°F)

USB Interface

Pyrometer Drawing

Accessories

Power Supply Unit (Reference no: 9000-02)	Temperature Indicator (Reference no: 9000-01)

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