



## • A250+ • A450+

On-line Single Color Infrared Focusable Non-contact Pyrometers

## • A250+ • A450+

210°C to 3000°C

### Features

- Wide temperature ranges from 210°C to 3000°C
- Focusable Optics
- Fast Response Time
- Spectral range 1.0 μm....1.6 μm
- Integrated OLED Display & Parameterizing Keys
- Laser targeting, Through The lens view finder and video sighting options are available
- Analog output options 0...20mA, 4...20mA
- RS-485 Serial interface
- User friendly PC software for communication
- Green LED for pyrometer status indication
- Red LED for Laser ON/OFF indication (PL)

### Standard Scope of Supply

- Pyrometer with Focusable optics, OLED Display & Parameterizing Keys
- Laser pilot light(PL)/Through the lens(TL) sighting / Video (user can select while ordering)
- Analog output 4...20mA, 0..20mA
- Digital Interface RS-485
- 5 mtr long connection cable with connector
- Calibration certificate, Software & Operation manual

### Optional

- Mechanical & Electrical Accessories
- Extra Cable Lengths

### Applications

- Preheating
- Annealing
- Tempering
- Welding
- Forging
- Hardening
- Melting
- Sintering
- Soldering
- Rolling
- Brazing
- Normalizing

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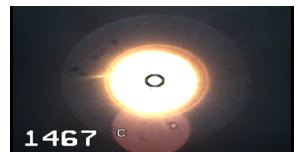
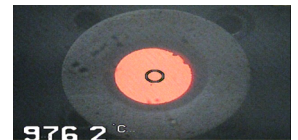
A250+ and 450+ is a highly accurate digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments.

The IR pyrometer parameters can be selected via the key pads on the back panel. The settings are displayed on the OLED Display. In the measuring mode real time temperature is displayed. In Pyrometers with video module real time colour video, measuring temperature and emissivity is displayed on the television screen. A250+ and 450+ have focusable optics for optimal match of the instrument for various applications. The pyrometers are equipped with RS-485; analog outputs 0/4....20. Switching laser ON/OFF does not effect the measurement.

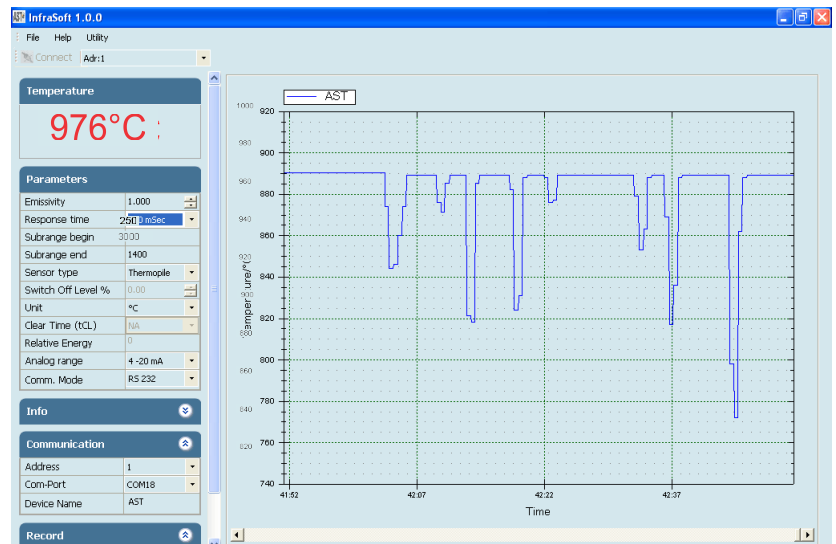
### Software "Infrasoft"

Tempsens "Infrasoft" software is under standard scope of supply. It offers possibilities of connecting three pyrometers simultaneously for parameter setting, view real time graph, offline graph and to evaluate measuring data. Communication between the pyrometer and the software is implemented via a cable connected between the pyrometer and the PC serial port. It comes with record feature, spot size calculator and parameter settings features. Some of the parameters adjustable via software are

- Emissivity, Response Time
- Clear Time(Peak Picker)
- Analog Output
- Sub Range
- Unit of Temperature(°C/°F)
- Communication mode (Comm. mode)



Example Video Image



We measure accurate temperature in extreme conditions

## Technical Specifications

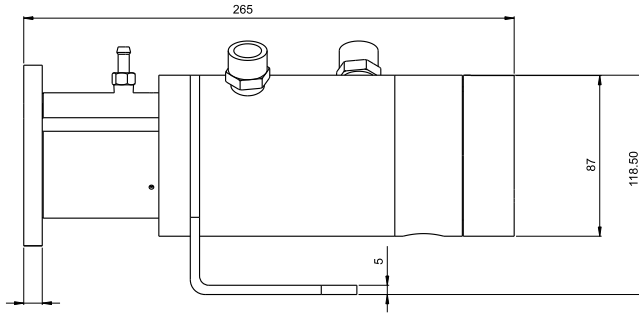
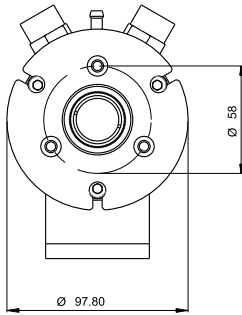
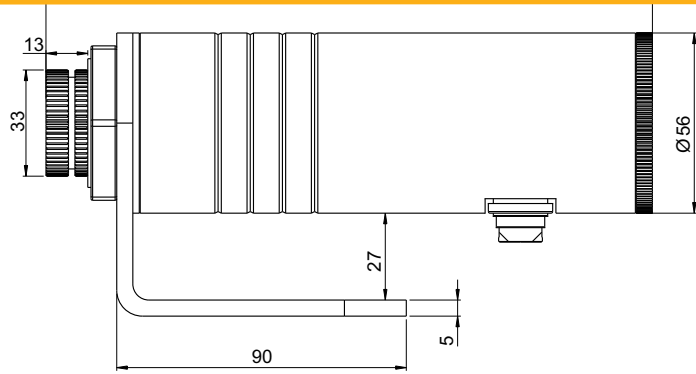
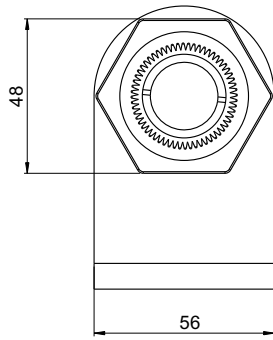
Model	A250+	A450+
Temperature Range (Analog sub-range adjustable)	210°C - 1350°C 250°C - 1800°C 300°C - 2500°C 350°C - 3000°C	600°C - 2500°C
Spectral Range	1.6 µm	1.0 µm
Photodetector Type	InGaAs	Si
Distance to Spot Size Ratio	75:1 (210°C - 1350°C) 150:1 (250°C - 1800°C) 300:1 (300°C - 2500°C) 300:1 (350°C - 3000°C)	300:1 (600°C - 2500°C)
Emissivity (ε)	0.1....1.0 adjustable	
Response Time	2 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), Through The Lens (TL) & Video Module	
Analog Output	0-20mA, 4-20mA (User selectable)	
Digital Output	RS-485	
Operating Temp. Range	0°C.....70°C	
Storage Temp. Range	-20°C...70°C	
Adjustable Parameters and Features via Software and Android app	Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (Sub range), Unit Of Temperature(°C/°F), Communication mode (Comm.mode), Record feature, Relay set point & hysteresis, etc.	
Adjustable Parameters and Features via Keypad	Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (Sub range), Unit Of Temperature(°C/°F), Communication mode (Comm. mode), Relay set point & hysteresis, address, etc.	
Relay output	One Relay output with hysteresis 60V DC / 42 AC RMS, 0.4 A	
Power Supply	12V to 28V DC with reverse voltage protection	
Power Consumption	Max 4.0 watt	
Laser Power	<1 m watt (only PL model)	
Protection Class	Ip65	
Housing	Stainless Steel	
Isolation	Power supply,Digital output and Analog output are galvanically isolated against each other	
Operating Humidity	10-95%, Non-Condensing Conditions	
Weight & Dimensions	1200g Dia= Ø 56mm; Length=188.5mm	

## Spot Sizes

Spot Sizes(mm)						
Focused Working Distances WD (mm)	Length L	A250+ 210°C - 1350°C (75:1)	A250+ 250°C - 1800°C (150:1)	A250+ 300°C - 2500°C 350°C - 3000°C (300:1)	Length L	A450+ 600°C - 2500°C (300:1)
500	13.20	6.70	3.40	1.70	12.70	1.70
700	8.70	9.40	4.70	2.40	8.50	2.40
1000	5.70	13.40	6.70	3.40	5.50	3.40
2000	2.40	26.70	13.40	6.70	2.30	6.70
5000	0.50	66.70	33.40	16.70	0.50	16.70
9000	0	120.00	60.00	30.00	0	30.00

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# Pyrometer & Cooling Jacket Drawing



## Accessories

**Mounting Clamp (Pyrometer)**  
(Reference no: 8500-04)



**Air Purge**  
(Reference no: 8500-05)



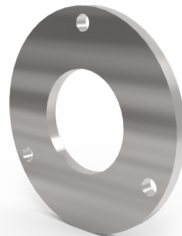
**Mounting Clamp (Water Cooling Jacket)**  
(Reference no: 8500-06)



**Mounting Flange**  
(Reference no: 8500-07)



**Mounting Plate**  
(Reference no: 8500-08)



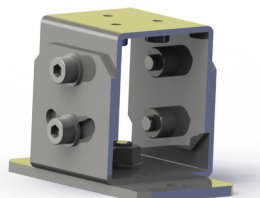
**Water Cooling Jacket**  
(Reference no: 8500-09)



**Temperature Indicator**  
(Reference no: 9000-01)



**Adjustable Mounting Stand**  
(Reference no: 8000-07)



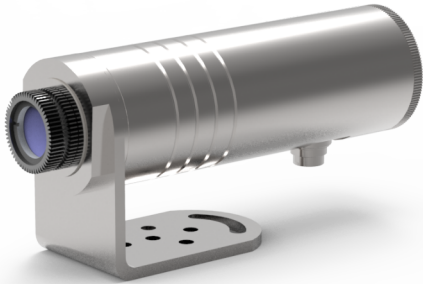
**Power supply Input 110/230V AC**  
Reference No. 9000 - 02  
Output 24 V DC, 0.7Amp.



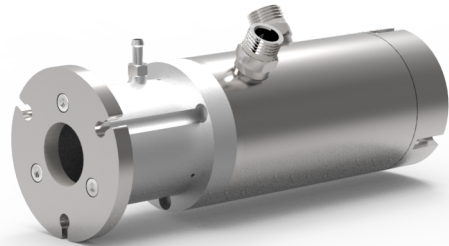
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## Assembly Options

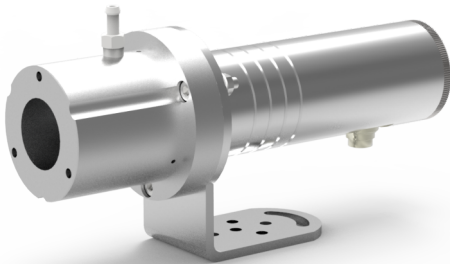
**Pyrometer with Mounting Clamp (8500-04)**



**Pyrometer with Mounting Flange (8500-07) + Air Purge (8500-05) + Water Cooling Jacket (8500-09)**



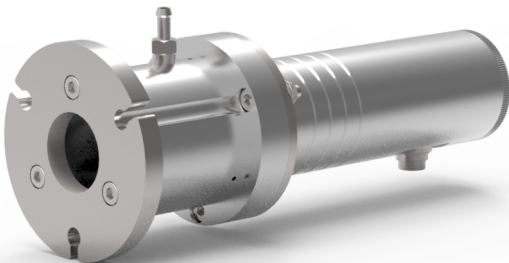
**Pyrometer with Air Purge (8500-05) + Mounting Clamp (8500-06)**



**Pyrometer with Water Cooling Jacket (8500-09) + Mounting Clamp (8500-06)**



**Pyrometer with Mounting Flange (8500-07) + Air Purge (8500-05)**



**Pyrometer with Air Purge (8500-05) + Water Cooling Jacket (8500-09) + Mounting Clamp (Water Cooling Jacket) (8500-06)**

