

Highly Accurate Digital two color Pyrometer with Extended Sensor Head, Laser Light, Inbuilt LCD & Keypad for Parameterization

800°C to 2500°C

E450C PL

E450C PL is a two color pyrometer from economic series. The Pyrometer model is a two piece measurement system containing one extended sensor head and one electronic box for non-contact temperature measurement of metals, ceramics and graphite etc. in a temperature range between 800°C to 2500°C.

This device measures the temperature of an object by calculating the ratio of the energies at two different wavelength bands. The ratio technique eliminates and reduces errors in temperature measurement caused by changes in Emissivity, Surface finish and energy absorbing materials such as Water vapour etc. The sensor head is unaffected by electromagnetic interferences.

The Pyrometer is equipped with a Inbuilt 4 digit LCD display which offers many signal processing features. The electronic box with integrated Keypad helps in setting parameters like Emissivity, Analog Sub range, Set point, Hysteresis (Hyst), Analog Output, Unit of temp (°C or F), Response Time, Peak Picker and Sensor address etc.

Technical specifications

Model	E450C PL
Temperature Range (Analog sub-range adjustable)	800°C....2500°C
Spectral Range	0.7...1.15 μm
Photodetector Type	Si/Si
Distance to Spot Size Ratio	80:1
Emissivity (ε)	0.1...1.0 adjustable (Single Color mode)
Emissivity Slope (ε1 / ε2)	0.75...1.25 slope adjustable (Two color mode)
Response Time	20 msec adjustable upto 10 sec
Accuracy	± 0.5% of the measured value + 1°C
Repeatability	0.1% of reading in °C + 1°C
Sighting Option	Laser Pilot Light (PL)
Analog Output	0-20mA, 4-20mA, 0-10V (User selectable)
Digital Output	USB 2.0 RS-232/RS-485 interface card (Optional) *At a time only one digital output possible
Operating Temp. Range	Electronic box and Sensor head upto 70°C
Storage Temp. Range	-20°C....70°C
Relay Output	Relay Output with hysteresis 60V DC/42V AC RMS, 0.4A
Adjustable Parameters and Features via Software	Emissivity, Emissivity Slope, Response Time, Clear Time (Peak Picker), Analog Output and Analog Scale (Sub range), Sensor type (Switches b/w 2-color or single color), Switch off level, Unit Of Temperature (°C/°F), Communication mode(Comm.mode), Record feature etc
Adjustable Parameters and Features via Keypad	Emissivity, Set point, Hysteresis (Hyst), Analog Sub Range, Analog Output, Unit of temperature, Sensor address, Sensor type (Switches b/w 2-color or single color), Switch off level, Response Time, Clear Time (Peak Picker) etc
Power Supply	24V DC
Power Consumption	Max 2.5 watt
Laser Power	<1 m watt
Protection Class	IP65
Housing	Sensor Head : Stainless Steel Electronic Box : Zinc
Isolation	Power supply, * Digital output and Analog output are galvanically isolated against each other *Not applicable for USB 2.0 digital output
Operating Humidity	10-95%, Non-Condensing Conditions
Weight & Dimensions	600g 112.5mm x 82.5mm x 33mm (L x W x H)



Features

- Wide temperature ranges from 800°C to 2500°C.
- Spectral range from 0.7 μm....1.15 μm
- Laser Pilot Light for precision targeting
- Two Color model
- Inbuilt LCD Display and Keypad for parameterisation
- Fast response time within milliseconds
- Analog output options available like 0...20mA, 4...20mA and 0...10V
- USB 2.0 Digital output and RS-232/RS-485 Serial interface
- Relay output
- User friendly PC software for communication

Standard Scope of Supply

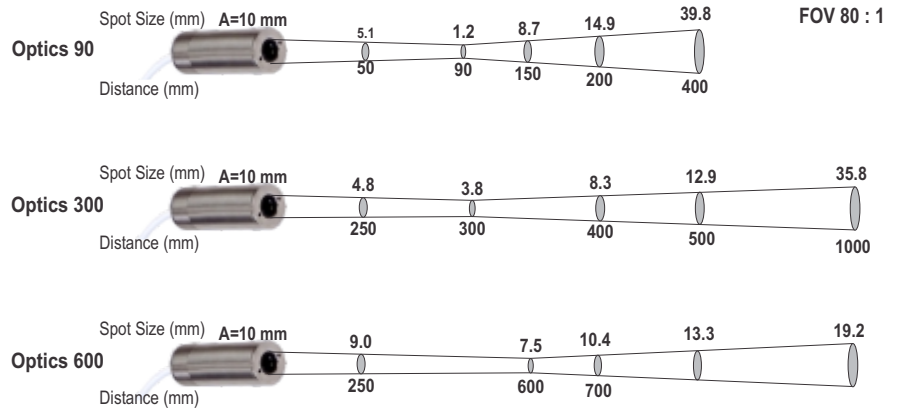
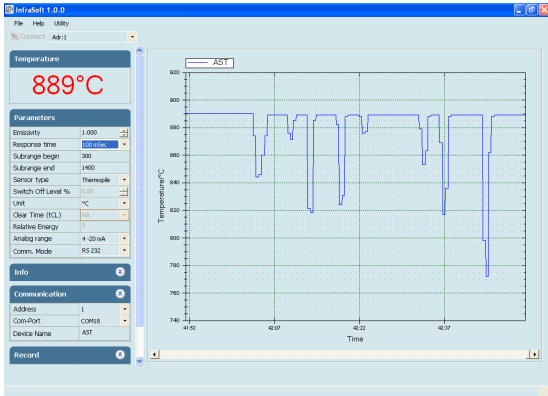
- Pyrometer with LCD Display
- Keypad for parameterizing
- Extended Sensor head with 3 mtr cable
- Laser Targeting Light
- Analog output 4...20mA, 0...20mA, 0... 10V
- USB 2.0 Digital output, USB Cable
- Relay Output
- Calibration certificate, Software & Operation manual

Optional

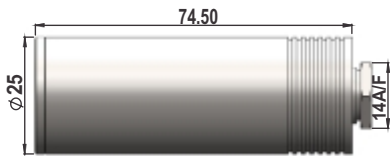
- Mechanical and Electrical Accessories
- RS-232/RS-485 interface card
- Extra Cable Lengths

Applications

- Induction heating
- Casting
- Annealing
- Welding
- Forging
- Sintering
- Melting
- Rolling

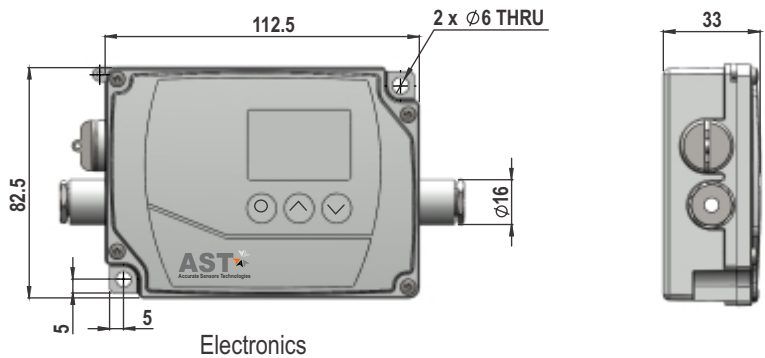


Pyrometer Drawing



Sensing Head

*all dimensions in mm



Electronics

Accessories

Water Cooling Jacket Incl. Air Purge Unit-Sensor Head (Reference No: 8000-01)



Air Purge Unit-Sensor Head (Reference No: 8200-01)



Adjustable Mounting for Sensor Head (Reference no: 8200-03)



Converter RS-232 ↔ RS-485 (Reference no: 9000-03)



Power Supply Unit (Reference no: 9000-02)



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