

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

CE 800°C to 2500°C

**AST E450C PL** is a highly accurate two color pyrometer with extended sensor head and sensor cable 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. Temperature measurement is not effected by parameters affecting the amount of energy reaching to pyrometer. This makes a ratio thermometer inherently more accurate. The ratio technique may eliminate, or reduce, error in temperature measurement caused by changes in emissivity, surface finish and energy absorbing materials such as water vapour between the pyrometer and the target.

The sensor head is unaffected by electromagnetic interferences. The pyrometer is equipped with a display which shows current temperature in measuring mode. Additionally all parameters can be read and changed via integrated keys.

**AST E450C PL** is provided with USB output and PC software. The pyrometer can be powered through USB port, in this case no external power supply is required. +24V DC is required for operation of analog output 4...20mA, 0...20mA, 0... 10V (user selectable), Laser, RS-232 & RS-485 and relay output.

### Technical specifications

Model	AST E450C PL
Temperature Range	800 - 2500°C (Sub-Range Adjustable)
Spectral Range, $\mu\text{m}$	0.7 ..... 1.15 $\mu\text{m}$
Photodetector Type	Si / Si
Distance to spot size ratio	80 : 1
Response Time	20 msec. Adjustable upto 10 sec
Accuracy	+/- 0.5% of the measured value +1°C
Repeatability	0.1% reading in °C + 1°C
Emissivity	0.1.....1 adjustable (Single color mode)
Emissivity Slop	0.75....1.25 slop adjustable (Two color mode)
Power	24V DC
Digital output	USB 2.0, RS-232 & RS-485 optional
Relay Output	Relay output with hysteresis 60V DC/42V AC RMS, 0.4A
Resolution	0.1K
Sighting	With Laser light
Operating temp. range	Electronic box and Sensor head 0°C ...+70°C
Storage temperature	-20° .... +70°C
Analog output	4-20 mA, 0-20mA, 0-10 V (User selectable)
Dimensions / Weight	112.50mm x 82.50mm x 33mm (l x w x h) / Weight = 600g
Adjustable Parameters via Keypad/software	Emissivity, Emissivity slop, Analog output, Address, Response time, Peak picker, Analog output Sub-Range
Environment	IP65

### AST E450C PL

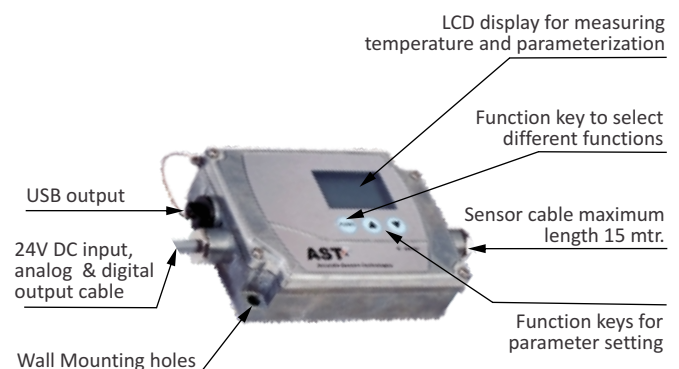


### Standard Scope of Supply

**AST E450C PL**, with Laser Targeting Light, LCD Display and keypad for parameterizing, Sensor Head with 3m cable, USB Output, 1 Relay Output, USB Cable. Analog Output 4...20mA, 0...20mA, 0... 10V (user selectable)

### Optional

- Sensor head extension cable (upto 15 m)
- RS-232 & RS-485 interface card



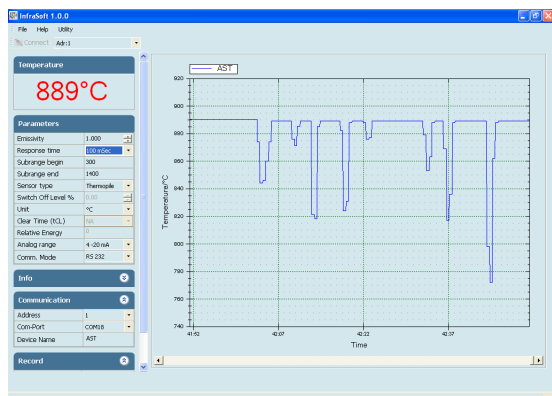
### Features

- Wide temperature ranges (800°C to 2500°C)
- In-built LCD
- Laser Light for targeting
- Parameter can be adjusted via integrated keypad or Software
- RS-232 & RS-485 Isolated (Optional)
- USB 2.0
- Relay output

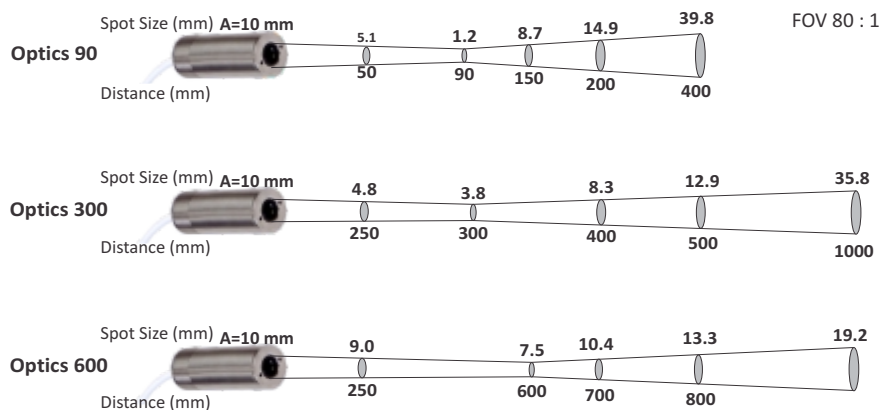
### Applications

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

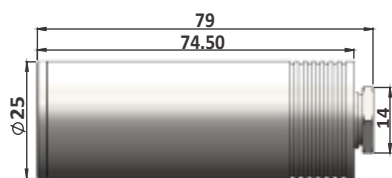
## Software "Infrasoft"



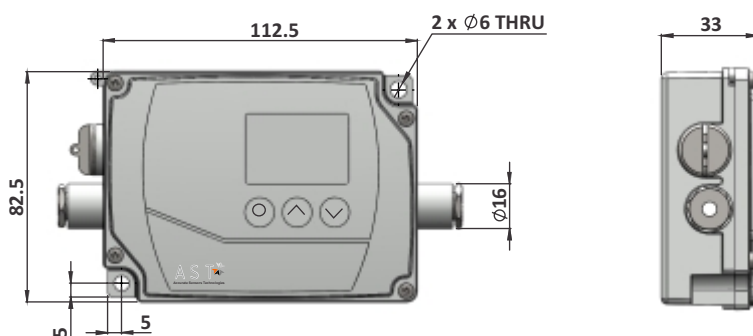
## Spot Size



## Drawings



Sensing Head



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)



Temperature Indicator (Reference no: 9000-01)

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