**E250 PL** and **E450 PL** are highly economic digital IR pyrometers with extended sensor head and separate electronic box for non-contact temperature measurement of metals, ceramics and graphite etc in temperature ranges between 250°C and 1900°C.

**E250 PL** and **E450 PL** IR Pyrometers are two piece measurement systems containing one extended sensor head and one electronic box. The electronic box comes with Inbuilt 4 digit LCD display which offers many signal processing features. The Keypad on the electronic box 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. The sensor head is un-effected by electromagnetic interferences.

**E250 PL** and **E450 PL** Infrared Pyrometers are provided with USB 2.0 output & PC Software for communication. 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, Laser, RS-232/RS-485 and Relay output.

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**Highly Accurate Digital Pyrometer with Extended Sensor Head, Laser light, Inbuilt LCD & Keypad for Parameterization**

**C E250 PL • E450 PL**

250°C to 1900°C

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### Technical Specifications

| **Model** | **Temperature Range (Analog sub-range adjustable)** | **Spectral Range** | **Photodetector Type** | **Distance to Spot Size Ratio** | **Emissivity (ε)** | **Response Time** | **Accuracy** | **Repeatability** | **Sighting Option** | **Analog Output** | **Digital Output** | **Operating Temp. Range** | **Storage Temp. Range** | **Relay Output** | **Adjustable Parameters and Features via Software** | **Adjustable Parameters and Features via Keypad** | **Power Supply** | **Power Consumption** | **Laser Power** | **Protection Class** | **Housing** | **Isolation** | **Operating Humidity** | **Weight & Dimensions** |
|-----------|-----------------------------------------------|-------------------|-----------------------|-------------------------------|------------------|-----------------|-------------|-----------------|-------------------|----------------|----------------|-----------------------------|--------------------------|----------------|--------------------------|--------------------------|----------------|----------------|------------------|---------------------------------|
| **E250 PL** | 250°C…1000°C | 1.6 µm | InGaAs | 20 : 1 | 0.1….1.0 adjustable | 2 msec adjustable upto 10 sec | ±0.3% of the measured value +1°C | 0.1% of reading in °C +1°C | Laser Pilot Light (PL) | 0-20mA, 4-20mA, 0-10V (User Selectable) | RS - 232 / RS - 485 interface card (Optional) | Electronic Box and Sensor Head upto 70°C | -20°C…70°C | Relay output with hysteresis 60V DC / 42V AC RMS, 0.4A | Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (sub range), Unit of Temperature (°C/F), Communication mode (Comm. mode), Record Feature etc. | Emissivity, Set Point, Hysteresis (Hyst), Analog Sub Range, Analog Output, Unit of temperature, Sensor address, Response Time, Clear Time (Peak Picker) etc. | 24V DC | Max 2.5 watt | <1 m watt | IP65 | Sensor Head : Stainless Steel Electronic Box : Zinc | Power supply, * Digital output and Analog output are galvanically isolated against each other *Not applicable for USB 2.0 digital output | 10-95%, Non-Condensing Conditions | 600g | 112.5mmx82.5mmx33mm (L x W x H) |
| **E450 PL** | 600°C…1900°C | 1.0 µm | Si | 40 : 1 | 80 : 1 | 80 : 1 adjustable upto 10 sec | ±0.5% of the measured value +1°C | 0.1% of reading in °C +1°C | 8 sec adjustable | USB 2.0 output | USB 2.0 Digital output, USB cable | -20°C…70°C | Relay output | Electronic Box and Sensor Head upto 70°C | Emissivity, Set Point, Hysteresis (Hyst), Analog Sub Range, Analog Output, Unit of temperature, Sensor address, Response Time, Clear Time (Peak Picker) etc. | Emissivity, Set Point, Hysteresis (Hyst), Analog Sub Range, Analog Output, Unit of temperature, Sensor address, Response Time, Clear Time (Peak Picker) etc. | 24V DC | Max 2.5 watt | <1 m watt | IP65 | Sensor Head : Stainless Steel Electronic Box : Zinc | Power supply, * Digital output and Analog output are galvanically isolated against each other *Not applicable for USB 2.0 digital output | 10-95%, Non-Condensing Conditions | 600g | 112.5mmx82.5mmx33mm (L x W x H) |

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### Features

- Wide temperature ranges from 250°C to 1900°C.
- Spectral range from 1.0 µm...1.6 µm
- Inbuilt LCD Display and Keypad for parameterisation
- Fast response time within milliseconds
- Laser Targeting light for precision targeting
- Analog output options available like 0...20mA, 4...20mA and 0...10V
- USB2.0 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 & Electrical Accessories
- RS-232 / RS-485 Interface card
- Extra Sensor Head Extension Cable Lengths

### Applications

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

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**Thermal & Cable Solutions**
Software “Infrasoft”

Spot Sizes

<table>
<thead>
<tr>
<th>Manufactured Working Distances WD (mm)</th>
<th>Spot Sizes (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E250 250°C-1000°C (20:1)</td>
</tr>
<tr>
<td>90</td>
<td>4.5</td>
</tr>
<tr>
<td>300</td>
<td>15</td>
</tr>
<tr>
<td>600</td>
<td>30</td>
</tr>
<tr>
<td>Aperture (A)</td>
<td>5</td>
</tr>
</tbody>
</table>

Pyrometer Drawing

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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