

Infrared Non Contact Pyrometers

We Measure Accurate Temperature in Extreme Conditions

PRODUCT OVERVIEW

✓ **Thermal Imagers**

- Long Wavelength
- Short Wavelength

✓ **Furnace Monitoring System**

✓ **Black Bodies**

✓ **Pyrometers**

- Single Color Pyrometers
- Two Color Pyrometers
- Focusable Pyrometers
- Fiber Optic Pyrometers
- Portable Pyrometers
- Micro Series Pyrometers
- **Special Pyrometers**
 - Glass Industry
 - Aluminium Industry
 - Foundries



T - Series
T3 - Series


| Models | TL-8 | TL-514 | TL-390 | T3-250/450 | | T3-390 |
|--|--|---|---|--|--------------|--|
| Features | Digital IR Pyrometer with Analog output, TTL output & USB interface for parameter setting for low temperature applications | Digital IR Pyrometer with Analog output, TTL output & USB interface for parameter setting for glass surface temperature measurement | Digital IR Pyrometer with Analog output, TTL output & USB interface for parameter setting for glass surface temperature measurement | Digital IR Pyrometer in 2 wire technology with Analog output, TTL output, USB interface and External Emissivity setting | | |
| Temperature Range (Sub Range Adjustable) | 0°C - 500°C | 200°C - 1400°C | 300°C - 1400°C | 250 - 1000°C 300 - 1300°C 350 - 2500°C | 600 - 2500°C | 300°C - 1400°C |
| Emissivity | 0.1....1.2 adjustable | 0.1 - 1.0 adjustable | 0.1 - 1.2 adjustable | 0.1....1.0 adjustable at device | | |
| Spectral Range | 8....14 μm | 5.14μm | 3.9μm | 1.6 μm | 1.0 μm | 3.9μm |
| Photodetector Type | Thermopile | Thermopile | Thermopile | InGaAs | Si | Thermopile |
| Distance to Spot Size Ratio | 15:1 | 50:1 | 50:1 | 50:1 100:1 200:1 | 200:1 | 50:1 |
| Response Time | 100 msec adjustable upto 10 sec | 100 msec. to 10 sec. adjustable | 100 msec. to 10 sec. adjustable | 10 msec adjustable upto 10 sec | | 60 msec. adjustable upto 10sec |
| Accuracy | ±2% of measured value or ±3°C whichever is greater | ±1.5% of temperature reading | ±1.5% of temperature reading | ± 0.3% of the measured value + 1°C | | T < 500°C; ± 1.5% of measured value T ≥ 500°C; ± 1% of measured value |
| Repeatability | ±0.5% of measured value or ±1°C whichever is greater | ±0.5% of measured value or ±1°C whichever is greater | ±0.5% of measured value or ±1°C whichever is greater | 0.1% of reading in °C + 1°C | | 0.3% of reading in °C + 1°C |
| Analog Output (User selectable) | 0 - 5V, 4 - 20mA, J type or K type T/C | 4-20 mA, 0-20mA | 4-20 mA, 0-20mA | 2 wire....4-20mA(Isolated), Load Independent Current, Linear Temperature Output, Load : Max 500Ω at 24V DC, Max 200Ω at 18V DC | | |
| Digital Output | TTL output | TTL Output | TTL Output | TTL Output | | |
| Sighting | N/A | Laser pilot light | Laser pilot light | Laser Pilot Light | | |
| Operating Temperature Range | 0 - 70°C | 0 - 70°C | 0 - 70°C | 0°C.....70°C 0°C.....200°C (With water cooling jacket) | | |
| Power Supply | 24V DC | +24 V DC (I ≤ 50mA) | +24 V DC (I ≤ 50mA) | 24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I < 30 mA)) | | |
| Power Consumption | Max 1.2 watt | Max 1.2 watt | Max 1.2 watt | For Laser Targeting Max 0.65 watt, For Device Max 0.6 watt | | |
| Protection Class | IP65 | IP65 | IP65 | IP65 | | |
| Storage Temperature | -20 to 70°C | -20 to 70°C | -20 to 70°C | -20 to 70°C | | |
| Dimensions & Weight | Dia. = Ø25mm L = 103 mm 0.2 kg | Dia. = Ø25mm L = 103 mm 0.2 kg | Dia. = Ø25mm L = 103 mm 0.2 kg | Dia = Ø40mm L = 113.5mm 0.25 kg | | Dia. = Ø25mm L = 103 mm 0.2 kg |

T3 - Series

E - Series



| T3-514 | | T3-814 | EL50 & EL50H | | E450 PL | E450C PL | E250 PL |
|---|--|--------------------------------|--|----------------------------------|--|--|---|
| Digital IR Pyrometer in 2 wire technology with Analog output, TTL output, USB interface and External Emissivity setting | | | Digital IR Pyrometer with extended Sensor head, Analog output, Digital interface, Relay output, USB 2.0, Inbuilt LCD & Keypad for parameterization | | Digital IR Pyrometer with extended Sensor head, Analog output, Digital interface, Relay output, USB 2.0 Output, Inbuilt LCD, Laser Targeting & Keypad for parameterization | Digital two color pyrometer with extended Sensor head, Analog output, Digital interface, Relay output, USB 2.0, Inbuilt LCD, Laser Targeting & Keypad for parameterization | Digital IR Pyrometer with extended Sensor head, Analog output, Digital interface, Relay output, USB 2.0, Inbuilt LCD, Laser Targeting & Keypad for parameterization |
| 300°C....1400°C 400°C...2500°C | | 0°C....1000°C 75°C...1000°C | 0°C - 800° C | | 600°C - 1900° C | 800°C - 2500°C | 250°C - 1000° C 300°C - 1300°C 350°C - 1800° C |
| 0.1....1.0 adjustable | | | 0.1....1.2 adjustable | | 0.1....1.0 adjustable | 0.1....1.0 (Single color mode) | 0.1....1.0 adjustable |
| 5.14 μm | 8 μm...14 μm | | 8.....14μm | | 1μm | 0.7.....1.15μm | 1.6μm |
| Thermopile | | | Thermopile | | Si | Si/Si | InGaAs |
| 50:1 | 50:1 100:1 | | 2 : 1 15 : 1 | | 80 : 1 | 80 : 1 | 20 : 1 40 : 1 80 : 1 |
| 60 msec. adjustable upto 10sec | 60 msec. adjustable upto 10sec | | 20 msec. adjustable upto 10 sec. | 60 msec. adjustable upto 10 sec. | 2 msec. adjustable upto 10 sec. | 20 msec.adjustable upto10 sec. | 2 msec. adjustable upto 10 sec. |
| T < 500°C; ± 1.5% of measured value, T ≥ 500°C, ± 1% of measured value | T < 200°C; ± 1.5% of measured value or 3°C, whichever is greater T ≥ 200°C; ± 1% of measured value or 4°C is greater | | ±1.0% of the measured value or 3°C whichever value is greater | | ±0.3% of the measured value +1°C | ±0.5% of the measured value +1°C | ±0.3% of the measured value +1°C |
| 0.3% of reading in °C + 1°C | | | 0.3% of reading in °C +1°C | | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C |
| 2 wire...4-20mA, Load Independent Current, Linear Temp. Output Load : Max 500Ω at 24V DC, Max 200Ω at 18V DC | | | 4 - 20mA, 0 - 20mA, 0 - 10V, J & K type T/C | | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10 V | 4 - 20 mA, 0 - 20 mA, 0 - 10V |
| TTL | | | USB 2.0, RS-232 / RS-485 (Optional) | | USB 2.0, RS-232 / RS-485 (Optional) | USB 2.0, RS-232 / RS-485 (Optional) | USB 2.0, RS-232 / RS-485 (Optional) |
| Laser Pilot Light (PL) | | | N/A | | Laser pilot light | Laser pilot light | Laser pilot light |
| 0°C.....70°C 0°C.....200°C (With water cooling jacket) | | | Electronic Box upto 70°C, Sensor head-120°C (EI50), Sensor head-180°C(EL50-H) | | Electronic Box and Sensor head upto 70°C | Electronic Box and Sensor head upto 70°C | Electronic Box and Sensor head upto 70°C |
| 24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA) | | | 12V - 28V DC with reverse polarity protection | | 24V DC | 24V DC | 24V DC |
| For Laser Targeting Max 0.65 watt For Device Max 0.6 watt | | | Max. 2.5 watt | | Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt |
| IP65 | | | IP65 | | IP65 | IP65 | IP65 |
| -20 to 70°C | -20 to 70°C, 0°C.....200°C | | -20 to 70°C | | -20 to 70°C | -20 to 70°C | -20 to 70°C |
| Dia = Ø40mm L = 113.5mm 0.25 kg | Dia = Ø40mm L = 113.5mm 0.25 kg | | 112.5 x 82.5 x 33 mm 0.6 kg | | 112.5 x 82.5 x 33 mm 0.6 kg | 112.5 x 82.5 x 33 mm 0.6 kg | 112.5 x 82.5 x 33 mm 0.6 kg |

A - Series



| Models | A150 | A250 | A450 | A250C |
|--|---|--|--|---|
| Features | Digital IR Pyrometer with Analog output & Digital interface, USB 2.0, Laser targeting for temperature measurement of metallic surfaces, graphite & ceramics | Digital IR Pyrometer with Analog output, Digital interface, Bluetooth/USB 2.0, Laser targeting or Through the lens view finder | Digital IR Pyrometer with Analog output, Digital interface, Bluetooth/USB 2.0, Laser targeting or Through the lens view finder | Digital two color pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting or Through the lens view finder |
| Temperature Range (Sub Range Adjustable) | 75°C - 700° C | 210°C - 1350°C 250°C - 1800°C 300°C - 2500°C 350°C - 3000°C | 600°C - 2500° C | 350°C....1000°C 450°C....1350°C |
| Emissivity | 0.1...1.0 adjustable | 0.1...1.0 adjustable | 0.1...1.0 adjustable | 0.1....1.0 adjustable (Single color mode) |
| Spectral Range | 2 to 2.6 µm | 1.6 µm | 1.0 µm | 1.5µm/1.6µm |
| Photodetector Type | Extended InGaAs | InGaAs | Si | InGaAs/InGaAs |
| Distance to Spot Size Ratio | 50 : 1 | 50 : 1 100 : 1 200 : 1 200 : 1 | 200 : 1 | 100:1 200:1 |
| Response Time | 2 msec. adjustable upto 10 sec. | 2 msec. adjustable upto 10 sec. | 2 msec. adjustable upto 10 sec | 100 msec adjustable upto 10 sec |
| Accuracy | Upto 400°C : 3°C T> 400°C : 0.5% of measured value in °C +1°C | ±0.3% of the measured value +1°C | ±0.3% of the measured value +1°C | ±0.5% of the measured value + 1°C |
| Repeatability | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C |
| Analog Output (User selectable) | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 0-20mA, 4-20mA, 0-10V |
| Digital Output | USB 2.0, RS-232 / RS - 485 (User Selectable) | Bluetooth/USB 2.0, RS-232 / RS - 485 (User Selectable) | Bluetooth/USB 2.0, RS-232 / RS - 485 (User Selectable) | USB 2.0, RS-232/RS-485 (User selectable) |
| Sighting | Laser Pilot light | Laser Pilot light or Through the lens sighting | Laser Pilot light or Through the lens sighting | Laser Pilot Light or Through The Lens sighting |
| Operating Temperature Range | 0°C - 70°C 0°C - 200°C (With water cooling jacket) | 0°C - 70°C 0°C - 200°C (With water cooling jacket) | 0°C - 70°C 0°C - 200°C (With water cooling jacket) | 0°C - 70°C 0°C - 200°C (With water cooling jacket) |
| Power Supply | 24V DC | 12V to 28V DC with reverse polarity protection | 12V to 28V DC with reverse polarity protection | 24V DC |
| Power Consumption | Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt | Max 2.5 watt |
| Protection Class | IP65 | IP65 | IP65 | IP65 |
| Storage Temp. | -20 to 70°C | -20 to 70°C | -20 to 70°C | -20°C to 70°C |
| Dimensions & Weight | Dia = Ø49.5mm; L = 118mm 0.6kg | Dia = Ø49.5mm; L = 118mm 0.6kg | Dia = Ø49.5mm; L = 118mm 0.6kg | Dia = Ø49.5mm; L = 118mm 0.6kg |

A - Series

AL - Series



| A450C | AL30 | AL45 | AL514 | AL390 |
|---|---|--|--|--|
| Digital two color pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting or Through the lens view finder | Digital IR Pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting light for temp. measurement of non-metallic surfaces, painted, coated or anodized metals | Digital IR Pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting light for measurement of flames & combustion gases that include CO ₂ | Digital IR Pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting light for glass surface temperature measurement | Digital IR Pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting light for measurement through flame |
| 600°C - 1600°C 800°C - 2500°C | 0°C - 1000° C 75°C - 1000°C | 400°C....1500°C | 300°C - 1400°C 400°C - 2500°C | 300°C - 1400°C |
| 0.1...1.0 (Single color mode) | 0.1...1.2 adjustable | 0.1....1.2 adjustable | 0.1 ... 1.2 adjustable | 0.1 ... 1.2 adjustable |
| 0.7.....1.15 μm | 8.....14μm | 4.43 μm | 5.14 μm | 3.9 μm |
| Si/Si | Thermopile | Thermopile | Thermopile | Thermopile |
| 100 : 1 200 : 1 | 50 : 1 100 : 1 | 40 : 1 | 50 : 1 | 50 : 1 |
| 20 msec. adjustable upto 10 sec. | 60 msec. adjustable upto 10 sec. | 60 msec adjustable upto 10sec | 60 msec. adjustable upto 10 sec. | 60 msec. adjustable upto 10 sec. |
| ±0.5% of the measured value +1°C | T < 200°C; ±1.5% of measured value or 3°C T ≥ 200°C ; ±1.0% of measured value or 4°C | T < 500°C ,± 1.5% of measured value T ≥ 500°C, ± 1% of measured value | T < 500°C ; ±1.5% of measured value T ≥ 500°C ; ±1.0% of measured value | T < 500°C ; ±1.5% of measured value T ≥ 500°C ; ±1.0% of measured value |
| 0.1% of reading in °C +1°C | 0.3% of reading in °C +1°C | 0.3% of reading in °C +1°C | 0.3% of reading in °C +1°C | 0.3% of reading in °C +1°C |
| 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10V | 4 - 20 mA, 0 - 20 mA, 0 - 10V |
| USB 2.0, RS-232 / RS - 485 (User Selectable) | USB 2.0, RS-232 / RS - 485 (User Selectable) | USB 2.0, RS-232/RS-485 (User selectable) | USB 2.0, RS-232 / RS - 485 (User Selectable) | USB 2.0, RS-232 / RS - 485 (User Selectable) |
| Laser Pilot light or Through the lens sighting | Laser pilot light | Laser Pilot Light | Laser pilot Light | Laser pilot Light |
| 0°C - 70°C 0°C - 200°C (With water cooling jacket) | 0°C - 70°C 0°C - 200°C (With water cooling jacket) | 0°C.....70°C 0°C.....200°C (With water cooling jacket) | 0°C - 70°C 0°C - 200°C (With water cooling jacket) | 0°C - 70°C 0°C - 200°C (With water cooling jacket) |
| 24V DC | 24V DC | 24V DC | 24V DC | 24V DC |
| Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt |
| IP65 | IP65 | IP65 | IP65 | IP65 |
| -20 to 70°C | -20 to 70°C | -20 to 70°C | -20 to 70°C | -20 to 70°C |
| Dia = Ø49.5mm; L = 118mm 0.6kg | Dia = Ø49.5mm; L = 118mm 0.6kg | Dia= Ø49.5 mm; L=118mm 0.6kg | Dia.= Ø49.5mm L= 118mm 0.6 kg | Dia.= Ø49.5mm L= 118mm 0.6 kg |

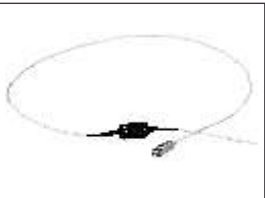



Fiber Optics



| Models | A250 FO-PL | A450 FO-PL | A250C FO-PL | A450C FO-PL |
|---|--|--|---|---|
| Features | Digital IR Pyrometer with mono fiber optic cable, Laser Pilot light, Digital interface, Analog output & Bluetooth/USB 2.0. | Digital IR Pyrometer with mono fiber optic cable, Laser Pilot light, Digital interface, Analog output & Bluetooth/USB 2.0. | Digital two color Pyrometer with mono fiber optic cable, Laser Pilot light with Digital interface, Analog output & USB 2.0. | Digital two color Pyrometer with mono fiber optic cable, Laser Pilot light with Digital interface, Analog output & USB 2.0. |
| Temperature Range (Sub Range Adjustable) | 250°C - 1800°C | 600°C - 2500°C | 350°C - 1000°C 450°C - 1350°C | 800°C - 2500°C 1000°C - 3200°C |
| Emissivity | 0.1.....1.0 adjustable | 0.1.....1.0 adjustable | 0.1.....1.0 (for single color mode) | 0.1.....1.0 (for single color mode) |
| Spectral Range | 1.6µm | 1.0 µm | 1.5µm/1.6µm | 0.7.....1.15µm |
| Photodetector Type | InGaAs | Si | InGaAs/InGaAs | Si/Si |
| Distance to Spot Size Ratio | 100:1(OH I) 200:1(OH II) 200:1(OH II - V) | 100:1(OH I) 200:1(OH II) 200:1(OH II - V) | 100:1 200:1 | 100:1 200:1 |
| Response Time | 2 msec. adjustable upto 10 sec | 2 msec adjustable upto 10 sec | 100 msec. adjustable upto 10 sec | 20 msec. adjustable upto 10 sec |
| Accuracy | ±0.3% of the measured value +1°C | ±0.3% of the measured value +1°C | ±0.5% of measured value +1°C | ±0.5% of measured value +1°C |
| Repeatability | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C |
| Analog Output (User selectable) | 4-20 mA, 0-20 mA, 0-10V | 4-20 mA, 0-20 mA, 0- 10V | 0-20mA, 4-20 mA, 0-10V | 4-20 mA, 0-20 mA, 0-10V |
| Digital Output | Bluetooth/USB 2.0, RS-232 / RS - 485 (User Selectable) | Bluetooth/USB 2.0, RS-232 / RS - 485 (User Selectable) | USB 2.0, RS-232 / RS - 485 (User Selectable) | USB 2.0, RS-232 / RS - 485 (User Selectable) |
| Sighting | Laser pilot light | Laser pilot light | Laser pilot light | Laser pilot light |
| Operating Temperature Range | Pyrometer 0°C - 70°C Optical Head & Fiber Optic Cable upto 250°C | Pyrometer 0°C - 70°C Optical Head & Fiber Optic Cable upto 250°C | Pyrometer 0°C - 70°C Optical Head & Fiber Optic Cable upto 250°C | Pyrometer 0°C - 70°C Optical Head & Fiber Optic Cable upto 250°C |
| Power Supply | 12V to 28V DC with reverse polarity protection | 12V to 28V DC with reverse polarity protection | 24V DC | 24V DC |
| Power Consumption | Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt | Max. 2.5 watt |
| Protection Class | IP65 | IP65 | IP65 | IP65 |
| Storage Temperature | -20 to 70°C | -20 to 70°C | -20 to 70°C | -20 to 70°C |
| Dimensions & Weight | Dia. = Ø49.5mm, L = 118mm 0.6kg | Dia. = Ø49.5mm L = 118mm 0.6kg | Dia. = Ø49.5mm L = 118mm 0.6kg | Dia. = Ø49.5mm L = 118mm 0.6kg |

A+ Series
Portable


| A250+ | A450+ | A450C+ | P250 | P450 |
|---|---|---|--|--|
| Focusable Digital IR Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder, Video module, Parameterizing Keys, OLED Display & Bluetooth | Focusable Digital IR Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder, Video module, Parameterizing Keys, OLED Display & Bluetooth | Focusable Digital IR Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder, Video module, Parameterizing Keys, OLED Display & Bluetooth | Highly accurate Portable infrared non-contact pyrometer | Highly accurate Portable infrared non-contact pyrometer |
| 250°C - 1800°C 300°C - 2500°C 350°C - 3000°C | 600°C - 2500°C | 600°C - 1600°C 800°C - 2500°C | 210°C....1350°C 250°C....1800°C 300°C....2500°C | 600°C...2500°C 700°C... 3000°C |
| 0.1....1.0 adjustable (Single color mode) | 0.1....1.0 adjustable (Single color mode) | 0.1....1.0 adjustable (Single color mode) | 0.1....1.2 adjustable | 0.1....1.2 adjustable |
| 1.6 μm | 1.0 μm | 0.7....1.15 μm | 1.6 μm | 1.0 μm |
| InGaAs | Si | Si/Si | InGaAs | Si |
| 75:1 150:1 300:1 | 300:1 | 150:1 (600°C - 1600°C) 300:1 (800°C - 2500°C) | 100:1 200:1 400:1 | 400:1 400:1 |
| 2 msec adjustable upto 10 sec | 2 msec adjustable upto 10 sec | 20 msec. adjustable upto 10 sec. | 5msec in Numerical Mode, 10msec in Graphical Mode, 10msec (when datastorage is ON) | 5msec in Numerical Mode, 10msec in Graphical Mode, 10 msec (when data storage is ON) |
| ±0.3% of the measured value +1°C | ±0.3% of the measured value +1°C | ±0.5% of the measured value +1°C | ± 0.3% of the measured value + 1°C | ± 0.3% of the measured value + 1°C |
| ±0.1% of reading in °C +1°C | ±0.1% of reading in °C +1°C | 0.1% of reading in °C +1°C | 0.1% of reading in °C + 1°C | 0.1% of reading in °C + 1°C |
| 0-20mA, 4-20mA, 0-10V (User selectable) | 0-20mA, 4-20mA, 0-10V (User selectable) | 0-20mA, 4-20mA, 0-10V (User selectable) | - | - |
| Bluetooth v 4.1 RS-232/RS-485 (User selectable) | Bluetooth v 4.1 RS-232/RS-485 (User selectable) | Bluetooth v 4.1 RS-232/RS-485 (User selectable) | Bluetooth, USB 2.0 | Bluetooth, USB 2.0 |
| Laser Pilot Light(PL), Through The Lens (TL) & Video Module | Laser Pilot light, Through the lens sighting or Video module | Laser Pilot light, Through the lens sighting or Video module | Optimized through lens view finder with dioptry correction -2.5 dpt. to +2.5 dpt | Optimized through lens view finder with dioptry correction -2.5 dpt. to +2.5 dpt |
| 0 to 70°C | 0 to 70°C | 0°C....70°C | 0°C....70°C | 0°C....70°C |
| 12V to 28V DC with reverse voltage protection | 12V to 28V DC with reverse voltage protection | 12V to 28V DC with reverse voltage protection | 3 x 1.2 V Rechargeable batteries | 3 x 1.2 V Rechargeable batteries |
| Max 4.0 watt | Max 4.0 watt | Max 4.0 watt | - | - |
| IP65 | IP65 | IP65 | IP52 | IP52 |
| -20 to 70°C | -20 to 70°C | -20°C...70°C | -20°C...55°C | -20°C...55°C |
| Dia= Ø 56mm, L=199.5mm 1.2kg | Dia= Ø 56mm, L=199.5mm 1.2kg | Dia= Ø 56mm L=199.5mm 1.2kg | 228 x 64 x 186 mm 0.9kg | 228 x 64 x 186 mm 0.9kg |

| | ML - Series | IR CAST 2C | Glass Industry | |
|--|--|---|--|--|
| |  |  |  |  |
| Models | ML-2W/2WH, ML-10V/10VH, ML-K/KH, ML-J/JH | IR CAST 2C | 450 G-2 | PGM |
| Features | Miniature Digital online infrared non-contact pyrometer for low temperature. applications | Digital two color pyrometer with through lens sighting, digital interface, analog output & USB 2.0 for metal casting applications | Special 2 wire pyrometer for glass industry with Digital output & heavy duty fibre optic cable useful in high ambient temperature conditions | Portable Glass Mould pyrometer with powerful data logging, In-Built charging & probes interchangeable on site. |
| Temperature Range (Sub Range Adjustable) | 0°C - 1000°C | 700°C - 1700°C | 600°C - 1800° C | 250°C - 600°C |
| Emissivity | 0.1 to 1.2 adjustable | 0.1.....1.0 adjustable (Single Color Mode) | 0.05.....1.0 adjustable via DIP switch | 0.1....1.0 adjustable |
| Spectral Range | 8.....14 µm | 0.7.....1.15µm | 1.0 µm | 1.6 µm |
| Photodetector Type | Thermopile | Si / Si | Si | - |
| Distance to Spot Size Ratio | 15:1, 2:1 | DV = 166:1 (V = Vertical) DH = 33:1 (H = Horizontal) | 100 : 1 Min. Spot Size 11mm | - |
| Response Time | 60 msec adjustable upto 10 sec | 20msec. Adjustable upto 10 sec | 250 msec adjustable upto 10 sec | 2 msec. Adjustable upto 10 sec. |
| Accuracy | ± 2% of measured value or ± 3°C whichever is greater | ± 0.5% +1°C of measured value | ±0.3% of the measured value or ±3°C whichever is greater | +/- 0.3% of the measured value +1°C |
| Repeatability | ± 0.5% of measured value or ± 1°C whichever is greater | 0.1% of reading in °C +1°C | ±0.2% of reading in °C +1°C | 0.1% of reading in °C +1°C |
| Analog Output (User selectable) | 2 Wire : 4 - 20mA (ML-2W/2WH), 4 Wire : 0 - 10V/0 - 5V - Switchable (ML-10V/10VH), K type thermocouple (ML-K/KH), J type thermocouple (ML-J/JH) | 4-20 mA or 0-20mA or 0-10 V | 4.....20mA | - |
| Digital Output | TTL Output | USB 2.0 RS-232 & RS-485 (User Selectable) | USB 2.0 | USB 2.0 |
| Sighting | N/A | Through the lens sighting | N/A | - |
| Operating Temperature Range | Electronics : 0°C....70°C Sensing Head : 0°C....120°C(Without H Model) or 0°C....180°C(With H Model) | 0°C.....70°C, 0°C.....200°C (with cooling jacket) | Pyrometer 0°C - 70°C Optical head & Fiber optic max 250°C | 0°C - 70°C at handle end |
| Power Supply | 8V DC to 25V DC | 24V DC | 24V DC | 3 AAA rechargeable Cell |
| Power Consumption | Max 0.5 watt (Normal Mode) | Max. 2.5 Watt. | Max 0.5 watt | - |
| Protection Class | IP54 | IP65 | IP65 | - |
| Storage Temperature | -20°C...70°C | -20 to 70°C | -20 to 70°C | - |
| Dimensions & Weight | Electronics : 43x22x11 mm Sensing Head : M12 x 1, Dia Ø14.5mm, L=35mm | Dia. = Ø49.5 mm, L = 118 mm 0.6 kg | 112.5 x 82.5 x 33.0 mm 0.5 kg | - |

TE-700 (High Resolution, High Temperature Ultra Compact Infrared Camera)

AST-TE700 is a thermal Imaging System, with high spatial and thermal resolution, that provides monitoring of temperature profile of the target object round the clock visually in a display system for demanding real time imaging applications in various industries. Whether in quality control, process monitoring or process automation - the infrared camera TE-700 measures temperatures without contact exactly and reliably. This model is specifically designed for continuous operation in fixed-mount applications. The device is durable, robust and suitable for industrial continuous operation.



Technical Specifications

| Model | TE-700 |
|--------------------------------|--|
| Temperature Range | 700°C - 1800°C |
| Spectral Range | 0.85 - 1.1µm |
| Detector | High Dynamic CMOS |
| Optional Resolution/Frame Rate | 768 x 576 Pixels@ 25Hz |
| Thermal Sensitivity (NETD) | <1 K (700°C [$<1292^{\circ}\text{F}$]), <2 K (1000°C [1832°F]) |
| Analog Output | 4 Channel Analog Current Output |
| Digital Input | 4 Active-high, Buffered Inputs |
| Digital Output | 4 Open Source, Mosfet Outputs |
| Connectivity | Ethernet/USB |
| Protocol | GIGE for ethernet, Proprietary for USB |
| Ambient Temperature | 0°C - 60°C |

Features

- ✓ Wide measurement range 700-1800°C (upto 25Hz frame rate)
- ✓ High dynamic CMOS detector with upto 768 x 576 pixels resolution
- ✓ Thermal as well as Monochrome Video Display
- ✓ Fast thermal data acquisition in real time via Gigabit Ethernet/USB
- ✓ Configurable storage and replay temperature video
- ✓ Digital and analog input/output modules
- ✓ Software controlled parameter settings
- ✓ Multiple client PC configuration
- ✓ Small aluminum compact housing
- ✓ Standard InfraView Software Package
- ✓ Integration in customized system solution, including software adjustments
- ✓ Accessories : Water Cooling Jacket, Pin Hole Lens Tube

LTE-80 (Low Resolution, Long Wavelength Most Economic Thermal Camera)

Infrared pyrometers can be used when we know the exact critical point of temperature measurement. Pyrometers help in temperature measurement at a certain point. But thermal imagers are required in applications where temperature of a certain area needs to be measured. High resolution, like 640x480 pixels /384x288 pixels, is not always needed in industrial applications. Sometimes we just need to identify faults. So AST LTE-80, 80x64 pixels, is the most economic solution.

Fit for Purpose

Very high resolution is not always needed as we just need to identify faults. However the resolution offered by our thermal camera is good which is equivalent to using hundreds of pyrometer for monitoring larger areas.



Technical Specifications

| Model | LTE-80 |
|--------------------------|----------------|
| Optical Resolution | 80 x 64 pixels |
| Supply Voltage | 5 V |
| Ambient temp. range | 0 to 70°C |
| Object temperature range | -20 to >1000°C |
| Frame rate (full frame) | 9 to 20 Hz |
| NETD (best optics) | 150 mk@1Hz |
| Communication | Ethernet |

Features

- ✓ More accuracy and security in every measurement
- ✓ High sensitivity of the system
- ✓ Temperature display
- ✓ Contrast adjustment
- ✓ Several lenses for different FOV
- ✓ Real time temperature measurement values

LTE-384 (High Resolution, Long Wavelength Ultra Compact Infrared Camera)

LTE-384 is affordable thermal camera in the market, with 50Hz frame rate, multi functions and wide temperature measurement range. It provides ultimate inspection tools and unprecedented easy-to use designs to fit your needs. Application areas include:-

- Online Monitoring System
- UAV & Aircraft & Robot Application
- Automation Security



Technical Specifications

| Model | LTE-384 |
|-----------------------|-----------------------|
| Detector Type | Uncooled FPA detector |
| IR Resolution | 384x288 |
| Pixel Pitch | 17µm |
| Spectral Range | 7.5 - 14µm |
| NETD | <0.05°C @30°C |
| Frequency | 50Hz/60Hz |
| Operation Temp. Range | -30°C ~ +60°C |

Features

- ✓ 384 x 288 17µm uncooled FPA detector
- ✓ NETD ≤40mk
- ✓ Multiple motorized Ge. lens, supporting auto focusing
- ✓ Auto tracking of hot spots and showing the temperature values
- ✓ Thermal images, temperature and temperature data flows are saved
- ✓ 100M network transmission temperature data
- ✓ Compact structure with weight of 420g
- ✓ IP54 encapsulation, 3 year warranty
- ✓ Professional software for free

Furnace Monitoring System

| Model | Specification |
|------------|------------------------------|
| TFV-750 | Straight View Visual Camera |
| TE-750 | Straight View Thermal Camera |
| TFV-750/OV | Elbow View Visual Camera |
| TE-750/OV | Elbow View Thermal Camera |



Features

- ✓ Water cooled lens tube, Vortex cooled camera chamber
- ✓ Auto retraction and shutter
- ✓ Pneumatic cylinder
- ✓ Air Purged
- ✓ Control panel with pneumatic system
- ✓ Software Infraview for Thermal camera
- ✓ Input/Output module

CCD Camera (TFV-750, TFV-750/OV)

| | | |
|--------------|---|---------------------------|
| Image sensor | : | 1/3" Super HD CCD |
| TV Line | : | Black and White 650 lines |
| Illumination | : | 0.005Lux@F2.0 |
| Image | : | Manual adjustable |
| Video output | : | Composite 1 [Vp-p] 75 (Ω) |
| Power | : | DC12V (±10%) |

Pinhole Lens

| | | |
|---------------|---|---|
| Lens length | : | 820 mm & 1100 mm |
| Angle of view | : | Straight view HxVxD 67°, 56°, 81° Elbow view 45°, 60° |
| Mount | : | CS |
| Focus | : | Manual Adjustable |
| Length | : | 820 mm |

Thermal Camera (TE-750, TE-750/OV)

| | |
|-------------------|----------------------------|
| Image Sensor | HD CMOS Sensor |
| Temperature Range | 700° C to 1800° C |
| Accuracy | 0.3% of measure value + 1° |
| Resolution | 768 x 576 pixels |
| Frame rate | 25 Hz |
| Spectral Range | 0.85 to 1.1µm |
| Connectivity | Ethernet/USB |

Infraview Software (For Thermal Camera)

- ✓ Configurable ROI's : point, line, free shape
- ✓ Histogram and isotherm visualization
- ✓ Hot and cold spot detection
- ✓ Color pallet scaling
- ✓ Trend charts
- ✓ Alarm output
- ✓ Video and Image export
- ✓ Server client configuration

Black Body

| Device Type | Calsys110 | Calsys500 | LBB33H/11CH | Calsys1200 | Calsys1500 | Calsys1700 | Fastcal 2700 |
|---------------------------------|-----------------------------------|--|------------------------------------|--|---|---|------------------------------|
| Temperature Range | 10 to 110°C | 50°C to 500°C | -15°C to 150°C | 300°C to 1200°C | 500°C to 1500°C | 500°C to 1700°C | 500°C to 2700°C |
| Stability | ±0.1°C | ±0.5°C at 50°C ±0.8°C at 250°C ±1.0°C at 500°C | 0.01°C/0.001°C | ±0.2°C at 300°C ±0.3°C at 800°C ±0.5°C at 1200°C | ±0.4°C at 500°C ±0.7°C at 1000°C ±1.0°C at 1500°C | ±0.7°C at 500°C ±1.4°C at 1200°C ±2.0°C at 1700°C | - |
| Time to Reach Max Temp. | 25 Mins | 45 Mins | - | 1.5 Hrs. | 2.5 Hrs. | 3 Hrs. | - |
| Controlling Sensor | Precision PRT | T/C "N" Type | RTD | Precision PT/RH-PTT/C | PT-RH/PTT/C | Precision PT/RH-PTT/C | Pyrometer |
| Emissivity | 0.95 ±0.01 | 0.95 ± 0.01 | 0.97 | 0.99 ± 0.01 | 0.99 ± 0.01 | 0.97 ± 0.01 | 0.99 |
| Temperature Controller | Digital self tuned PID controller | | | | | | |
| Computer Interface | RS - 232 | | RS-232/USB | RS - 232 | | | |
| Temperature Resolution | 0.1°C | 0.1°C | 0.1°C/0.01C | 1.0°C | 1.0°C | 0.1°C | 0.1°C |
| Cavity | - | - | - | Silicon Carbide | Silicon Carbide | End Closed Tube | Graphite Dual cavity |
| Aperture Dia | 80 mm | 100 mm | - | 40 mm | 40 mm | 29 mm | 25mm |
| Power Supply | 230V AC | 230V AC | 220VAC | 230V AC | 230V AC | 230V AC | 440V AC |
| Power Consumption | 0.5 KW | 1.0 KW | 500W | 2.5 KW | 3.5 KW | 3.0 KW | 50.0 KW |
| Dimension (H x W x D) Weight | 330 x 355 x 225 mm, 12 Kg | 270 x 360 x 270 mm, 10 Kg | 500x500x250/310x350x210mm, 14/6 Kg | 590 x 450 x 530 mm, 50 Kg | 590 x 450 x 530 mm, 50 Kg | 640 x 500 x 550 mm, 80 Kg | 1700 x 900 x 1200 mm, 300 Kg |

Special Aluminum / Non-Ferrous Pyrometers

| Instrument | A4-EX | A4-IN | A4-S-EX | A4-S-IN | A4-EX-FO |
|---------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| Temperature Range | 170°C to 1150°C | 350°C to 1270°C | 170°C to 1150°C | 350°C to 1270°C | 450°C to 1500°C |
| Emissivity | 0.1 -1.0 | | | | |
| Response Time | 0.1 - 1.0 sec | | | | |
| Default Value | 0.5 sec | | | | |
| Accuracy & Repeatability | ±1% | | | | |
| Sighting | Integrated Laser Pilot Light | Integrated Laser Pilot Light | Integrated Laser Pilot Light | Integrated Laser Pilot Light | - |
| Power Supply | 24VDC | | | | |
| Analog Output | 4-20 mA, 0-20 mA, 0-10V, K Type T/C | 4-20 mA, 0-20 mA, 0-10V, K Type T/C | 4-20 mA, 0-20 mA, 0-10V, K Type T/C | 4-20 mA, 0-20 mA, 0-10V, K Type T/C | 4-20 mA, 0-20 mA, 0-10V |
| Digital Output | RS-232, RS-422, USB, Bluetooth | | | | |
| Digital Display | P110 | | | | |
| Sensor Overall Dimensions | 215 x 110 x 105 mm | 215 x 110 x 105 mm | 355 x 110 x 105 mm | 355 x 110 x 105 mm | 215 x 110 x 105 mm |
| Sensor Weight | ~2.0Kg | ~2.0Kg | 3.4Kg | 3.4Kg | ~2.0Kg |
| Operating Temp. Range | 0°C +50°C | 0°C +50°C | 0°C +50°C | 0°C +50°C | Sensor : 0°C +50°C / Optical Head +FOC end: 0°C +200°C |
| Storage Temp. Range | -20°C +70°C | | | | |
| Humidity | Unlimited for the sensor-head | | | | |

About Us

Temperature is one most common measured physical entity among vivid industrial sectors. Understanding the very importance of temperature in process industries, Accurate Sensors Technologies was founded in 1994 to focus exclusively on non-contact temperature measurement solutions for Aluminium surfaces with low, unstable and variable emissivity characteristics. We use innovative approaches for handling the unstable targets and intermediate conditions common to process industries via achieving a degree of accuracy far better than pyrometers available in the market.

Our comprehensive product portfolio comprises infrared measurement devices for different industrial applications as well as research & development. Along with our free thermal analysis software, our measurement devices enable constant monitoring and control of virtually every manufacturing process, and reductions in production costs through specific process optimization.

Today AST is a leading name among manufacturers of Infrared Pyrometers for non contact temperature measurement in Processes Industries like Steel, Aluminium, Cement, Glass and non metals etc. Apart from pyrometers, AST also provides infrared cameras , furnace monitoring systems and black body furnaces.

Our highly experienced Electro-Physics, Optical scientists and application engineering teams continuously strives to provide our valuable customers best possible solutions in the world of infrared measurement technology. Our sales/dealer network with experienced and qualified application experts assures customer satisfaction via instant solutions and feedbacks. With large vivid distributors network worldwide our products are just a mouse click away. We strive to provide regular dealer training via conferences ,joint customer visits for demonstration and participating in leading exhibitions worldwide. We are ISO 9001:2008 accredited to guarantee all our internal procedures. We ensure unobstructed production of all products every time for our valuable customers and dealers worldwide.



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