AST
Accurate Sensing Technologies

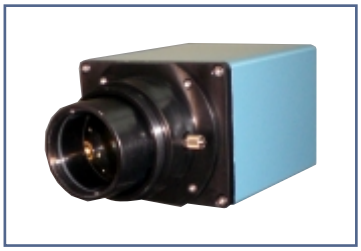
Infrared Non Contact Pyrometers

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

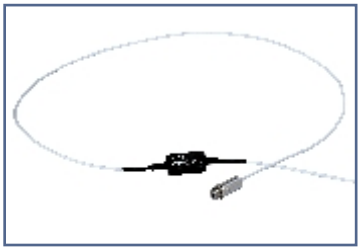
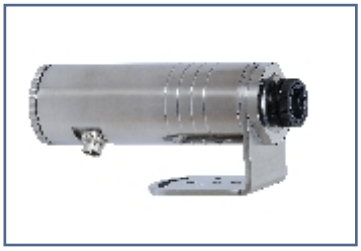


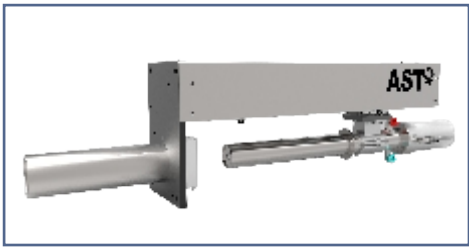


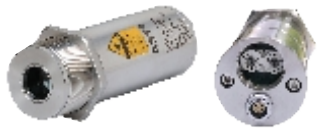








	T - Series			T3 - Series		
						
Models	**TL-8**	**TL-514**	**TL-390**	**T3-250/450**		**T3-390**
Features	Digital IR Pyrometer with Analog output, TTL output & USB interface for parameter setting for low temperature applications	Digital IR Pyrometer with Analog output, TTL output & USB interface for 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 (El50), 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 adajustable 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°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

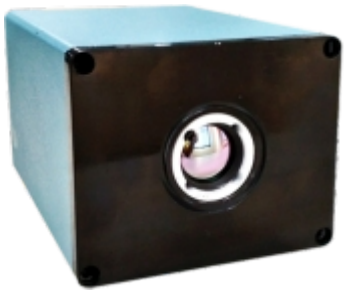
- ✓ Wide measurement range 700-1800°C (upto 25Hz frame rate)
- ✓ High dynamic CMOS detector with upto 768 x 576 pixels resolution
- ✓ Thermal as well as Monochrome Video Display
- ✓ Fast thermal data acquisition in real time via Gigabit Ethernet/USB
- ✓ Configurable storage and replay temperature video
- ✓ 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 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

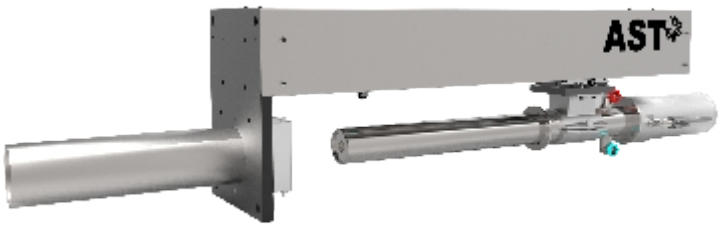
Model	LTE-384
Detector Type	Uncooled FPA detector
IR Resolution	384x288
Pixel Pitch	17μm
Spectral Range	7.5 - 14μm
NETD	<0.05°C @30°C
Frequency	50Hz/60Hz
Operation Temp. Range	-30°C ~ +60°C

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

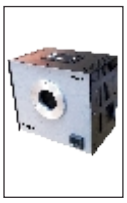
Thermal Camera (TE-750, TE-750/OV)

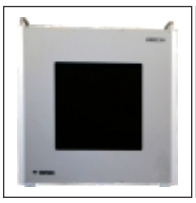
Image Sensor	HD CMOS Sensor
Temperature Range	700° C to 1800° C
Accuracy	0.3% of measure value + 1°
Resolution	768 x 576 pixels
Frame rate	25 Hz
Spectral Range	0.85 to 1.1μm
Connectivity	Ethernet/USB

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

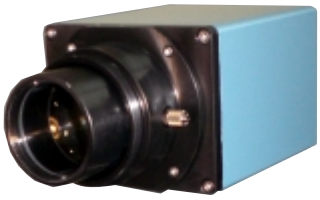






Device Type	Calsys110	Calsys500	LBB33H/11CH	Calsys1200	Calsys1500	Calsys1700	Fastcal 2700
Temperature Range	10 to 110°C	50°C to 500°C	-15°C to 150° C	300°C to 1200°C	500°C to 1500°C	500°C to 1700°C	500°C to 2700°C
Stability	±0.1°C	± 0.5°C at 50°C ± 0.8°C at 250°C ± 1.0°C at 500°C	0.01° C/0.001° C	± 0.2°C 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	500x500x250/310x350x 210mm, 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

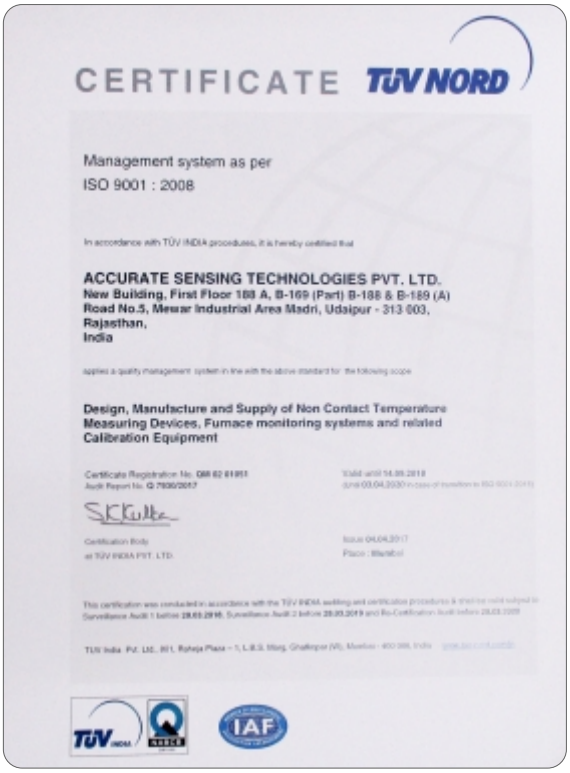
Special Aluminum / Non-Ferrous Pyrometers




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.


CERTIFICATE TÜV NORD

Management system as per
ISO 9001 : 2008

In accordance with TÜV INDIA procedures, it is hereby certified that

ACCURATE SENSING TECHNOLOGIES PVT. LTD.
New Building, First Floor 188 A, B-169 (Part) B-188 & B-189 (A)
Road No.5, Mewar Industrial Area Madri, Udaipur - 313 003,
Rajasthan,
India

applies a quality management system in line with the above standard for the following scope

Design, Manufacture and Supply of Non Contact Temperature Measuring Devices, Furnace monitoring systems and related Calibration Equipment

Certificate Registration No. 08 62 61951
Audit Report No. Q 7030/2017

Valid until 14.05.2018
(until 03.04.2020 in case of transition to ISO 9001:2015)

Certification Body
at TÜV INDIA PVT. LTD.

Issue 04.04.2017
Place : Mumbai

This certification was conducted in accordance with the TÜV INDIA auditing and certification procedures & shall be valid subject to Surveillance Audit 1 before 18.03.2018, Surveillance Audit 2 before 20.03.2019 and Re-Certification Audit before 20.03.2020

TÜV India Pvt. Ltd., 801, Rohaja Plaza – 1, L.B.S. Marg, Ghatkopar (W), Mumbai - 400 086, India www.tuv-india.com

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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AST
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We Measure Accurate Temperature in Extreme Conditions