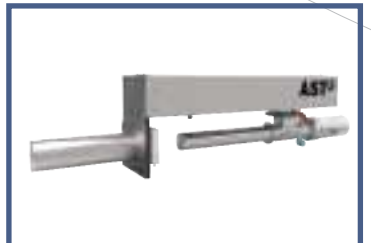
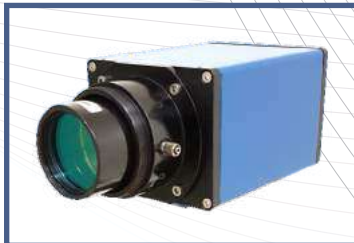


**We Measure Accurate Temperature in Extreme Conditions**

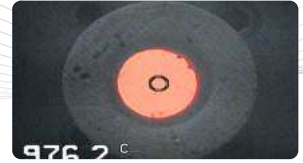
## PRODUCT OVERVIEW

- ✓ Infrared Pyrometers
- ✓ Thermal Imagers
- ✓ Furnace Monitoring System
- ✓ Black Bodies





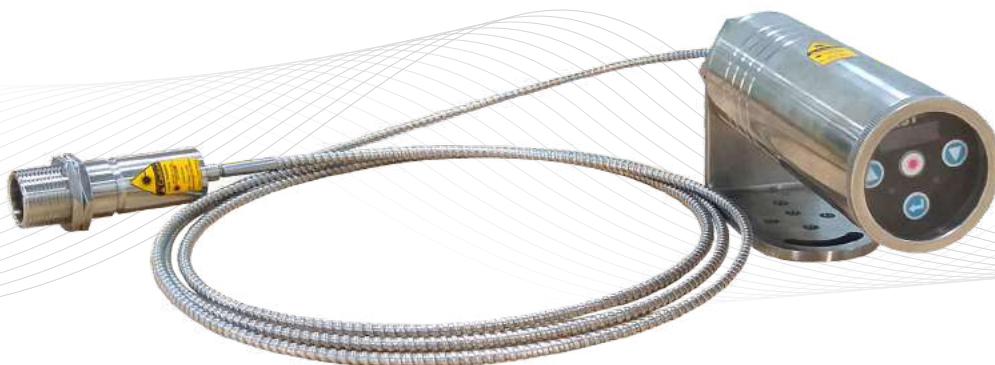
Thermal Image



Video Module

## A+ Series

Model	A250+	A450+	A450C+	A250C+
Features	Focusable Digital IR Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder/Video module, Parameterizing Keys & OLED Display	Focusable Digital IR Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder/Video module, Parameterizing Keys & OLED Display	Focusable Digital IR two color Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder/Video module, Parameterizing Keys & OLED Display	Focusable Digital IR two color Pyrometer with Analog output, Digital interface, Laser targeting/Through the lens view finder/Video module, Parameterizing Keys & OLED Display
Temperature Range (Sub Range Adjustable)	210°C - 1350°C (410°F - 2462°F) 250°C - 1800°C (482°F - 3272°F) 300°C - 2500°C (572°F - 4532°F) 350°C - 3000°C (662°F - 5432°F)	600°C - 2500°C (1112°F - 4532°F)	600°C - 1600°C (1112°F - 2912°F) 800°C - 2500°C (1472°F - 4532°F)	475°C - 1475°C (887°F - 2687°F)
Emissivity	0.1.....1.0 adjustable	0.1.....1.0 adjustable	0.75....1.25 slope adjustable	0.75....1.25 slope adjustable
Spectral Range	1.6 µm	1.0 µm	0.7....1.15 µm	1.5µm/1.6 µm
Photodetector Type	InGaAs	Si	Si/Si	InGaAs/InGaAs
Distance to Spot Size Ratio	75:1 150:1 300:1	300:1	150:1 300:1	150:1
Response Time	2 msec adjustable upto 10 sec	2 msec adjustable upto 10 sec	20 msec. adjustable upto 10 sec.	100 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 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	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)
Digital Output	RS-485	RS-485	RS-485	RS-485
Sighting	Laser Pilot Light(PL), Through The Lens (TL), Video Module	Laser Pilot Light(PL), Through The Lens (TL), Video Module	Laser Pilot Light(PL), Through The Lens (TL), Video Module	Laser Pilot Light(PL), Through The Lens (TL) & Video Module
Operating Temperature Range	0 - 70°C (32 - 158°F )	0 - 70°C (32 - 158°F )	0 - 70°C (32 - 158°F )	0°C.....70°C (32 - 158°F ) ; 0°C.....200°C (With water cooling jacket)
Power Supply	12V to 28V DC with reverse voltage protection	12V to 28V DC with reverse voltage protection	12V to 28V DC with reverse voltage protection	12V to 28V DC with reverse voltage protection
Power Consumption	Max 4.0 watt	Max 4.0 watt	Max 4.0 watt	Max 2.5 watt
Protection Class	IP65	IP65	IP65	IP65
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)
Dimensions & Weight	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=188.5mm (7.42in), 1.2kg (2.64lbs)



### A+ Series with Fiber Optics

Model	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, Parameterizing Keys & OLED Display	Digital IR pyrometer with mono fiber optic cable, Laser Pilot light, Digital Interface, Analog output, Parameterizing Keys & OLED Display	A250C+ FO PL is a highly accurate digital two color pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments.	Digital IR two color pyrometer with mono fiber optic cable, Laser Pilot light, Digital Interface, Analog output, Parameterizing Keys & OLED Display
Temperature Range (Sub Range Adjustable)	250°C - 1800°C (482°F - 3272°F) 300°C - 2500°C (572°F - 4532°F)	600°C - 2500°C (1112°F - 4532°F)	350°C - 1000°C (630°F - 1800°F) 450°C - 1350°C (810°F - 2430°F)	800°C - 2500°C (1472°F - 4532°F) 1000°C - 3200°C (1832°F - 5792°F) 600°C - 1600°C (1112°F - 2912°F)
Emissivity	0.1....1.0 adjustable	0.1....1.0 adjustable	0.1....1.0 adjustable	0.75....1.25 slope adjustable
Spectral Range	1.6µm	1.0 µm	1.5/1.6 µm	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) 400:1(OH III - V)	100:1(OH I) 200:1(OH II) 200:1(OH II - V) 400:1(OH III - V)	100:1 OH(I) 100:1 OH(II) 100:1 OH(II) - Variable 200:1 OH(I) 200:1 OH(II) - 200:1 OH(II) - Variable	100:1 200:1 400:1
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 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	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)
Digital Output	RS-485	RS-485	RS-485	RS-485
Sighting	Laser pilot light	Laser pilot light	Laser pilot light	Laser pilot light
Operating Temperature Range	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)
Power Supply	12V to 28V DC with reverse polarity protection	12V to 28V DC with reverse polarity protection	12V to 28V DC with reverse polarity protection	12V to 28V DC with reverse polarity protection
Power Consumption	Max. 4 watt	Max. 4 watt	Max. 4 watt	Max. 4 watt
Protection Class	IP65	IP65	IP65	IP65
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)
Dimensions & Weight	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)



Thermal Image

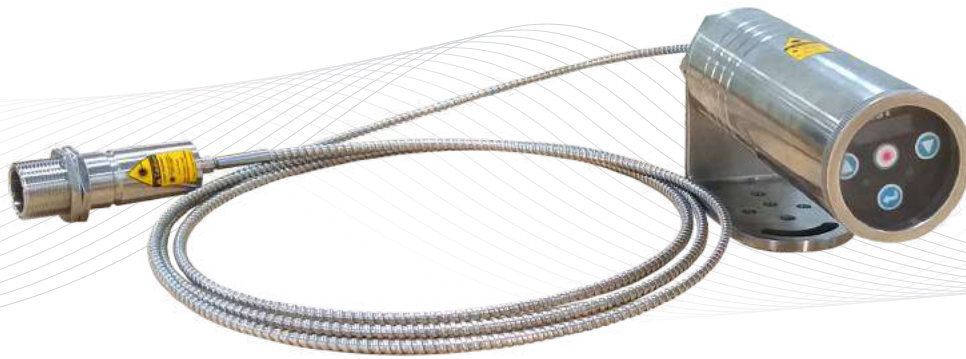


Video Module

## Swift Series

Model	Swift 250	Swift 350	Swift 450
Features	SWIFT Series is a highly accurate and very fast digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments	SWIFT Series is a highly accurate and very fast digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments	SWIFT Series is a highly accurate and very fast digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments
Temperature Range (Sub Range Adjustable)	250°C - 1800°C (450°F - 3240°F) 300°C - 2500°C (540°F - 4500°F) 350°C - 3000°C (630°F - 5400°F)	350°C - 3500°C (630°F - 6300°F)	600°C - 2500°C (1080°F - 4500°F)
Emissivity	0.1.....1.0 adjustable	0.1.....1.0 adjustable	0.1.....1.0 adjustable
Spectral Range	1.6 µm	2.0 to 2.6 µm	1.0µm
Photodetector Type	InGaAs	Extended InGaAs	Si
Distance to Spot Size Ratio	150:1(250°C - 1800°C) 300:1(300°C - 2500°C) 300:1(350°C - 3000°C)	300:1(350°C - 3500°C)	300:1(600°C - 2500°C)
Response Time	10 µsec adjustable upto 10 sec	10 µsec adjustable upto 10 sec	10 µsec adjustable upto 10 sec
Accuracy	± 0.5% of the measured value + 1°C	± 0.5% of the measured value + 1°C	± 0.5% of the measured value + 1°C
Repeatability	0.2% of reading in °C + 1°C	0.2% of reading in °C + 1°C	0.2% of reading in °C + 1°C
Analog Output	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)
Digital Output	Ethernet	Ethernet	Ethernet
Sighting	Laser Pilot Light(PL)	Laser Pilot Light(PL)	Laser Pilot Light(PL)
Operating Temperature Range	0°C.....70°C(32 - 158°F)	0°C.....70°C(32 - 158°F)	0°C.....70°C(32 - 158°F)
Power Consumption	Max 3.0 watt	Max 3.0 watt	Max 3.0 watt
Protection Class	IP65	IP65	IP65
Storage Temperature	-20°C...70°C (-4 to 158°F)	-20°C...70°C (-4 to 158°F)	-20°C...70°C (-4 to 158°F)
Dimensions & Weight	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)





## Swift Series with Fiber Optics

Model	Swift 250 FO	Swift 350 FO	Swift 450 FO
Features	SWIFT FO PL Series is a highly accurate and very fast digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments.	SWIFT FO PL Series is a highly accurate and very fast digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments.	SWIFT FO PL Series is a highly accurate and very fast digital single color IR Focusable pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments.
Temperature Range (Sub Range Adjustable)	250°C - 1800°C (450°F - 3240°F) 300°C - 2500°C (540°F - 4500°F)	350°C - 3500°C (630°F - 6300°F)	600°C - 2500°C (1080°F - 4500°F)
Emissivity	0.1.....1.0 adjustable	0.1.....1.0 adjustable	0.1.....1.0 adjustable
Spectral Range	1.6 µm	2.0 to 2.6 µm	1.0µm
Photodetector Type	InGaAs	Extended InGaAs	Si
Distance to Spot Size Ratio	200:1 OH(II)	200:1 OH(II)	200:1 OH(II)
Response Time	10 µsec adjustable upto 10 sec	10 µsec adjustable upto 10 sec	10 µsec adjustable upto 10 sec
Accuracy	± 0.5% of the measured value + 1°C	± 0.5% of the measured value + 1°C	± 0.5% of the measured value + 1°C
Repeatability	0.2% of reading in °C + 1°C	0.2% of reading in °C + 1°C	0.2% of reading in °C + 1°C
Analog Output	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)	0-20mA, 4-20mA (User selectable)
Digital Output	Ethernet	Ethernet	Ethernet
Sighting	Laser Pilot Light(PL)	Laser Pilot Light(PL)	Laser Pilot Light(PL)
Operating Temperature Range	Pyrometer 0°C.....70°C(32 - 158°F) Optical head and Fibre Optic Cable upto 250°C	Pyrometer 0°C.....70°C(32 - 158°F) Optical head and Fibre Optic Cable upto 250°C	Pyrometer 0°C.....70°C(32 - 158°F) Optical head and Fibre Optic Cable upto 250°C
Power Consumption	Max 3.0 watt	Max 3.0 watt	Max 3.0 watt
Protection Class	IP65	IP65	IP65
Storage Temperature	-20°C...70°C(-4 to 158°F)	-20°C...70°C (-4 to 158°F)	-20°C...70°C(-4 to 158°F)
Dimensions & Weight	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)	Dia= Ø 56mm (2.20in), L=199.5mm (7.85in), 1.2kg (2.64lbs)







## A Series

Model	A250 ❄️	A450 ❄️	A250C ❄️	A450C ❄️	A150 ❄️
Features	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, Bluetooth/USB 2.0, Laser targeting or Through the lens view finder	Digital two color 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 for temperature measurement of metallic surfaces, graphite & ceramics
Temperature Range (Sub Range Adjustable)	210°C - 1350°C (410°F - 2462°F) 250°C - 1800°C (482°F - 3272°F) 300°C - 2500°C (572°F - 4532°F) 350°C - 3000°C (662°F - 5432°F)	600°C - 2500°C (1112°F - 4532°F)	350°C - 1000°C (662°F - 1832°F) 450°C - 1350°C (842°F - 2462°F)	600°C - 1600°C (1112°F - 2912°F) 800°C - 2500°C (1472°F - 4532°F)	75°C - 700°C (167°F - 1292°F)
Emissivity	0.1.....1.0 adjustable	0.1.....1.0 adjustable	0.75....1.25 slope adjustable	0.75....1.25 slope adjustable	0.1.....1.0 adjustable
Spectral Range	1.6 µm	1.0 µm	1.5µm/1.6µm	0.7.....1.15 µm	2 to 2.6 µm
Photodetector Type	InGaAs	Si	InGaAs/InGaAs	Si/Si	Extended InGaAs
Distance to Spot Size Ratio	50 : 1 100 : 1 200 : 1 200 : 1	200 : 1	100:1 200:1	100 : 1 200 : 1	40 : 1
Response Time	2 msec. adjustable upto 10 sec.	2 msec. adjustable upto 10 sec	100 msec adjustable upto 10 sec	10 msec.	2 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 the measured value + 1°C	±0.5% of the measured value +1°C	Upto 400°C : 3°C T> 400°C : 0.5% of measured value in °C +1°C
Repeatability	0.1% of reading in °C +1°C				
Analog Output	0-20mA, 4-20mA, 0-10V (User selectable)				
Digital Output	Bluetooth/USB 2.0, RS-232 / RS - 485 (User Selectable)				
Sighting	Laser Pilot light or Through the lens sighting				Laser Pilot light
Operating Temperature Range	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F) (With water cooling jacket)				
Power Supply	12V to 28V DC with reverse polarity protection				
Power Consumption	Max. 2.5 watt	Max. 2.5 watt	Max 2.5 watt	Max. 2.5 watt	Max. 2.5 watt
Protection Class	IP65	IP65	IP65	IP65	IP65
Storage Temperature	-20 to 70°C (-4 to 158°F)				
Dimensions & Weight	Dia=Ø49.5mm(1.94in), L = 118mm(4.64in), 0.6kg(1.32lbs)				



### A Series with Fiber Optics

Model	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 & Bluetooth/USB 2.0	Digital two color Pyrometer with mono fiber optic cable, Laser Pilot light with Digital interface, Analog output & Bluetooth/USB 2.0
Temperature Range (Sub Range Adjustable)	250°C - 1800°C (482°F - 3272°F) 300°C - 2500°C (572°F - 4532°F)	600°C - 2500°C (1112°F - 4532°F)	350°C - 1000°C (662°F - 1832°F) 450°C - 1350°C (842°F - 2462°F)	800°C - 2500°C (1472°F - 4532°F) 1000°C - 3200°C (1832°F - 5792°F) 600°C - 1600°C (1112°F - 2912°F)
Emissivity	0.1.....1.0 adjustable	0.1.....1.0 adjustable	0.75....1.25 slope adjustable	0.75....1.25 slope adjustable
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	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)
Digital Output	Bluetooth/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)	Bluetooth/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 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)	Pyrometer 0 - 70°C (32 - 158°F), Optical Head & Fiber Optic Cable upto 250°C (482°F)
Power Supply	12V to 28V DC with reverse polarity protection	12V to 28V DC with reverse polarity protection	12V to 28V DC with reverse polarity protection	12V to 28V DC with reverse polarity protection
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 (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)
Dimensions & Weight	Dia=Ø49.5mm(1.94in) L = 118mm(4.64in) 0.6kg(1.32lbs)	Dia=Ø49.5mm(1.94in) L = 118mm(4.64in) 0.6kg(1.32lbs)	Dia=Ø49.5mm(1.94in) L = 118mm(4.64in) 0.6kg(1.32lbs)	Dia=Ø49.5mm(1.94in) L = 118mm(4.64in) 0.6kg(1.32lbs)



## A Series with Thermopile

Model	AL30	AL45	AL390	AL514	AL30 FAST
Features	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 CO2	Digital IR Pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting light for measurement through flame	Digital IR Pyrometer with Analog output, Digital interface, USB 2.0, Laser targeting light for glass surface temperature measurement	AL30 FAST Digital Infrared Pyrometers with Thermopile Sensors provides the advantage of noncontact temperature measurement of non-metallic surfaces, painted, coated or anodized metals etc.
Temperature Range (Sub Range Adjustable)	0°C - 1000°C (32°F - 1832°F) 75°C - 1000°C (167°F - 1832°F)	400°C - 1500°C (752°F - 2732°F)	300°C - 1400°C (572°F - 2552°F)	300°C - 1400°C (572°F - 2552°F) 400°C - 2500°C (752°F - 4532°F)	0°C - 1000°C (32°F - 1832°F) 75°C - 1000°C (167°F - 1832°F)
Emissivity	0.1...1.2 adjustable	0.1....1.2 adjustable	0.1 ... 1.2 adjustable	0.1 ... 1.2 adjustable	0.1....1.2 adjustable
Spectral Range	8.....14µm	4.43 µm	3.9 µm	5.14 µm	8 µm...14 µm
Photodetector Type	Thermopile	Thermopile	Thermopile	Thermopile	Thermopile
Distance to Spot Size Ratio	50 : 1 100 : 1	40 : 1	50 : 1	50 : 1	50:1 100:1
Response Time	60 msec. adjustable upto 10 sec				6 msec
Accuracy	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	T < 200°C; ±1.5% of measured value or 3°C T ≥ 200°C; ±1.0% of measured value or 4°C
Repeatability	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	0.3% of reading in °C +1°C
Analog Output	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)
Digital Output	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)
Sighting	Laser pilot light	Laser Pilot Light	Laser pilot Light	Laser pilot Light	Laser Pilot Light (PL)
Operating Temperature Range	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F)(With water cooling jacket)	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F)(With water cooling jacket)	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F)(With water cooling jacket)	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F)(With water cooling jacket)	0°C.....70°C 0°C.....200°C (With water cooling jacket)
Power Supply	24V DC	24V DC	24V DC	24V DC	24V DC
Power Consumption	Max. 2.5 watt	Max. 2.5 watt	Max. 2.5 watt	Max. 2.5 watt	Max 2.5 watt
Protection Class	IP65	IP65	IP65	IP65	IP65
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20°C...70°C (-4 to 158°F)
Dimensions & Weight	Dia=Ø49.5mm(1.94in), L = 118mm(4.64in), 0.6kg(1.32lbs)				





## E Series

Model	E250	E450	E450C
Features	Digital IR 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 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
Temperature Range (Sub Range Adjustable)	250°C - 1000° C (482°F - 1832°F) 300°C - 1300°C (572°F - 2372°F) 350°C - 1800° C (662°F - 3272°F)	600°C - 1900° C (1112°F - 3452°F)	800°C - 2500°C (1472°F - 4532°F)
Emissivity	0.1....1.0 adjustable	0.1....1.0 adjustable	0.75....1.25 slope adjustable
Spectral Range	1.6µm	1µm	0.7.....1.15µm
Photodetector Type	InGaAs	Si	Si/Si
Distance to Spot Size Ratio	20 : 1 40 : 1 80 : 1	80 : 1	80 : 1
Response Time	2 msec. adjustable upto 10 sec.	2 msec. adjustable upto 10 sec.	20 msec.adjustable upto10 sec.
Accuracy	±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
Analog Output	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)
Digital Output	USB 2.0, RS-232 / RS-485 (Optional)	USB 2.0, RS-232 / RS-485 (Optional)	USB 2.0, RS-232 / RS-485 (Optional)
Sighting	Laser pilot light	Laser pilot light	Laser pilot light
Operating Temperature Range	Electronic Box and Sensor head upto 70°C (158°F)	Electronic Box and Sensor head upto 70°C (158°F)	Electronic Box and Sensor head upto 70°C (158°F)
Power Supply	24V DC	24V DC	24V DC
Power Consumption	Max. 2.5 watt	Max. 2.5 watt	Max. 2.5 watt
Protection Class	IP65	IP65	IP65
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)
Dimensions & Weight	112.5 x 82.5 x 33 mm, (4.42 x 3.24 x 1.29 in), 0.6 kg (1.32lbs)	112.5 x 82.5 x 33 mm, (4.42 x 3.24 x 1.29 in), 0.6 kg (1.32lbs)	112.5 x 82.5 x 33 mm, (4.42 x 3.24 x 1.29 in), 0.6 kg (1.32lbs)



## E Series

Model	EL50 & EL50H	EL50H+	EL50H EX	EL50H+ EX
Features	Digital IR Pyrometer with extended Sensor head, Analog output, Digital interface, Relay output, USB 2.0, Inbuilt LCD & Keypad for parameterization	Digital Pyrometer in economic range with extended sensor head in 4 wire technology, for non-contact temperature measurement between 0°C to 800°C.	Digital Pyrometer in economic range with extended sensor head in 4 wire technology, for non-contact temperature measurement between 0°C to 800°C.	Digital Pyrometer in economic range with extended sensor head in 4 wire technology, for non-contact temperature measurement between 0°C to 800°C.
Temperature Range (Sub Range Adjustable)	0°C - 800° C (32°F - 1472°F)	0°C....800°C (32°F - 1472°F)	0°C....800°C (32°F - 1472°F)	0°C....800°C (32°F - 1472°F)
Emissivity	0.1....1.2 adjustable	0.1....1.2 adjustable	0.1....1.2 adjustable	0.1....1.2 adjustable
Spectral Range	8.....14µm	8...14 µm	8...14 µm	8...14 µm
Photodetector Type	Thermopile	Thermopile	Thermopile	Thermopile
Distance to Spot Size Ratio	2 : 1 15 : 1	15:1	2:1, 15:1 (To be specified while ordering)	15:1
Response Time	20 msec. adjustable upto 10 sec.(EL50) 60 msec. adjustable upto 10 sec.(EL50H)	60 msec adjustable upto 10 sec	60 msec adjustable upto 10 sec	60 msec adjustable upto 10 sec
Accuracy	±1.0% of the measured value or 3°C whichever value is greater	±1% or ±1.5°C (at ambient temperature 23 ±5 °C)	±1.5% of the measured value or 2°C whichever is greater (The sensor head must be at constant ambient temperature for a minimum of 15 minutes)	±1% or ±1.5°C (at ambient temperature 23 ±5 °C)
Repeatability	0.3% of reading in °C +1°C	0.3% of reading in °C + 1°C	0.3% of reading in °C + 1°C	0.1% of reading in °C +1°C
Analog Output	4-20mA, 0-20mA, 0-10V, J & K type T/C (User selectable)	0-20mA, 4-20mA, 0-10V, Thermocouple Type "K" or "J" (User selectable)	0-20mA, 4-20mA, 0-10V, Thermocouple Type "K" or "J" (User selectable)	0-20mA, 4-20mA, 0-10V, Thermocouple Type "K" or "J" (User selectable)
Digital Output	USB 2.0, RS-232 / RS-485 (Optional)			
Operating Temperature Range	N/A	Electronic box upto 70°C Sensor head upto 250°C	Electronic box upto 70°C Sensor head upto 180°C	Electronic box upto 70°C Sensor head upto 250°C
Power Supply	Electronic Box upto 70°C (158°F), Sensor head upto :120°C (248°F) for EL50 & upto180°C (356°F) EL50-H	12V DC to 28 V DC with reverse polarity protection	12V DC to 28 V DC with reverse polarity protection	12V DC to 28 V DC with reverse polarity protection
Power Consumption	12V - 28V DC with reverse polarity protection	Max. 2.5 watt	Max. 2.5 watt	Max. 2.5 watt
Protection Class	Max. 2.5 watt	IP65	IP65	IP65
Storage Temperature	IP65	-20°C...70°C (Electronics), -20°C...250°C (Sensor Head)	-20....60°C(Electronics) - 20....180°C (Sensor Head)	-20°C...70°C (Electronics), -20°C...250°C (Sensor Head)
Dimensions & Weight	-20 to 70°C (-4 to 158°F)	112.5 x 82.5 x 33 mm, (4.42 x 3.24 x 1.29 in), 0.6 kg (1.32lbs)		



## T3 Series

Model	T3-250	T3-450	T3-390	T3-514	T3-814
Features	Digital IR Pyrometers in 2 wire technology with Analog output, TTL output, USB interface and External Emissivity setting				
Temperature Range (Sub Range Adjustable)	250°C - 1300°C (480°F - 2372°F) 300°C - 1800°C (572°F - 3272°F) 350°C - 2500°C (662°F - 4532°F)	600°C - 2500°C (1112°F - 4532°F)	300°C - 1400°C (572°F - 2552°F)	300°C - 1400°C (572°F - 2552°F) 400°C - 2500°C (752°F - 4532°F)	0°C - 1000°C (32°F - 1832°F) 75°C - 1000°C (167°F - 1832°F)
Emissivity	0.1.....1.0 adjustable at device				
Spectral Range	1.6 µm	1.0 µm	3.9µm	5.14 µm	8 µm...14 µm
Photodetector Type	InGaAs	Si	Thermopile	Thermopile	Thermopile
Distance to Spot Size Ratio	50:1 100:1 200:1	200:1	50:1	50:1	50:1 100:1
Response Time	10 msec adjustable upto 10 sec	10 msec adjustable upto 10 sec	60 msec. adjustable upto 10sec	60 msec. adjustable upto 10sec	60 msec. adjustable upto 10sec
Accuracy	± 0.3% of the measured value + 1°C	± 0.3% of the measured value + 1°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% 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
Repeatability	0.1% of reading in °C + 1°C		0.3% of reading in °C + 1°C		
Analog Output	2 wire....4-20mA(Isolated)				
Digital Output	TTL Output	TTL Output	TTL Output	TTL Output	TTL Output
Sighting	Laser Pilot Light	Laser Pilot Light	Laser Pilot Light	Laser Pilot Light	Laser Pilot Light
Operating Temperature Range	0 - 70°C (32 - 158°F), 0 - 200°C (32 - 392°F), (With water cooling jacket)				
Power Supply	24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA)	24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA)	24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA)	24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA)	24 V DC Stabilized (5 to 25 V DC for Laser Targeting light (I ≤ 30 mA)
Power Consumption	For Laser Targeting Max 0.65 watt,For Device Max 0.6 watt	For Laser Targeting Max 0.65 watt,For Device Max 0.6 watt	For Laser Targeting Max 0.65 watt,For Device Max 0.6 watt	For Laser Targeting Max 0.65 watt For Device Max 0.6 watt	For Laser Targeting Max 0.65 watt For Device Max 0.6 watt
Protection Class	IP65	IP65	IP65	IP65	IP65
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)
Dimensions & Weight	Dia = Ø40mm (1.57in) L = 113.5mm (1.46in) 0.25 kg (0.55lbs)	Dia = Ø40mm (1.57in) L = 113.5mm (1.46in) 0.25 kg (0.55lbs)	Dia = Ø40mm (1.57in) L = 113.5mm (1.46in) 0.25 kg (0.55lbs)	Dia = Ø40mm (1.57in) L = 113.5mm (1.46in) 0.25 kg (0.55lbs)	Dia = Ø40mm (1.57in) L = 113.5mm (1.46in) 0.25 kg (0.55lbs)



### T Series

### ML Series

Model	TL-8	TL-514	TL-390	TL8 FAST	ML-2W, ML-10V, ML-K, ML-J
Features	Digital IR Pyrometer with Analog output, Alarm output, TTL output & USB interface for parameter setting for low temperature applications			rugged and compact IR Pyrometer of class T series especially designed for low temp. application needs	Miniature Digital online infrared non-contact pyrometer for low temperature applications
Temperature Range (Sub Range Adjustable)	0°C - 500°C (32°F - 932°F)	200°C - 1400°C (392°F - 2552°F)	300°C - 1400°C (572°F - 2552°F)	0°C to 500°C (32°F - 932°F)	0°C - 1000°C (32°F - 1832°F)
Emissivity	0.1....1.2 adjustable	0.1 - 1.0 adjustable	0.1 - 1.2 adjustable	0.1 to 1.2 adjustable	0.1 to 1.2 adjustable
Spectral Range	8.....14 μm	5.14μm	3.9μm	8 - 14 μm	8.....14 μm
Photodetector Type	Thermopile	Thermopile	Thermopile	Thermopile	Thermopile
Distance to Spot Size	15:1	50:1	50:1	15:1	15:1, 2:1
Response Time	100 msec. to 10 sec. adjustable	100 msec. to 10 sec. adjustable	100 msec. to 10 sec. adjustable	10 msec adjustable upto 10 sec	60 msec. adjustable upto 10 sec.
Accuracy	±2% of measured value or ±3°C whichever is greater	±1.5% of temperature reading	±1.5% of temperature reading	± 2% of measured value or ± 3°C whichever is greater	± 2% of measured value or ± 3°C whichever is greater
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	± 0.5% of measured value or ± 1°C whichever is greater	± 0.5% of measured value or ± 1°C whichever is greater
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	0 - 5V	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)
Digital Output	TTL output	TTL Output	TTL Output	TTL Output	TTL Output
Sighting	N/A	Laser pilot light	Laser pilot light	-	N/A
Operating Temperature Range	0 - 70°C (32 - 158°F)	0 - 70°C (32 - 158°F)	0 - 70°C (32 - 158°F)	0 - 70°C (32 - 158°F)	Electronics : 0 - 70°C (32 - 158°F) Sensing Head : 0 - 120°C (32 - 248°F)or 0....180°C (32 - 356°F)
Power Supply	24 V DC	24 V DC	24 V DC	24 V DC, I < 50 mA	8 V DC to 25 V DC
Power Consumption	Max 1.2 watt	Max 1.2 watt	Max 1.2 watt	Max 1.2 watt	Max 0.5 watt (Normal Mode)
Protection Class	IP65	IP65	IP65	IP65	IP54
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4°F to 158°F)	-20 to 70°C (-4°F to 158°F)	-20 to 70°C (-4°F to 158°F)	-20°C to 70°C (-4°F to 158°F)
Dimensions & Weight	Dia. = Ø25mm (0.98in) L = 103 mm (4.05in) 0.2 kg (0.44lbs)	Dia. = Ø25mm (0.98in) L = 103 mm (4.05in) 0.2 kg (0.44lbs)	Dia. = Ø25mm (0.98in) L = 103 mm (4.05in) 0.2 kg (0.44lbs)	Dia. = Ø25mm (0.98in) L = 103 mm (4.05in) 0.2 kg (0.44lbs)	Electronics : 43x22x11mm (1.69x0.86x0.43in) Sensing Head : M12 x 1, Dia Ø14.5mm (0.57in), L=35mm (1.37in)





Numeric Display



Graphic Display

## P Series

Model	P250	P450	P450C	P390
Features	Highly accurate Portable infrared non-contact pyrometer	Highly accurate Portable infrared non-contact pyrometer	Highly accurate Portable two color infrared non-contact pyrometer	Highly accurate Portable two color infrared non-contact pyrometer
Temperature Range (Sub Range Adjustable)	210°C - 1350°C (410°F - 2462°F) 250°C - 1800°C (482°F - 3272°F) 300°C - 2500°C (572°F - 4532°F)	600°C - 2500°C (1112°F - 4532°F) 700°C - 3000°C (1292°F - 5432°F)	600°C - 1600°C (1112°F - 2912°F) 800°C - 2500°C (1472°F - 4532°F)	400°C - 1400°C (720°F - 2520°F)
Emissivity	0.1....1.0 adjustable	0.1....1.0 adjustable	0.75....1.25 slope adjustable	0.1....1.0 adjustable
Spectral Range	1.6 µm	1.0 µm	0.7....1.15µm	3.9 µm
Photodetector Type	InGaAs	Si	Si/Si	Thermopile
Distance to Spot Size Ratio	100:1 200:1 400:1	400:1 400:1	200:1 400:1	200:1
Response Time	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)	25msec in Numerical Mode, 30msec in Graphical Mode, 30 msec (when data storage is ON)	50 msec in Numerical Mode 55 msec in Graphical Mode 55 msec (When data storage is 'ON')
Accuracy	± 0.3% of the measured value + 1°C	± 0.3% of the measured value + 1°C	± 0.5% of the measured value + 1°C	±1.0% 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	0.5% of reading in °C + 1°C
Digital Output	USB 2.0	USB 2.0	USB 2.0	USB 2.0
Sighting	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	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
Operating Temperature Range	0 - 70°C (32 - 158°F)	0 - 70°C (32 - 158°F)	0 - 70°C (32 - 158°F)	0 - 70°C (32 - 158°F)
Power Supply	3 x 1.2 V Rechargeable batteries	3 x 1.2 V Rechargeable batteries	3 x 1.2 V Rechargeable batteries	3 x 1.2 V Rechargeable batteries
Protection Class	IP52	IP52	IP52	IP52
Storage Temperature	-20 to 55°C (-4 to 131°F)	-20 to 55°C (-4 to 131°F)	-20 to 55°C (-4 to 131°F)	-20 to 55°C (-4 to 131°F)
Dimensions & Weight	228 x 64 x 186mm (8.97x2.51x1.98in) 0.9kg (1.98lbs)	228 x 64 x 186mm (8.97x2.51x1.98in) 0.9kg (1.98lbs)	228 x 64 x 186mm (8.97x2.51x1.98in) 0.9kg (1.98lbs)	228 x 64 x 186mm (8.97x2.51x1.98in) 0.9kg (1.98lbs)


**Foundries**

**Glass Industries**

Model	IR CAST 2C	IR CAST 2C+	450G2	PGM+
Features	Digital two color pyrometer with through lens sighting, digital interface, analog output & USB 2.0 for metal casting applications	Digital two color focusable pyrometer with through lens sighting, digital interface, analog output, USB, OLED display and parameterizing keys 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)	700°C - 1700°C (1292°F - 3092°F)	700°C - 1700°C (1292°F - 3092°F)	600°C - 1800°C (1112°F - 3272°F)	250°C - 600°C (482°F - 1112°F)
Emissivity	0.75....1.25 slope adjustable	0.75....1.25 slope adjustable	0.05.....1.0 adjustable via DIP switch	0.1....1.0 adjustable
Spectral Range	0.7.....1.15µm	0.7.....1.15µm	1.0 µm	1.6 µm
Photodetector Type	Si / Si	Si / Si	Si	-
Distance to Spot Size Ratio	DV = 166:1 (V = Vertical) DH = 33:1 (H = Horizontal)	DV = 250:1 (V = Vertical) DH = 50:1 (H = Horizontal)	100 : 1 Min. Spot Size 11mm	-
Response Time	20msec. Adjustable upto 10 sec.	20msec. Adjustable upto 10 sec.	250 msec Adjustable upto 10 sec.	2 msec. Adjustable upto 10 sec.
Accuracy	± 0.5% +1°C of measured value	± 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	0.1% of reading in °C +1°C	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	0-20mA, 4-20mA, 0-10V (User selectable)	0-20mA, 4-20mA, 0-10V (User selectable)	4-20mA	-
Digital Output	USB 2.0, RS-232 / RS - 485 (User Selectable)	USB 2.0, RS-232 / RS - 485 (User Selectable)	USB 2.0	USB 2.0
Sighting	Through the lens sighting	Through the lens sighting	-	-
Operating Temperature Range	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F)(With water cooling jacket)	0 - 70°C (32 - 158°F), 0°C - 200°C (32 - 392°F)(With water cooling jacket)	Pyrometer 0 - 70°C (32 - 158°F) Optical head & Fiber optic max 250°C (482°F)	0 - 70°C (32 - 158°F) at handle end
Power Supply	24 V DC	24 V DC	24 V DC	3 AAA rechargeable Cell
Power Consumption	Max. 2.5 Watt.	Max. 2.5 Watt.	Max 0.5 watt	-
Protection Class	IP65	IP65	IP65	-
Storage Temperature	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-20 to 70°C (-4 to 158°F)	-
Dimensions & Weight	Dia. = Ø49.5 mm (1.94in), L = 118 mm (4.64in), 0.6 kg (1.3lbs)	Dia. = Ø49.5 mm (1.94in), L = 118 mm (4.64in), 0.6 kg (1.3lbs)	112.5 x 82.5 x 33.0 mm (4.42x3.24x1.29 in) 0.5 kg (1.10lbs)	-

## ThermCAM-HT

### (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 (1292°F - 3272°F)
Spectral Range	0.85 - 1.1µm
Detector	High Dynamic CMOS
Optional Resolution/Frame Rate	640 x 480 Pixels@ 25Hz
FOV	32°x24°, 51°x39°, 83°x67°
Thermal Sensitivity (NETD)	<1 K (700°C [ $<1292^{\circ}\text{F}$ ]), <2 K (1000°C [ $1832^{\circ}\text{F}$ ])
Analog Output	4 Channel Analog Current Output
Digital Input	2 Isolated Inputs
Digital Output	2 Relay Outputs
Connectivity	Ethernet/USB
Protocol	GIGE for ethernet, Proprietary for USB
Ambient Temperature	0°C - 60°C (32°F - 140°F)

Features
✓ High dynamic CMOS detector with upto 640 x 480 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, I/O Module

## ThermCAM-384

### (High Resolution, Long Wavelength Ultra Compact Infrared Camera)

LTE-384 is an affordable thermal camera in the market, with 25Hz frame rate, multi functions and wide temperature measurement range. It provides ultimate inspection tools and unprecedented easy-to use designs to fit your needs. Whether in quality control, process monitoring or process automation - the infrared camera LTE-384 measures temperatures without contact exactly and reliably. The device is durable, robust and suitable for industrial continuous operation.



#### Technical Specifications

Model	LTE-384	
Temperature Range	-20°C - 120°C 100°C - 1000°C Upto 1500°C Optional	(Switchable)
Spectral Range	8 - 14μm	
Detector	Uncooled FPA detector	
Optional Resolution/Frame Rate	384 x 288 Pixels@ 25Hz	
FOV	18.5°x14°	
Frequency	50Hz/60Hz	
Operation Temp. Range	-30°C ~ +60°C (-22°F ~ +140°F)	

Features
✓ 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
✓ IP54 encapsulation, 3 year warranty
✓ Professional software for free



## ThermCAM-640 (High Resolution, Long Wavelength Ultra Compact Infrared Camera)

LTE-640 is an affordable thermal camera in the market, with 30Hz frame rate, multi functions and wide temperature measurement range. It provides ultimate inspection tools and unprecedented easy-to use designs to fit your needs. Whether in quality control, process monitoring or process automation - the infrared camera LTE-640 measures temperatures without contact exactly and reliably. The device is durable, robust and suitable for industrial continuous operation. The modular thermal image processing software INFRAVIEW is customizable with Client-Server Architecture for catering to multiple clients at the same time. It can be configured / customized to cater to application / solution requirements. It is supplied with every LTE-640 Camera.



### Technical Specifications

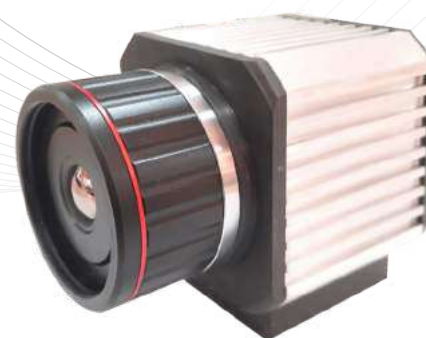
Model	LTE-640	
Temperature Range	-20°C - 120°C 100°C - 1000°C Upto 1500°C Optional	(Switchable)
Spectral Range	8 - 14μm	
Detector	Uncooled FPA detector	
Optional Resolution	640 x 480 Pixels	
FOV	30.4° x 23.1°	
Frequency	30Hz	
Operation Temp. Range	-10°C ~ +60°C (+14°F ~ +140°F)	

Features
✓ Auto tracking of hot spots and showing the temperature values
✓ Configurable storage and temperature video recording
✓ Digital and analog input/output modules
✓ Software controlled parameter settings
✓ Multiple client PC configuration
✓ Small aluminum compact housing
✓ Standard software package
✓ Integration in customized system solution, including software Adjustments

## ThermCAM-160 (Medium Resolution Long Wavelength Ultra Compact Infrared camera)

LTE-160 is a medium resolution thermal camera, with 30Hz frame rate, multi functions and wide temperature measurement range. It provides ultimate inspection tools and unprecedented easy-to use designs to fit your needs. Like quality control, process monitoring or process automation. The device is durable, robust and suitable for industrial continuous operation.

The thermal imager captured by LTE 160 can be transferred to a computer using Infraview software supplied with every LTE 160. It can display thermal video, provide continues thermal output without loss and no appreciable time delay in I/O cards. Multiple clients PC upto 4 can also be configured to view thermal video at different locations through LAN.



### Technical Specifications

Model	LTE-160	
Temperature Range	-20°C - 120°C 100°C - 1000°C Upto 1500°C Optional	
Spectral Range	8 - 14μm	
Detector	Uncooled FPA detector	
Optional Resolution	160 x 120 Pixels	
FOV	30.40°x23.1° (Other FOV's also possible)	
Frequency	30Hz	
Operation Temp. Range	-10°C ~ +60°C (+14°F ~ +140°F)	

Features
✓ Auto tracking of hot spots and showing the temperature values
✓ Configurable storage and temperature video recording
✓ Digital and analog input/output modules
✓ Software controlled parameter settings
✓ Multiple client PC configuration
✓ Small aluminum compact housing
✓ Standard software package
✓ Integration in customized system solution, including software Adjustments



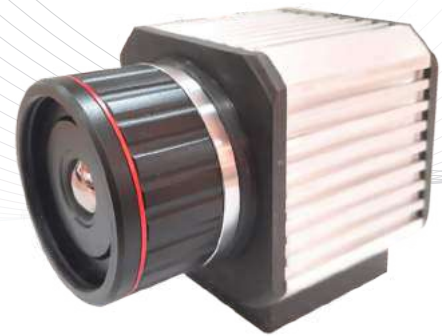
## ThermCAM-80

### (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
Temperature Range	-20°C - 500°C 100°C - 1000°C
Spectral Range	8 - 14μm
Detector	Uncooled FPA detector
Optional Resolution/Fram Rate	80 x 80 Pixels@ 9Hz
FOV	120°x90°, 88°x70°, 41°x33°, 18°x14°

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

# FURNACE MONITORING SYSTEM

Model	Specifications
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

Model	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%)

Model	Thermal Camera (TE-750, TE-750/OV)
Image Sensor	HD CMOS Sensor
Temperature Range	700° C to 1800° C (292°F to 3272°F)
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

	Pinhole Lens
Lens length	820 mm & 1100 mm (32.2 in & 43.3 in)
Angle of view	Straight view HxVxD 67°, 56°, 81° Elbow view 45°, 60°
Mount	CS
Focus	Manual Adjustable
Length	820 mm (32.2in)

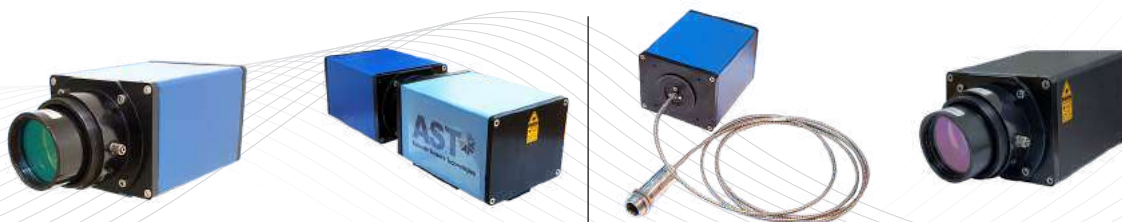
Infraview Software (For Thermal Camera)
✓ Configurable ROI's : point, line, free shape
✓ Histogram and isotherm visualization
✓ Hot and cold spot detection
✓ Color pallet scaling
✓ Trend charts
✓ Alarm output
✓ Video and Image export
✓ Server client configuration

## BLACK BODIES



Model	Calsys 37BB	LBBCH	LBBH	Calsys 1200BB	Calsys 1500BB	Calsys 1700BB	Fastcal 3000
Temperature Range	+5 to 50°C (50 to 230°F)	50 to 500°C (122 to 932°F)	50 to 400°C (5 to 302°F)	300 to 1200°C (572 to 2192°F)	500 to 1500°C (932 to 2732°F)	500 to 1700°C (932 to 3092°F)	500 to 3000°C (932 to 5432°F)
Time to Reach Max Temp.	10 to 15 Mins	45 Mins	30 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	0.98 ±0.01	0.95 ± 0.01	0.98 ±0.02	0.99 ± 0.01	0.99 ± 0.01	0.97 ± 0.01	-
Temperature Controller	Digital self tuned PID controller						
Computer Interface	RS - 232		RS-232/USB	RS - 232			
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 & Weight	110x110x137 mm (12.9x13.9x8.8 in), 12Kg (26.45lbs)	270x360x270 mm (10.6x14.7x10.6 in), 10Kg (22.04lbs)	500x500x250 mm (19.6x19.6x9.8 in)/310x350x210 mm (12.2x13.7x8.2 in), 14kg (30.8lbs)/6Kg (13.2lbs)	590x450x530 mm (23.2x17.7x20.8 in), 50 Kg(110.2lbs)	590x450x530 mm (23.2x17.7x20.8 in), 50 Kg(110.2lbs)	640x500x550 mm (25.1x19.6x21.6 in), 80 Kg (176.3lbs)	1700x900x1200 mm (66.9x35.4x47.2 in), 300 Kg (661.3lbs)

## SPECIAL PYROMETERS



### Aluminum Industry

Model	A5-IN/ A5-S-IN (Pyrometer with Built in Scanning System)	A5-EX/ A5-S-EX (Pyrometer with Built in Scanning System)	A5-WL/A5-WL-FO (Special pyrometer for Laser Welding)	A5-2W/A5-2W-FO (Pyrometer for special variable emissivity & Complicated atmosphere applications)
Temperature Range	300....2000°C (572....3632°F)	105....2500°C (221....4532°F)	105....2500°C (221....4532°F)/ 300....1000°C (662....1382°F)	105....2500°C (221....4532°F)/ 300....980°C (572....1796°F)
Photodetector Type	InGaAs	Extended InGaAs	Extended InGaAs	According to application
Spectral Range	1.3....1.6µm	2.1....2.4µm	2.0....2.5µm	According to application
Response Time	0.1sec to 17sec adjustable	0.1sec to 17sec adjustable	50 msec to 17sec adjustable	50 msec to 17sec adjustable
Accuracy & Repeatability	±1%	±1%	±1%	0.25% ±2°C (3.6°F)
Sighting	Laser Pilot Light	Laser Pilot Light	Laser Pilot Light	Laser Pilot Light
Power Supply	24V DC	24V DC	24V DC	24V DC
Analog Output	4 - 20mA, 0 - 20mA, 0 - 10V, K type T/C	4 - 20mA, 0 - 20mA, 0 - 10V, K type T/C	4 - 20mA, 0 - 20mA, 0 - 10V, K type T/C	4 - 20mA, 0 - 20mA, 0 - 10V, K type T/C
Digital Output	RS-232, RS-422, RS-485, USB, Bluetooth	RS-232, RS-422, RS-485, USB, Bluetooth	RS-232, RS-422, RS-485, USB, Bluetooth	RS-232, RS-422, RS-485, USB, Bluetooth
Digital Display	P110	P110	P110	P110
Dimensions	215x110x105 mm (8.46x4.33x4.13 in)	215x110x105 mm (8.46x4.33x4.13 in)	215x110x105 mm (8.46x4.33x4.13 in)	215x110x105 mm (8.46x4.33x4.13 in)
Sensor Weight	2 Kg (4.4 lbs)	2 Kg (4.4 lbs)	2 Kg (4.4 lbs)	2 Kg (4.4 lbs)
Operating Temp. Range	0-50°C (32-122°F)	0-50°C (32-122°F)	0-50°C (32-122°F)	0-50°C (32-122°F)

## Explosion Proof Digital IR Fibre Optic Pyrometer with Mono Fiber Optic Cable

The AST SRU FO is a two channel model for measurement of refractory temperature, gas temperature and smart hybrid temperature. It is highly accurate digital Fibre Optic industrial IR Pyrometers, for non contact temperature measurement in demanding applications. Infrared Thermometry Fibre Optic Pyrometers are widely used in high ambient temperature and explosion proof applications without cooling and also in processes involving digital interferences. With very fast response time of 2ms to 10 sec. The pyrometer provided with RS-485 for communication between pyrometer & PC Software. The parameters such Emissivity, Transmissivity Response time, Analog output, Analog Scale (Sub range), Channel selection, Clear Time, Temperature Unit and record feature can be adjusted remotely via PC software.



### Technical Specifications

Model	SRU FO
Temperature Range	350°C....2000°C (630°F....3600°F)
Emissivity	0.01....1.5 adjustable
Accuracy	±0.25% of measured value +1°C
Response Time	2 msec. adjustable upto 10 sec.
Analog Outputs	Two analog output (4 - 20 mA & 0 - 20mA)
Area Classification	Zone 1 and 2 II C T3

### Features

- ✓ Fast Response Time : 2ms to 10Sec. (Analog)
- ✓ Fiber Optic Cable withstand up to 250°C ambient
- ✓ Wide Temp. range: 350°C to 2000°C (630°F....3600°F)
- ✓ OLED Display (128×64) with keypad
- ✓ RS-485 Serial Interface
- ✓ CE Certifications (EMI/RFI)

## DATA LOGGER SMARTRACK 10

The new age data logger AST Smartrack 10 is constructed using a solid block of aluminium and is perfect for monitoring your day to day temperature requirements. It comes with 10 channels of thermocouples of various types namely K,J,E and T providing a wide temperature measurement range and upto 50,000 temperature readings per channel with date and time. It receives its power from 3 AA sized Ni-Mh rechargeable batteries which gives the user a hassle free operation and there is also provision for non-rechargeable battery for higher temperatures and longer duration. These batteries can be recharged using the USB option provided on the logger body. The device's communication can be established using the same process over INFRALOG software. By using this software a variety of functions can be performed which include retrieving the data, programming the logging parameters and analysis of the stored data.



### Features

- ✓ Maximum temperature can be reached upto 950°C (1710°F).
- ✓ Stainless steel casing which provides resistance to oxidation at high temperatures.
- ✓ Replaceable wear strips to minimize maintenance cost.
- ✓ To avoid thermal stresses, rounded edge barriers are designed.





## 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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**We Measure Accurate Temperature in Extreme Conditions**