



Digital IR Fiber Optic Pyrometer with Mono Fiber Optic Cable

CE 250°C to 2500°C

• A250+ FO PL • A450+ FO PL

A250+ FO PL and **A450+ FO PL** is a highly accurate digital single color Fiber Optic pyrometer to provide high performance and low maintenance of non contact temperature measurement in demanding industrial and R&D environments.

The IR pyrometer parameters can be selected via the key pads on the back panel. The settings are displayed on the OLED Display. In the measuring mode real time temperature is displayed. The pyrometers are equipped with RS-485; analog outputs 0/4...20. Switching laser ON/OFF does not effect the measurement.



Technical Specifications

Model	A250+ FO PL	A450+ FO PL
Temperature Range (Analog sub-range adjustable)	250°C - 1800°C 300°C - 2500°C	600°C - 2500°C
Spectral Range	1.6 μm	1.0 μm
Photodetector Type	InGaAs	Si
Distance to Spot Size Ratio	100:1 OH(I) 200:1 OH(II) 200:1 OH(II) - Variable 400:1 OH(III) - Variable	100:1 OH(I) 200:1 OH(II) 200:1 OH(II) - Variable 400:1 OH(III) - Variable
Emissivity (ε)	0.1...1.0 adjustable	
Response Time	2 msec adjustable upto 10 sec	
Accuracy	± 0.3% of the measured value + 1°C	
Repeatability	0.1% of reading in °C + 1°C	
Sighting Options	Laser Pilot Light(PL)	
Analog Output	0-20mA, 4-20mA (User selectable)	
Digital Output	RS-485	
Operating Temp. Range	0°C.....70°C Optical Head and Fiber Optic Cable upto 250°C	
Storage Temp. Range	-20°C...70°C	
Adjustable Parameters and Features via Software and Android app	Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (Sub range), Unit Of Temperature(°C/°F), Communication mode (Comm. mode), Record feature, Relay set point & hysteresis, etc.	
Adjustable Parameters and Features via Keypad	Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (Sub range), Unit Of Temperature(°C/°F), Communication mode (Comm. mode), Relay set point & hysteresis, address, etc.	
Relay output	One Relay output with hysteresis 60V DC / 42 AC RMS, 0.4 A	
Power Supply	12V to 28V DC with reverse voltage protection	
Power Consumption	Max 4.0 watt	
Laser Power	<1 m watt (only PL model)	
Protection Class	IP65	
Housing	Stainless Steel	
Isolation	Power supply, Digital output and Analog output are galvanically isolated against each other	
Operating Humidity	10-95%, Non-Condensing Conditions	
Weight & Dimensions	1200g Dia= Ø 56mm; Length=188.5mm	

Features

- Wide temperature ranges from 250°C to 2500°C
- Fast Response Time
- Spectral range 1.0 μm...1.6 μm
- Integrated OLED Display & Parameterizing Keys
- Laser targeting light for high precision targeting
- Analog output options 0...20mA, 4...20mA
- RS-485 Serial interface
- User friendly PC software for communication
- Green LED for pyrometer status indication
- Red LED for Laser ON/OFF indication (PL)

Standard Scope of Supply

- Pyrometer with OLED Display & Parameterizing Keys
- 2.5 Mtr mono fibre optic cable
- Optical head OH (I), OH(II), OH(II)variable or OH(III) variable
- Laser pilot light(PL)
- Analog output 4...20mA, 0..20mA
- Digital Interface RS-485
- 5 mtr long connection cable with connector
- Calibration certificate, Software & Operation manual



Optional

- Mechanical & Electrical Accessories
- Extra Length of Fiber Cable and Connection Cable

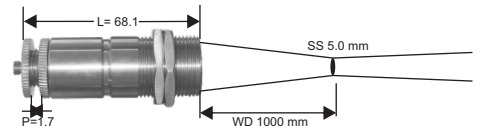
Applications

- Preheating
- Annealing
- Tempering
- Welding
- Forging
- Hardening
- Melting
- Sintering
- Soldering
- Rolling
- Brazing
- Normalizing

Spot Sizes

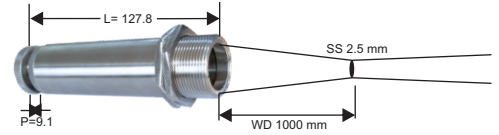
Fixed Optics		A250+ FO/PL	A450+ FO/PL
Optical Head	Working Distances (mm)	Spot Sizes(mm) 250°C - 1800°C/ 300°C - 2500°C	Spot Sizes(mm) 600°C - 2500°C
	120	1.2	1.2
	260	2.6	2.6
	700	7.0	7.0
Optical Head - I	Aperture(mm)	10.0(250 - 1800°C) 6.0(300 - 2500°C)	10.0
	90	0.5	0.5
	200	1.0	1.0
	600	3.0	3.0
	4500	23	23
	Optical Head - II	Aperture(mm)	18.0(250°C 1800°C) 11.0(300°C 2500°C)

Example of OH(II) - Variable



Pull Out (P) = 1.7 mm
Optical Head Length (L) = 68.1 mm

Example of OH(III) - Variable



Pull Out (P) = 9.1 mm
Optical Head Length (L) = 127.8 mm

*All Dimensions in mm

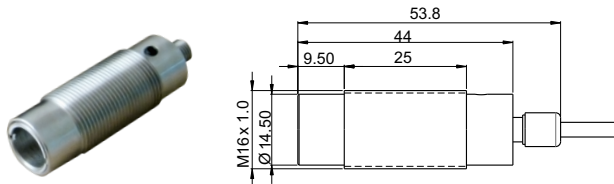
Variable Optics	Aperture	Optical Head - II - V (Variable)										
Working Distance (WD) (mm)	10	250	300	400	600	800	1000	1500	2000	2500	4000	5000
Optical Head Length L (mm)		78.9	75.75	72.8	70.1	68.8	68.1	67.15	66.7	66.4	66.7	66.4
Optical Pullout P (mm)		12.5	9.35	6.4	3.7	2.4	1.7	0.75	0.3	0	0.3	0
Spot Size (mm) AST A250+ A450+ FO PL		1.3	1.5	2.0	3.0	4.0	5.0	7.5	10.0	13.0	28.0	38.0

Variable Optics	Aperture	Optical Head - III - V (Variable)								
Working Distance (WD) (mm)	12	340	400	600	800	1000	1500	2000	3000	5000
Optical Head Length L (mm)		158.7	150.3	136.8	131	127.8	123.8	121.9	120	118.7
Optical Pullout P (mm)		40.0	31.60	18.1	12.3	9.1	5.10	3.20	1.30	0
Spot Size (mm) AST A250+ A450+ FO PL		0.80	1.0	1.5	2.0	2.5	3.75	5.0	7.50	12.5

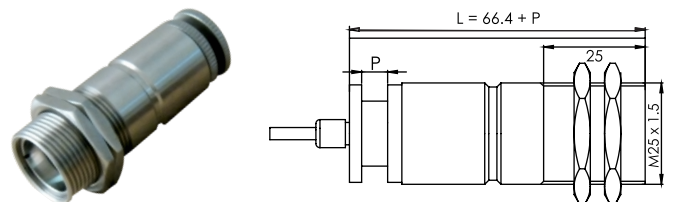
*All Dimensions in mm

Pyrometer Drawing

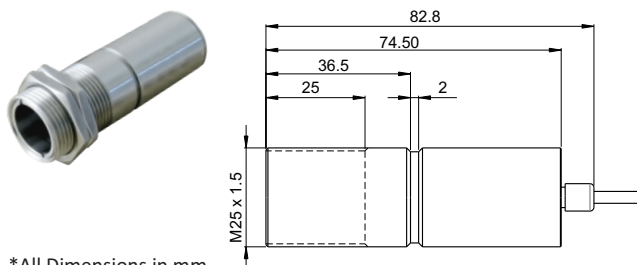
OH1



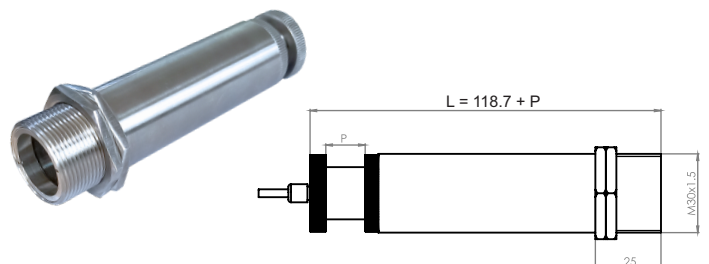
OH2-V



OH2



OH3-V



*All Dimensions in mm

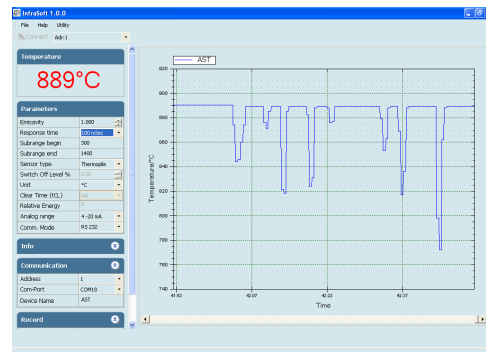
We measure accurate temperature in extreme conditions

AST Infrasoft

AST "Infrasoft" software is under standard scope of supply. It offers possibilities of connecting three pyrometers simultaneously for parameter setting, view real time graph, offline graph and to evaluate measuring data. Communication between the pyrometer and the software is implemented via a cable connected between the pyrometer and the PC serial port. It comes with record feature, spot size calculator and parameter settings features.

Some of the parameters adjustable via software are

- Emissivity, Response Time,
- Clear Time (Peak Picker),
- Analog Output,
- Sub Range,
- Unit Of Temperature (°C/°F),
- Communication mode (Comm. mode).



Accessories

Air purge unit
for OH II, OH II Variable & OH III Variable
Reference No. 8200 - 01



Air purge unit for optical head-I
Reference No. 8200 - 02



Adjustable Mounting
for OH II, OH II Variable & OH III Variable
Reference No. 8200 - 03



Adjustable Mounting for Optical Head-I
Reference No. 8200 - 04



Power supply Input 110/230V AC
Reference No. 9000 - 02
Output 24 V DC, 0.7Amp

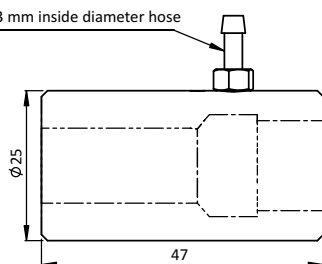


Temperature Indicator with retransmission output 4..20mA
Reference No. 9000 - 01



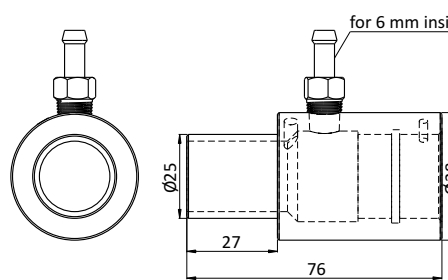
Pyrometer Accessories Drawing

for 3 mm inside diameter hose

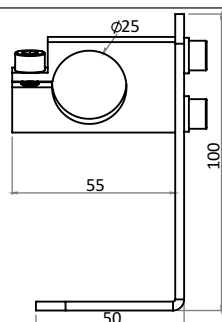


Air Purge Unit for Optical Head I
(Reference no: 8200-02)

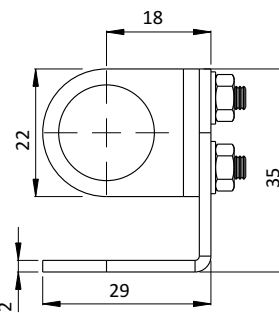
for 6 mm inside diameter hose



Air Purge Unit for OH II, OH II Variable & OH III Variable
(Reference no: 8200-01)



Adjustable Mounting for OH II, OH II Variable & OH III Variable
(Reference no: 8200-03)



Adjustable Mounting for Optical Head I
(Reference no: 8200-04)

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