• A450C FO-PL

600°C to 3200°C

Features

- Pyrometer with Rugged mono fiber optics withstands ambient up to 250°C
- Two Color model
- Spectral range 0.7 µm...1.15 µm
- Wide temperature range from 600°C....3200°C
- Useful In applications involving electromagnetic fields.
- Analog output options 0...20mA or 4...20mA or 0-10 V
- High Optical Resolution
- Laser targeting light for high precision targeting
- Bluetooth V2.0
- RS -232/RS-485 serial interface

Standard Scope of Supply

- Pyrometer with Laser Pilot Light(PL) for targeting purpose
- 2.5 mtr Mono Fibre optic cable
- Optical head (l) or (ll) or (ll-Variable)
- Analog Output 4...20mA, 0 - 20mA, 0-10V
- Bluetooth V2.0
- RS-232/RS-485 serial interface
- 5 mtr long connection cable with connector
- Calibration Certificate, PC Software & Operation manual

Optional

- Mechanical and Electrical Accessories
- Extra Lengths of Fiber Cable and Connection cable

Applications

- Induction heating
- Welding
- Casting
- Forging
- Annealing
- Sintering
- Rolling mill
- Rotary kilns
- Pouring stream

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• A450C FO-PL

Digital Fibre Optic IR Pyrometer in two color with mono fiber optic cable with Bluetotth V2.0

A450C FO-PL is a highly accurate digital two colour radiation Fibre Optic IR Pyrometer from FO-PL series. This device measures the temperature of an object by calculating the ratio of the energies at two different wavelength bands. The ratio technique eliminates and reduces errors in temperature measurement caused by changes in Emissivity, Surface finish and energy absorbing materials such as water vapour etc.
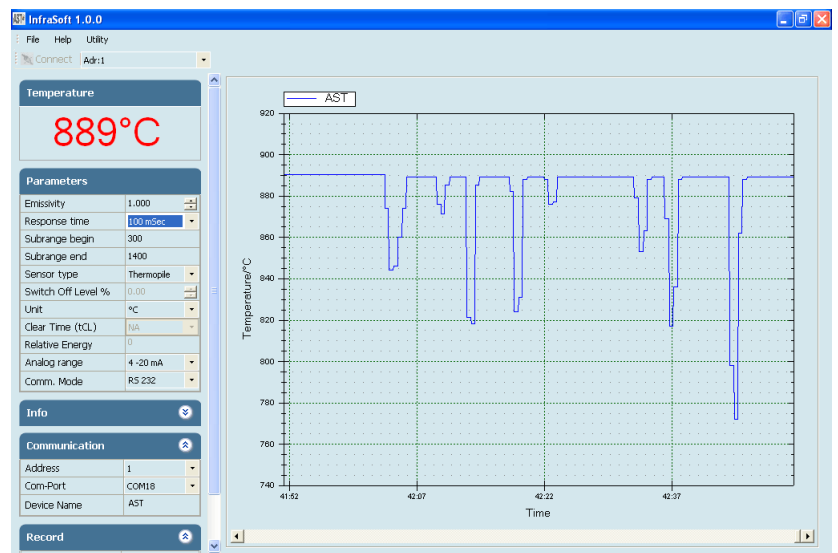
The Fibre Optic Pyrometers are widely used in high ambient temperature applications without cooling upto 250°C and also in processes involving electromagnetic interferences.

Software "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

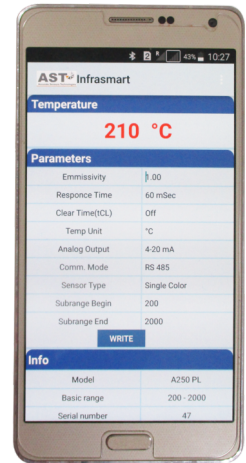**We measure accurate temperature in extreme conditions**

AST Infrasoft

AST Infrasmart is an android application used to communicate a pyrometer with mobile devices. This application works via bluetooth after pairing with mobile. APK file for this android application will be provided with device.

Number of parameters set through the application are :

- Emmisivity
- Response time
- Clear Time
- Unit of Temperature
- Analog Output

- Communication Mode
- Sensor Type
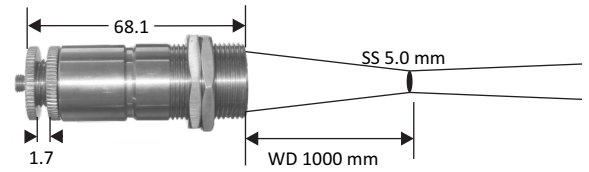- Sub Range
- Data Logging

Technical Specifications

Model	A450C FO PL
Temperature Range (Analog sub-range adjustable)	600°C….1600°C 800°C….2500°C 1000°C….3200°C
Spectral Range	0.7 μm…1.15 μm
Photodetector Type	Si/Si
Distance to Spot Size Ratio	100:1 OH(I) 200:1 OH(II) 200:1 OH(ll-Variable)
Emissivity (ε)	0.1….1.0 adjustable(Single Color mode)
Emissivity Slope (ε1 / ε2)	0.75…1.25 slope adjustable (Two color mode)
Response Time	20 msec adjustable upto 10 sec
Accuracy	± 0.5% 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, 0-10V (User selectable)
Digital Output	Bluetooth V2.0 RS-232/RS-485 (User selectable) *At a time only one digital output possible
Operating Temp. Range	Pyrometer 0°C…….70°C Optical head and Fibre Optic Cable upto 250°C
Storage Temp. Range	-20°C….70°C
Adjustable Parameters and Features via Software	Emissivity, Emissivity Slope, Response Time, Clear Time(Peak Picker), Analog Output, Analog Scale(Sub range),Sensor type (Switches b\w 2-color or single color), Switch off level, Unit Of Temperature(°C/°F), Communication mode(Comm.mode), Record feature etc.
Power Supply	12V to 28V DC with reverse voltage protection
Power Consumption	Max 2.5 watt
Laser Power	<1 m watt
Protection Class	IP65
Housing	Stainless Steel
Isolation	Power supply, *Digital output and Analog output are galvanically islolated against each other
Operating Humidity	10-95%, Non-Condensing Conditions
Weight & Dimensions	600g Dia= Ø 49.5 mm; Length=118mm

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Spot Sizes

Optical Head	Working Distances (mm)	600°C - 1600°C 800°C - 2500°C 1000°C - 3200°C
	120	1.2
	260	2.6
	700	7.0
	90	0.5
	200	1.0
	600	3.0
	4500	23

Example of OH(ll) - Variable

68.1 · SS 5.0 mm · 1.7 · WD 1000 mm

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

Variable Optics	Optical Head - ll - V (Variable)								
Working Distance (mm)	250	300	400	600	800	1000	1500	2000	2500
Optical Head Length L (mm)	78.9	75.75	72.8	70.1	68.8	67.1	67.15	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
Spot Size (mm) 600°C - 1600°C/800°C - 2500°C/1000°C - 2500°C	1.3	1.5	2.0	3.0	4.0	5.0	7.5	10.0	13.0

Accessories

Air Purge Unit for Optical Head II & ll Variable Reference No. 8200 - 01	Air Purge Unit for Optical Head-I Reference No. 8200 - 02	Adjustable Mounting for Optical Head II Reference No. 8200 - 03	Adjustable Mounting for Optical Head-I Reference No. 8200 - 04

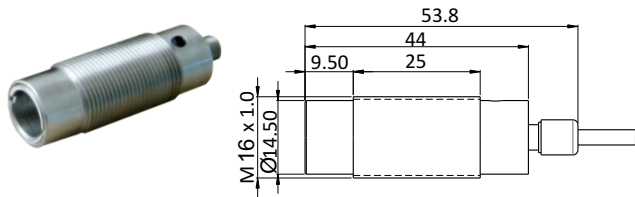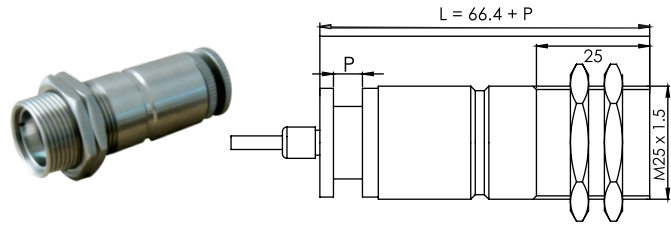| Display with Parameterizer (P-120) Reference No. 9001 - 01	Power supply Input 110/230V AC Reference No. 9000 - 02 **Output 24 V DC, 0.7Amp**	Temperature Indicator with retransmission output 4..20mA Reference No. 9000 - 01	Converter RS-485/ RS-232 Reference No. 9000-03

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Pyrometer Drawing

OH1

53.8
44
9.50   25
M 16 x 1.0
Ø14.50

OH2-Variable

L = 66.4 + P
P   25
M25 x 1.5

OH2

82.8
74.50
36.5
25   2
M25 x 1.5

⚠ Caution
Laser Radiation
Laser Diode
Max. Output : 1mW
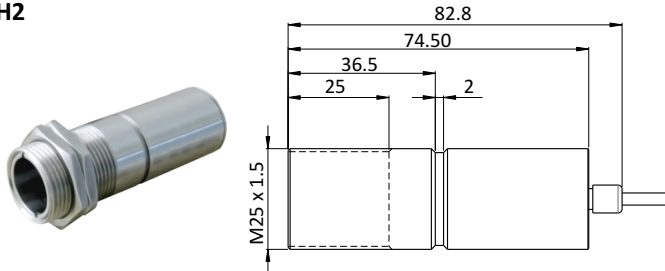Wavelength : 670nm
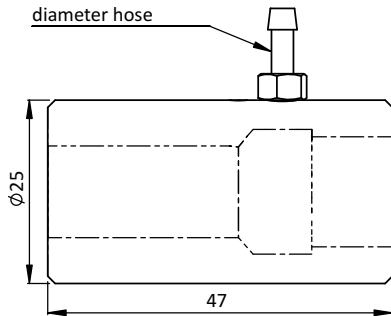Class II Laser Product
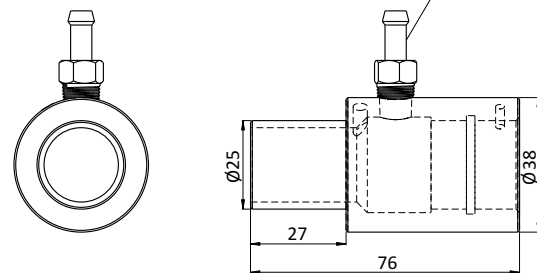
Ø49.5 mm
118 mm
131 mm
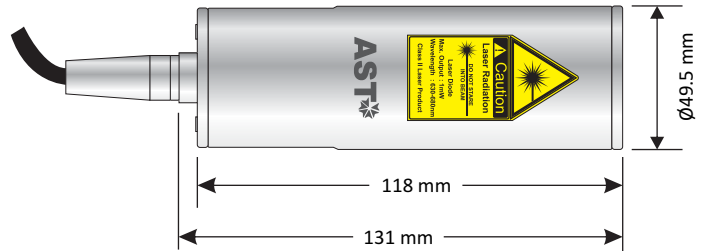
* All Dimensions in mm

Pyrometer Drawing

for 3 mm inside
diameter hose

Ø25
47

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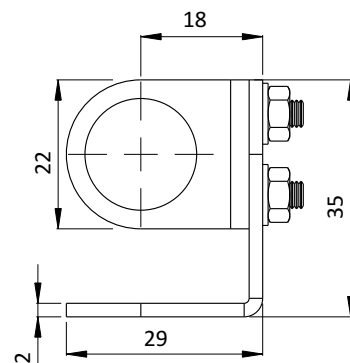**(Reference no: 8200-02)**

for 6 mm inside diameter hose

Ø25   Ø38
27
76

Air Purge Unit for Optical Head ll
(Reference no: 8200-01)

Ø25
55   100
50

Adjustable Mounting for Optical Head ll
(Reference no: 8200-03)

18
22   35
2   29

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

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