AST — Accurate Sensors Technologies

On-line Single Color Infrared Focusable Non-contact Pyrometers

CE 600°C to 1800°C

AL45+

AL45+ are special pyrometers which provides the advantage of measurement of flames and combustion gases that include Co_2.

The narrow spectral range of about 4.43µm, in the Co_2 absorption band enables the measurement of flames and hot combustion gases.

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. In Pyrometers with video module real time colour video, measuring temperature and emissivity is displayed on the television screen. *AL45+* have focusable optics for optimal match of the instrument for various applications. The pyrometers are equipped with RS-485; analog outputs 0/4….20. Switching laser ON/OFF does not effect the measurement.


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(Comm.mode)
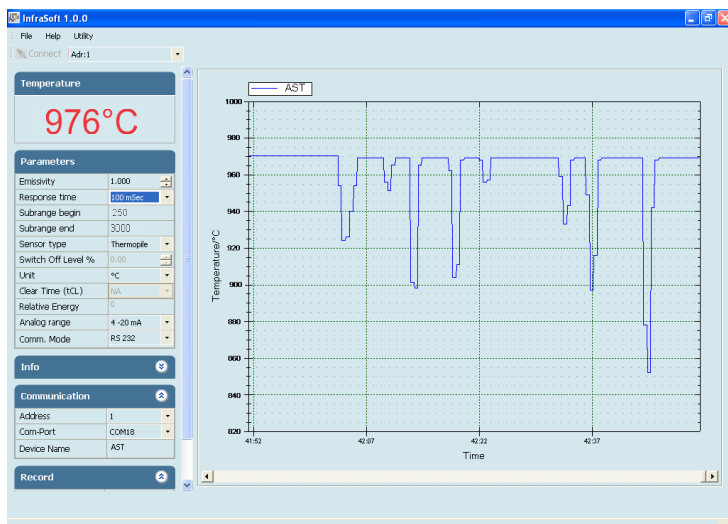
Features

- Wide temperature ranges from 600°C to 1800°C
- Focusable Optics
- Fast Response Time
- Spectral range 4.43 µm
- Integrated OLED Display & Parameterizing Keys
- Laser 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 Focusable optics, OLED Display & Parameterizing Keys
- 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 Cable Lengths

Applications

- Measurement of flame temperature.
- Measurement of flames and combustion gases that include CO_2

We measure accurate temperature in extreme conditions

Technical Specifications

Model	AL45+
Temperature Range (Analog sub-range adjustable)	600°C....1800°C
Spectral Range	about 4.43 μm (absorption band for hot CO_2
Photodetector Type	Thermopile
Distance to Spot Size Ratio	75:1
Emissivity (ε)	0.1….1.2 adjustable
Response Time	60 msec adjustable upto 10sec
Accuracy	±1% of measured value (The instrument must be at constant ambient temperature for minimum 25-30 mins in power on condition)
Repeatability	0.3% 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
Storage Temp. Range	-20°C…70°C
Adjustable Parameters and Features via Software	Emissivity, Response Time, Clear Time (Peak Picker), Analog Output, Analog Scale (Sub range), Unit Of Temperature(°C/°F), Record feature 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), 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 islolated against each other
Operating Humidity	10-95%, Non-Condensing Conditions
Weight & Dimensions	1200g Dia= Ø 56mm; Length=188.5mm

Spot Sizes

Spot Sizes(mm)	
Focused working distances WD (mm)	AL45+ 600°C - 1800°C (75:1)
500	6.70
700	9.40
1000	13.40
2000	26.70
5000	66.70
9000	120.00

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Pyrometer & Cooling Jacket Drawing
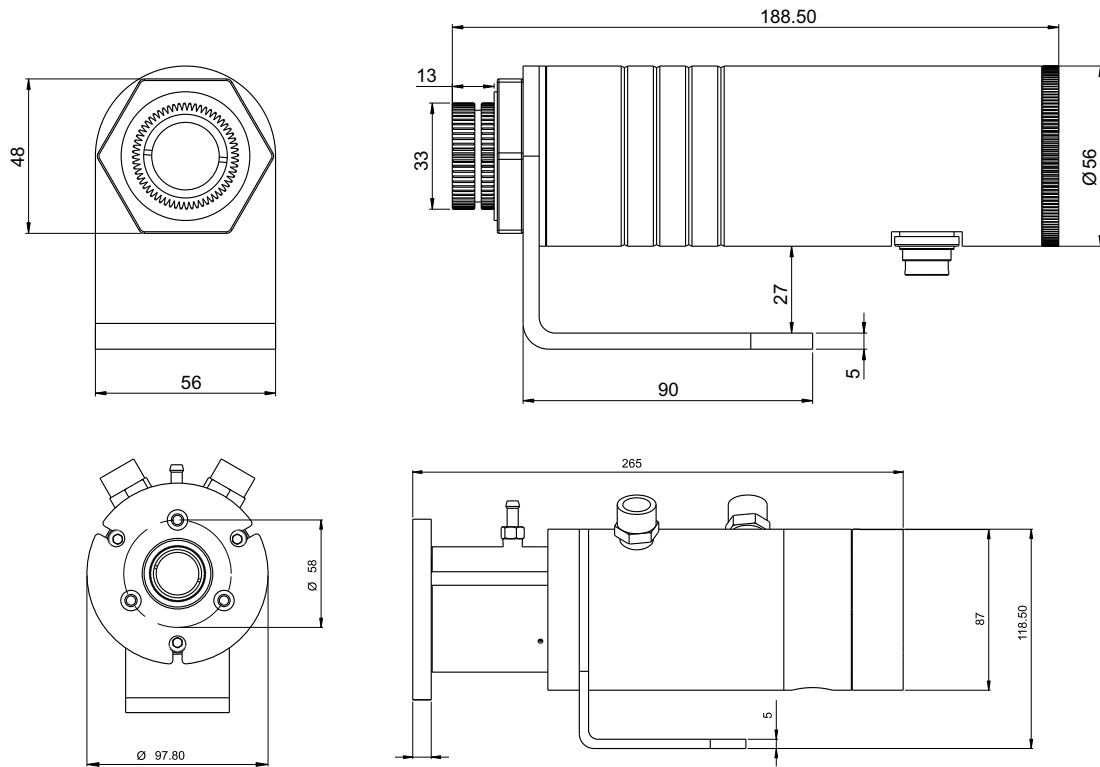
Accessories

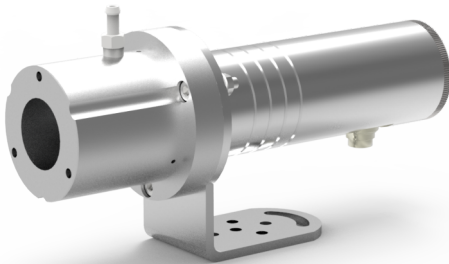| Mounting Clamp (Pyrometer) (Reference no: 8500-04)	Air Purge (Reference no: 8500-05)	Mounting Clamp (Water Cooling Jacket) (Reference no: 8500-06)
Mounting Flange (Reference no: 8500-07)	**Mounting Plate** (Reference no: 8500-08)	**Water Cooling Jacket** (Reference no: 8500-09)
Temperature Indicator (Reference no: 9000-01)	**Adjustable Mounting Stand** (Reference no: 8000-07)	**Power supplyInput 110/230V AC** Reference No. 9000 - 02 Output 24 V DC, 0.7Amp.
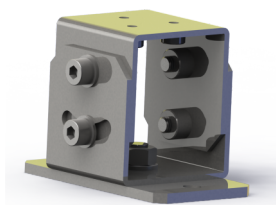
We measure accurate temperature in extreme conditions

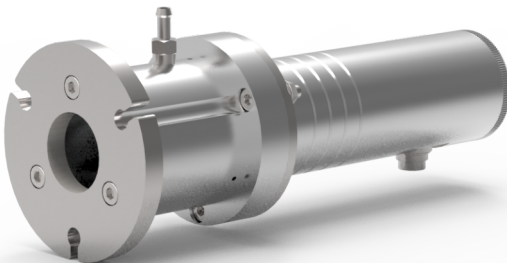| **Pyrometer with Mounting Clamp (8500-04)**	**Pyrometer with Mounting Flange (8500-07) + Air Purge (8500-05) + Water Cooling Jacket (8500-09)**
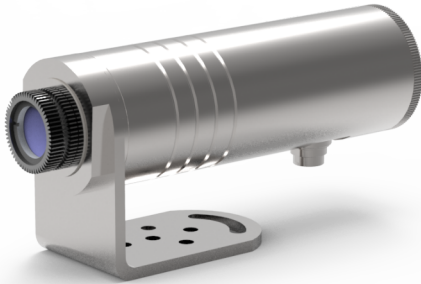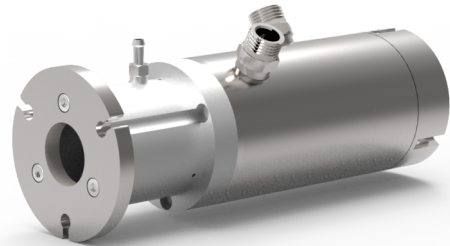
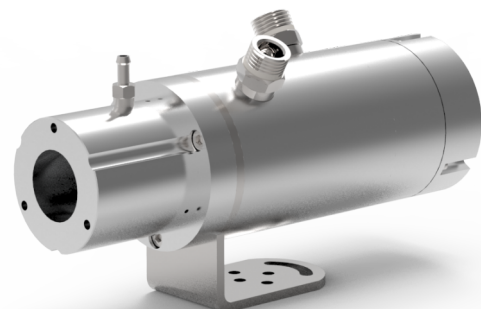| **Pyrometer with Air Purge (8500-05) + Mounting Clamp (8500-06)**	**Pyrometer with Water Cooling Jacket (8500-09) + Mounting Clamp (8500-06)**

Pyrometer with Mounting Flange (8500-07) + Air Purge (8500-05)	**Pyrometer with Mounting Flange (8500-07) + Air Purge (8500-05) + Water Cooling Jacket (8500-09)**

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