Fiber Optic Two Color / Single Color IR Pyrometers

FIBER Series

FIBER Series are specially designed for critical applications in harsh industrial sites, hard to reach areas and precise temperature control requirements. Fiber optics can withstand high temperature up to 250℃, without need of additional water cooling accessories. It has strong casing, lens (with air purge functions), die cast aluminium housing with IP54 environment protection grade.

Common Features:

- Two Color / Single Color Fiber Optic IR Pyrometers: Various Models to cover Temperature ranges from 600°C - 2500°C
- Consists of lens, fiber optics and processing components
- Manual adjustable focal lens, achromatic lens combination
- Accuracy: 0.5%, Resolution: 0.1℃, Response time: 5ms - 99.99s adjustable
- Laser aiming to clearly show the position and size of measured target
- Industrial-grade OLED screen is used as the display interface
- Interfaces: 2 independent analog outputs, 2 alarm outputs, 1 level output and RS485 communication interface
- Supports up to 26 pyrometers in bus cascade, and rea

Technical Specification:

Model	R-SD/6016	R-SD/7018	R-SD/7025	S-SD/6022	S-SD/7025	S-ID/3014	S-ID/3522
Temperature Range	600°C-1600°C	700°C-1800°C	700°C-2500°C	600°C-2200°C	700°C-2500°C	300°C-1400°C	350°C-2200°C
Detector	Si/Si (Laminated Silicon)			Si (silicon photovoltaic cell)		InGaAs (Indium Gallium Arsenide)	
Spectral Response	0.7-1.08 μm and 1.08μm			0.85 -1.1 μm		1.45 - 1.7 μm	
Accuracy	±0.5% R (R is the reading temperature)						
Repeatability	±2°C						
Temperature Resolution	0.1°C						
Optical Resolution (D:S)	50:1	100:1	100:1	150:1	200:1	150:1	200:1
Measuring Distance	Adjustable focal length 0.15m to infinity						
Emissivity / E-Slope	Emissivity (Single colour mode): 0.100-1.100, adjustable in 0.001 increment E-Slope (Two color mode) : 0.850-1.150, adjustable in 0.001 increment			Emissivity: 0.100-1.100, adjustable in 0.001 increment			
Response Time	5ms - 99.99s adjustable						
Signal processing	Peak /Valley/Average values, High and Low ambient temperature alarm, one-color and two-color mode switchable, power failure protection						
Outputs	**Group1:** Multiple Analog outputs （4mA～20mA，0mA～20mA，0V～5V，0V～10V, switchable), **Gourp2:** Analog outputs 4mA～20mA **Alarms output:** upper or lower temperature limit alarm ； PhotoMOS relay, maximum allowed voltage: AC42V or DC60V; maximum allowed current: 120mA; response time: 2ms **PNP** level output (output current 100mA, with overload protection) **RS485** output, which can realize parameter modification, data recording and query functions						
Display	self-luminous industrial-grade OLED display						
Power Supply	DC (20-30)V, with overvoltage, overcurrent, short circuit protection, power consumption: 5W (24V@200mA) Built-in EMI filter, can resist 2500VDC pulse group Interference.						
Aiming(focusing) Method	Built-in visible red laser aiming						
Operating Temperature	**Pyrometer:** without water cooling: -20℃ to+60℃, and pyrometer with water cooling: -20℃ to +200℃ (cooling water pressure is 0.2MPa, flow 2L/min) **Lens and optical fiber:** -20℃ to +250℃ (purging pressure is 0.1MPa, flow rate is 6L/ min)						
Environment Protection	IP54						

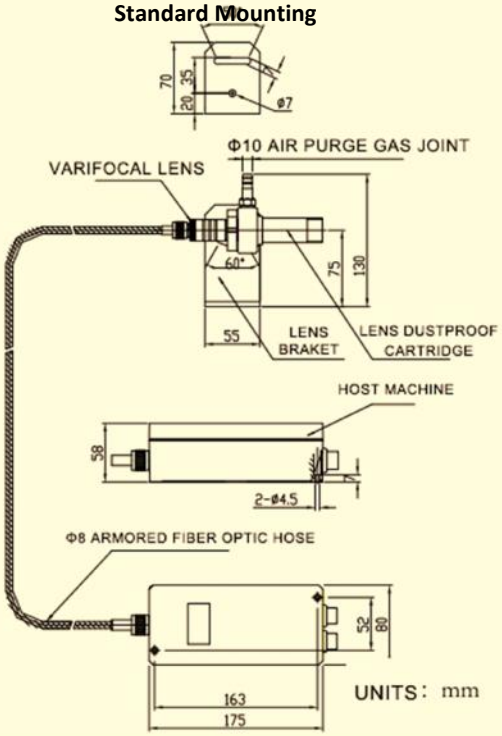
Mounting Diagram :

Lens Assembly

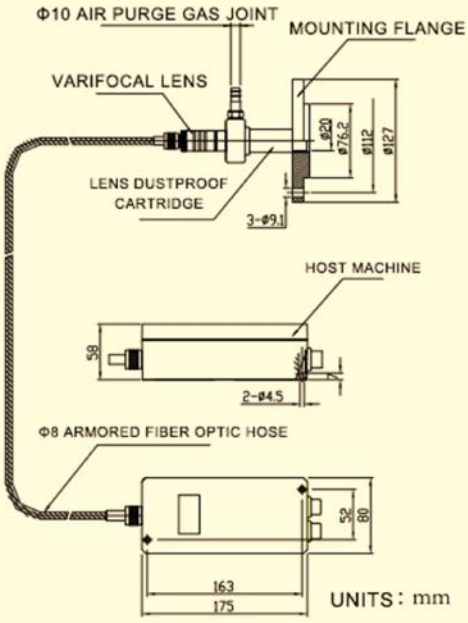
Interconnecting FO cable

Pyrometer Terminal box/ Indicator

Standard Mounting



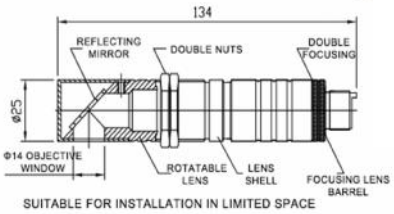
Flange Mounting



Optional Accessories

1. **Water cooling plate**
   (For Pyrometer Terminal box/ Indicator)
   Model: FWP-1

2. **Steering Mechanism Assembly**
   (For Installation in limited Space)
   Model: FSM-1



Model Identification /Ordering Chart

FIBER — X — XX / XXXX / X

Variant
R - Two Color Ratio
S - Single Wavelength

Detector
SD - Silicon (Si)
ID - InGaAs

Temperature Range
First 2 digits
Lower limit of measuring range (number × 10) in °C
Next 2 digits
Upper limit of measuring range (number × 10) in °C

Optical Fiber Length
3 - Default fiber length: 3meters
1 - 1.5 meter
5 - 5 meter
S – Special, as per requirement

Manufactured by

NAGMAN INSTRUMENTS AND ELECTRONICS PRIVATE LIMITED

AN ISO 9001:2015 CERTIFIED COMPANY

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