

# Fast Response Fiber Optic Infrared Sensors

OS1562/OS1572  
Starts at  
**\$2400**



OS1562F-L1-R1-4, \$2460,  
shown smaller than  
actual size.

- ✓ Temperature Ranges to 1825°C (3320°F)
- ✓ ±1.0% Accuracy
- ✓ Time Constant 10 msec (0 to 63.2%)
- ✓ Small Spot Sizes Down to 0.020" at 6"
- ✓ 1 mV/Degree Output Standard
- ✓ Unaffected by Electrical Noise
- ✓ Emissivity Adjustment for High Accuracy Measurements
- ✓ Fiber Optic Vacuum Bushing Good for 10<sup>-7</sup> Torr
- ✓ Optional Backlighting For Precise Sighting
- ✓ L1 Standard Probe
- ✓ Available Second Output: 0 to 10 Vdc, 4 to 20 mA, J or K Thermocouple Signal
- ✓ Signal Processing Available with OS1572



OS1562-MB mounting bracket included.

L1 lens probe type

## Additional Assemblies Available Consult Engineering

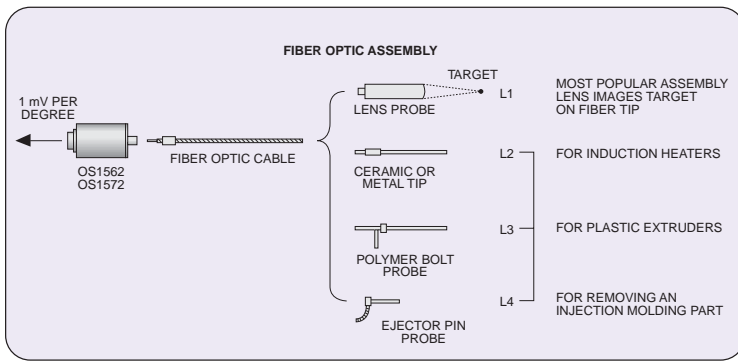
- Small Spot Sizes Down to 0.004"
- Temperatures to 800°F at Pressures to 30,000 PSI
- Ceramic/Metal Tip Probe for Induction Heating Where Probe Is Close to Surface
- Polymer Bolt Probe for Extrusion Applications
- Ejector Pin Probe for Injection Molding

The OS1562 and OS1572 are stand-alone fiber optic infrared sensor for applications requiring the advantages of non-contact temperature measurement and fiber optic technology. They are used where conventional infrared detectors are not possible, such as with targets which are not easy to access, have small spot sizes, are in high energy fields or are in environments with high humidity or containing smoke, or in vacuum applications.

Some important factors that determine the fiber optic assembly needed with the sensors are: the

distance from the fiber optic probe lens to the surface being measured; the size of object; the temperature range; the ambient temperature range around the fiber optics; the length of fiber optic cable; the method of heating the surface being measured; and the atmospheric conditions between the fiber optic lens and the product.

The ordering matrix shows a few configurations of the sensors with fiber optic probe assemblies. Consult OMEGA for other available fiber optic assembly configurations. All systems include sensor, fiber optic probe, and fiber optic cable.



## Specifications

**Ambient Temperature:** 10 to 50°C (50 to 122°F)  
**Accuracy:** ±1.0% rdg  
**Repeatability:** ±0.5% rdg  
**Emissivity:** 0.05 to 1.0 adjustable in 0.01 steps  
**Spectral Response:** 0.91 to 2.8 microns  
**Time Constant:** 10 msec, (0 to 63.2%)  
**Signal Output:** 1 mV/degree standard  
**Resolution:** 1°C/°F  
**Power:** ±15 Vdc, 100 mA regulated supply 0.05% line and load  
**Power Consumption:** 2 W max  
**Dimensions:**  
**OS1562:** 6.9 H x 10.2 W x 30.5 cm D (2.7 x 4.0 x 12")  
**Weight:** 1.8 kg (4 lb)  
**Fiber Optic Cable:** Glass or quartz fiber with heavy duty s.s. jacket standard, 0.5 mm/1.78 mm (0.020"/.070") cable dia, 300°F ambient max

### Optional Second Output (OS1562 Models – No Add'l Cost)

Order Suffix	Description
-V	0 to 10 Vdc
-MA	4 to 20 mA
-J	J thermocouple
-K	K thermocouple

### Available Probe Types

- L1** Lens Probe (Standard)
- L2** Ceramic/Metal Tip
- L3** Polymer Bolt
- L4** Ejector Pin Probe



L1 shown with optional bifurcated cable for backlighting.

### Accessories

Model No.	Price	Description
<b>PSS-D15B</b>	<b>\$114</b>	±15 Vdc or 30 V regulated power supply, ±100 mA, 0.02% line and load, 115 Vac input
<b>OS1562-MB</b>	<b>95</b>	Additional mounting bracket

### Optional Second Output (OS1572 Models)

Order Suffix	Add'l Price	Description
-V	<b>\$75</b>	0 to 10 Vdc
-MA	<b>125</b>	4 to 20 mA

Consult OMEGA for custom vacuum bushings and other OS1562 or OS1572 fiber optic systems.

### Optional Signal Processing Feature (OS1572 Models)

Order Suffix	Add'l Price	Description
-PS	<b>\$330</b>	Peak sense/hold
-SA	<b>330</b>	Signal advertising
-FR	<b>330</b>	Fast rise variable decay

**MOST POPULAR MODELS HIGHLIGHTED!**

### To Order (Specify Model Number)

Model No.	Base Price	Temp. Range	Spot Size @ Target Dist.	Cable Length	Output Signal(s)	Signal Processing
<b>OS1562F-L1-R1</b>	<b>\$2460</b>	850 to 1800°F	0.020"@6"	1.2 m (4')	1 mV/° standard	N/A
<b>OS1562F-L1-R2</b>	<b>2400</b>	400 to 850°F	0.085"@6"	0.3 m (1')		N/A
<b>OS1562F-L1-R3</b>	<b>2460</b>	400 to 850°F	0.22"@8"	1.2 m (4')		N/A
<b>OS1562C-L1-R4</b>	<b>2460</b>	900 to 1825°C	1.0"@26"	1.2 m (4')		N/A
<b>OS1572F-L1-R1</b>	<b>3500</b>	1600 to 3320°F	0.020"@6"	1.2 m (4')	2nd output optional, see table	optional see table
<b>OS1572F-L1-R2</b>	<b>3460</b>	400 to 850°F	0.085"@6"	0.3 m (1')		
<b>OS1572F-L1-R3</b>	<b>3500</b>	450 to 1000°F	0.22"@8"	1.2 m (4')		
<b>OS1572C-L1-R4</b>	<b>3500</b>	800 to 1550°C	1.0"@26"	1.2 m (4')		

Comes with sensor probe assembly, fiber optic cable, mounting bracket and operator's manual.

**Ordering Examples:** OS1572F-L1-R3-4-MA-SA, fiber optic infrared sensor, 450 to 1000°F range, 0.22" spot size at 8", 1.2 m (4') cable, with 4 to 20 mA and signal advertising, \$3500 + 125 + 330 = **\$3995**.

**OS1562F-L1-R1-4**, fiber optic infrared sensor, 850 to 1800°F range, 0.020" spot size at 6", 1.2 m (4') cable, with 1 mV/° output, and Type J thermocouple output, **\$2460**.

# omega.co.uk<sup>®</sup>

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

[www.omega.co.uk](http://www.omega.co.uk)



#### UNITED STATES

[www.omega.com](http://www.omega.com)

1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)

Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)

Deckenfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)

Manchester, England  
0800-488-488  
+44-(0)161-777-6611

#### FRANCE

[www.omega.fr](http://www.omega.fr)

0800-466-342

#### BENELUX

[www.omega.nl](http://www.omega.nl)

0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

### • Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

### • pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

### • Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

### • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters