

Economical Fiber Optic Infrared Transmitter

With 4-Wire, 4 to 20 mA Output



OS1553-A
\$2175

- ✓ Reaches Difficult-to-Access Locations
- ✓ Fast, Precise 10 msec Time Constant
- ✓ Ideal for Small Targets with Spot Sizes Down to 0.004" Available
- ✓ Adjustable Emissivity for High Accuracy
- ✓ Spectral Filtering Allows Use in Dirty Atmospheres
- ✓ Works with Standard Process Meters and Controllers

The OS1553-A is a self-contained fiber optic infrared transmitter designed to provide a linear 4 to 20 mA output for monitoring, datalogging or controlling temperature.

The detector may be remotely mounted up to 1.2 m (4') away from the fiber optic lens via the fiber optic cable, removing it from hazardous locations. Other problems that can be overcome by the OS1553-A fiber optic design include: taking measurements in high energy fields measuring very small objects or surfaces; and taking measurements in "dirty" atmospheres containing water vapor, dust or smoke.

Some important factors that will determine the fiber optic assembly needed for your infrared application are: the distance from the fiber optic lens to the surface being measured; the size of the object being measured; temperature range; ambient temperature around the fiber optic cable; the length of the cable; the method of heating the surface being measured; and the atmospheric conditions between the fiber optic lens and product.

Specifications

Accuracy: ±1.0% rdg or 1.7°C (±3°F), whichever is greater

Spectral Response: 0.95 to 1.09 microns

Repeatability: ±1°C/F or less

Time Constant: 10 msec (0 to 63.2%)

Output: 4 to 20 mA linear output



OS1553-A shown in an industrial application.

Power: 20 to 40 Vdc, 100 mA regulated, 0.2%
Power/Output Cable: 4 conductor shielded [4.5 m (15') standard]
Maximum Loop Resistance:

$$\frac{V_{source}-20}{20 \text{ mA}}$$

Emissivity: 0.05 to 0.99, adj in 0.01 steps

Ambient Temperature: 0 to 50°C (32 to 122°F)

Dimensions: 69 Dia. x 203 mm L (2.7 x 8")

Weight: 1.6 kg (3.5 lb)

Fiber Optic Cable: 1.2 m (4') glass fiber material, heavy-duty stainless steel

OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor, and equivalent loaners.

For R1 Temp Range

Spotsize/Target Distance Chart		
*Code	Spotsize @	Distance
01	0.15"	6"
02	0.25"	8"
03	0.50"	16"
04	0.75"	24"
05	1.00"	30"
06	1.20"	36"

For R2 Temperature Range

Spotsize/Target Distance Chart		
*Code	Spotsize @	Distance
07	0.004"	1"
08	0.025"	4"
09	0.050"	10"
10	0.100"	18"
11	0.150"	24"
12	0.250"	36"

MOST POPULAR MODEL HIGHLIGHTED!

To Order (Specify Model Number)

Model No.	Price	Temp Range
OS1553-A-R1-(*)	\$2175	565 to 840°C (1050 to 1550°F)
OS1553-A-R2-(*)	2175	816 to 1370°C (1500 to 2500°F)

(*) Insert code from spotsize chart above.

Accessories

Model No.	Price	Description
PSR-24S	\$60	Regulated power supply, 24 Vdc, 400 mA, screw terminal
PSR-24L	60	Regulated power supply, 24 Vdc, 400 mA, UL, stripped leads
PSR-24L-230	60	Regulated power supply, 24 Vdc, 400 mA, stripped leads, 230 Vac input, CE
PSU-93	40	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
OS1550-MB	50	Mounting bracket
OS1550-MN	15	Mounting nut
TX4-100	28.50	4 conductor shielded extension cable

Comes with probe assembly, fiber cable, and operator's manual.

Note: Consult OMEGA for information on custom OS1553-A fiber optic systems for any application.
Ordering Example: OS1553-A-R1-02, fiber optic sensor with 565 to 840°C (1050 to 1550°F) range, 0.25" spot = \$2175. OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years (\$350), \$2175 + 350 = \$2525.



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• 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

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 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, Strain Gages, 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