

# Infrared Transmitter Fiber Optic Probes 4 to 20 mA Output

OS1553 Series  
**\$2475**  
All Models



- ✓ 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 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 can be remotely mounted as far as 9 m (30') 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's fiber optic design include: taking measurements in high energy fields; measuring very small objects or surfaces; 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.

OS1553-L1-R1-4,  
\$2475, shown  
smaller than  
actual size.



OS1553-MB mounting  
bracket, included.

## Specifications

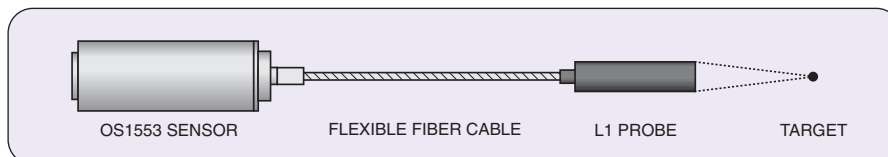
**Accuracy:**  $\pm 1.0\%$  rdg or  $1.7^\circ\text{C}$  ( $\pm 3^\circ\text{F}$ ), whichever is greater  
**Spectral Response:** 0.95 to 1.09 microns  
**Repeatability:**  $\pm 1^\circ\text{C}/\text{F}$  or less  
**Time Constant:** 10 msec (0 to 63.2%)  
**Output:** 4 to 20 mA linear output  
**Power:** 20 to 40 Vdc, 100 mA Regulated, 0.02%  
**Maximum Loop Resistance:**  

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

**Emissivity:** 0.05 to 0.99, adjustable in 0.01 steps  
**Ambient Temperature:** 0 to  $50^\circ\text{C}$  (32 to  $122^\circ\text{F}$ )

**Dimensions:**  
8.64 H x 12.07 W x 24.77 cm D  
(3.40 x 4.75" x 9.75")

**Weight:** 1.8 kg (4 lb)  
**Fiber Optic Cable:** Glass fiber material, heavy-duty stainless steel jacket, 0.23" O.D.,  $300^\circ\text{F}$  max  
**Probe:** 25.4 diameter by up to 279 mm long (1 by 11")



**MOST POPULAR MODELS HIGHLIGHTED!**

## To Order (Specify Model Number)

Model No.	Base Price	Temp Range	Spot Size @ Target Dist	Cable Length
OS1553-L1-R1-4	\$2475	816 to $1370^\circ\text{C}$ (1500 to $2500^\circ\text{F}$ )	0.020" @ 6"	1.2 m (4')
OS1553-L1-R2-4	2475	565 to $840^\circ\text{C}$ (1050 to $1550^\circ\text{F}$ )	0.16" @ 3"	1.2 m (4')
OS1553-L1-R3-4	2475	565 to $840^\circ\text{C}$ (1050 to $1550^\circ\text{F}$ )	0.79" @ 12"	1.2 m (4')
OS1553-L1-R4-4	2475	816 to $1370^\circ\text{C}$ (1500 to $2500^\circ\text{F}$ )	0.50" @ 32"	1.2 m (4')

Consult OMEGA for information on custom OS1553 fiber optic systems to suit any application.

## Accessories

Model No.	Price	Description
PSS-D15B	\$114	$\pm 15$ Vdc or 30 Vdc regulated power supply, $\pm 100$ mA, 0.02% line and load, 115 Vac input
OS1553-MB	95	Additional mounting bracket

Comes with probe assembly, fiber optic cable, mounting bracket, and operator's manual.  
**Ordering Example:** OS1553-L1-R1, fiber optic sensor with 816 to  $1370^\circ\text{C}$  (1500 to  $2500^\circ\text{F}$ ) range, 0.02" spot size at 6" target distance, and PSS-D15B power supply,  $\$2475 + 114 = \$2589$ .



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