



# Fiber Optic Temperature Sensor

## Applications

The Model FP4700 Fiber Optic Temperature Sensor is designed to measure temperatures wherever high accuracy is required. They are particularly suitable for use in or on...

- Concrete
- Steel structures
- Nuclear or hazardous environments



• Model FP4700 Fiber Optic Temperature Sensor.

## Operating Principle

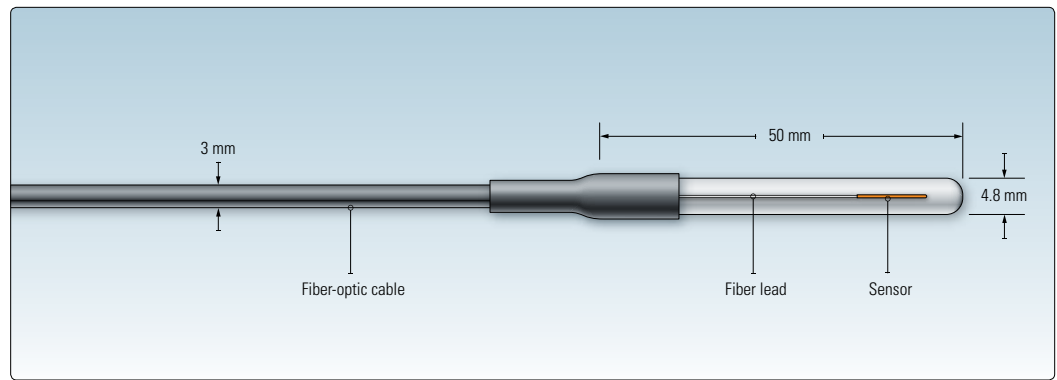
**GEOKON**'s fiber optic temperature sensors are designed for use in environments where high levels of electrical interference exist or where intrinsic safety is an issue.

The FP4700 uses the temperature-dependent birefringence of a specially selected crystal as the temperature transduction mechanism. This crystal does not show thermal creep or aging as with some other fiber optic sensors.

## Advantages and Limitations

The available operating range is from  $-40^{\circ}\text{C}$  to  $+250^{\circ}\text{C}$  and is dependent on cable type (please contact **GEOKON, INCORPORATED** with temperature parameters).

Other advantages include: EMI/RFI immunity; intrinsically safe; transmission over long cables; and high voltage immunity.



• The Model FP4700 components and dimensions.

## Technical Specifications

Temperature Range <sup>1</sup>	-40°C to +250°C
Resolution	0.1°C
Accuracy <sup>2</sup>	±1.0°C
Response Time	1.5 s typical
Operating Humidity Range	0-100%
EMI/RFI Susceptibility	complete immunity
Calibration	NIST traceable
Cable Length <sup>3</sup>	1.5 m (standard)
Optical Connector	SC (standard)
Cable Sheathing	depends on temperature range
Signal Conditioner Compatibility	all Opsens WLPI signal conditioners
Length × Diameter	50 × 4.8 mm (sensor)

<sup>1</sup>The available operating range is dependent on cable type (please contact **GEOKON, INCORPORATED** with temperature parameters).

<sup>2</sup>Total accuracy over the full range including both signal conditioner and sensor errors. Higher accuracy available on request.

<sup>3</sup>Other cable lengths available on request.