



**GAAS-BASED FIBER OPTIC  
TEMPERATURE SENSOR  
FOR DEMANDING APPLICATIONS  
AND ROUGH HANDLING USAGE**

Compatible with any Opsens' GaAs (SCBG) series of signal conditioners

### Key Features

- Robust design
- Good accuracy
- Low drift and low hysteresis
- EMI/RFI and microwave immune
- Intrinsically safe
- -40 °C to +250 °C temperature range

### Applications

- EM, RF and microwave environments
- Sterilization applications
- Nuclear and hazardous environments
- Civil engineering and geotechnical applications
- Power substation and transformer ambient temperature monitoring (For Power transformer applications, see also OTG-T data sheet)

### Description

Opsens' OTG-P fiber optic temperature sensor is encapsulated in a rugged stainless steel tube (ceramic tube also available) for maximum protection in the most adverse handling conditions. The OTG-P sensor uses the well proven technique based on the temperature-dependent bandgap of GaAs crystal as the temperature transduction mechanism.

Combined with Opsens' GaAs (SCBG) signal conditioning technology and with the inherent advantages of fiber optics, the OTG-P delivers unprecedented repeatability and reliability in the most adverse conditions. The spectrally encoded light signal is completely immune to EM, RF, MR and microwave fields.

The standard operating range of the OTG-P is from -40 °C to +250 °C. Higher temperature ranges are available upon request.

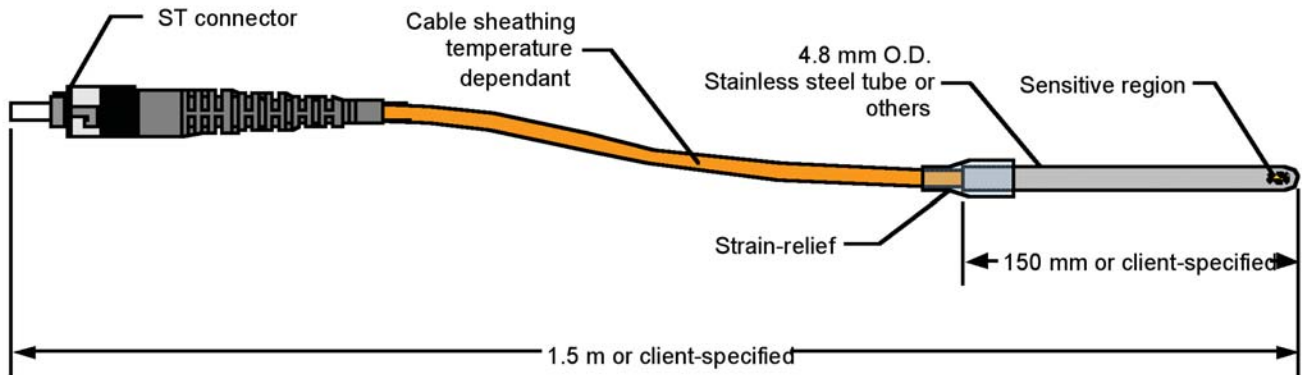
The OTG-P is made with industry standard 62.5/125 microns optical fiber and is compatible with all Opsens' GaAs (SCBG) signal conditioners. This robust fiber optic temperature sensor, available in different cables and sheath options, is customizable for customer-specific applications or for OEM applications.

† Patent pending

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## Specifications

Temperature operating and calibrated range	-40 °C to +250 °C (other ranges available upon request)
Resolution	0.1 °C
Accuracy	± 0.8 °C or better (Total accuracy over the full range including both signal conditioner and sensor errors - higher accuracy available on demand)
Operating humidity range	0-100 %
EMI/RFI susceptibility	Complete immunity
Calibration	NIST traceable
Cable length	1.5 meters standard (other lengths available)
Optical connector	ST standard
Cable sheathing	Operating temperature dependant (contact factory)
Thermowell material	Stainless steel (Ceramic or other materials available as an option)
Signal conditioner compatibility	All Opsens GaAs (SCBG) signal conditioners with 62.5/125 microns

All specifications are subject to change without prior notifications