

GAAS-BASED FIBER OPTIC TEMPERATURE SENSOR FOR R&D AND INDUSTRIAL APPLICATIONS

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

Key Features

- Small and robust design
- Good accuracy and outstanding repeatability
- EMI/RFI and microwave immune
- Intrinsically safe
- OEM-type and custom version

Applications

- EM, RF and microwave environments
- High voltage environments
- Nuclear and hazardous environments
- Microwave assisted chemistry
- Sterilization applications
- In-situ process control
- RF and microwave drying application

Description

Opsens' OTG-A fiber optic temperature sensor offers the highest performances in the industry. The OTG-A sensor uses the well proven technique based on the temperature-dependent bandgap of GaAs crystal as the temperature transduction mechanism. Its small sensing GaAs crystal located at the tip of the optical fiber makes it convenient for tip measurement applications.

Combined with Opsens' GaAs (SCBG) signal conditioning technology and with the inherent advantages of fiber optic, the OTG-A delivers unprecedented repeatability and reliability in the most adverse conditions such as high level of EM, RF, MR and microwave field environments.

The standard operating range of the OTG-A is from -40 °C to +250 °C. Higher temperature ranges up to 350 °C are available upon request.

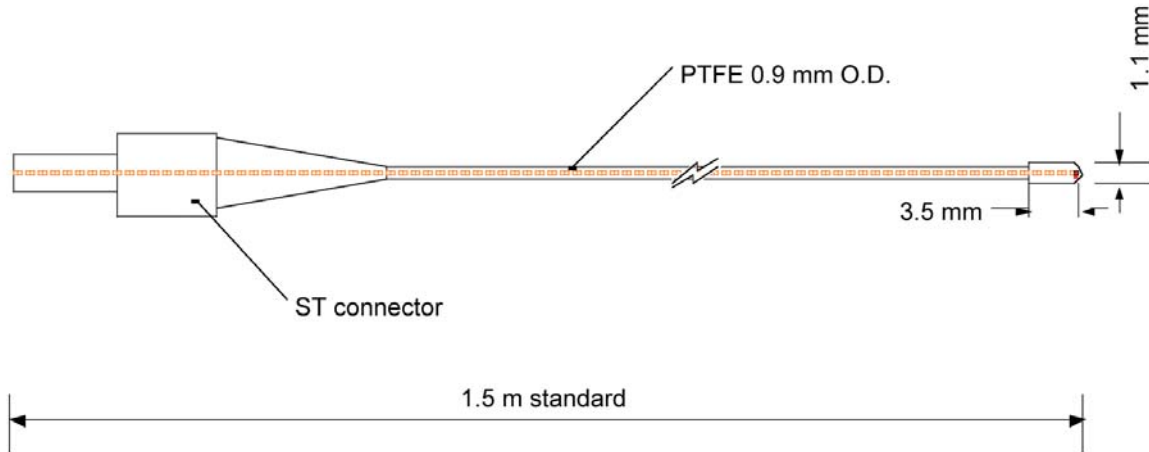
The OTG-A is made with industry standard optical fiber and is compatible with all Opsens' GaAs (SCBG) signal conditioners. This compact and robust fiber optic temperature sensor is available with different optical cables and sheath options and is customizable according to customer specific applications or for OEM-type applications.

Note: for Power Transformer temperature monitoring applications, see OTG-T sensor datasheet and related brochure.

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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	± 0.3 °C or better (Total accuracy from 20 °C to 45 °C range including both signal conditioner and sensor errors) ± 0.8 °C or better (Total accuracy over the full range including both signal conditioner and sensor errors)
Response time	0.5 s typical (For faster response time, see the OTG-F product datasheet)
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	Teflon™ PTFE
Signal conditioner compatibility	All Opsens GaAs (SCBG) signal conditioners

All specifications are subject to change without prior notifications