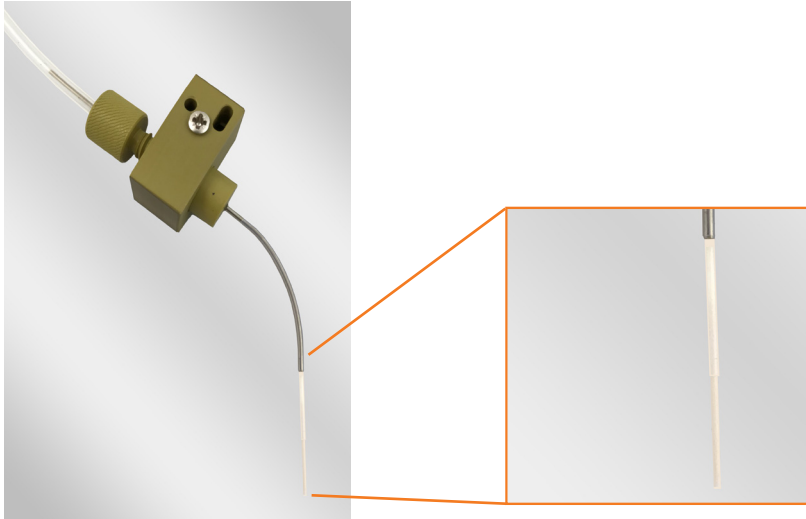


# FIBER OPTIC TEMPERATURE SENSOR

FAST RESPONSE TIME GaAs-BASED FIBER OPTIC TEMPERATURE SENSOR FOR ENERGY AND POWER ELECTRONIC RELATED APPLICATIONS



## KEY FEATURES

- Immune to EM and RF interferences
- Smart retractable design enabling measurement through silicon gel
- Small size (0.22 mm OD) but robust
- High Temperature range (up to 350 °C)
- Non-invasive (very low thermal mass)
- Fast response time
- Practical holder to optimize sensor position

**OTG-PM** Compatible with Opsens Solutions' GaAs (SCBG) signal conditioners

## DESCRIPTION

The OTG-PM is made with industry standard optical fiber and is compatible with all Opsens Solutions' GaAs (SCBG) signal conditioners. Its small size and **fast response time** are perfectly tailored for complicated instrumentation projects, such as those related to **power semiconductor** devices.

The **miniature** sensor head (0.15x0.15 mm) protected by a tube (0.22 mm OD) is handling through a **clever retractable design**: rigid ceramic tubing (0.64 mm OD) allows for **easy piercing** of the silicone gel layer for precise sensor positioning. The upper stainless-steel tubing coated with Teflon is curved to **optimize eye contact** from any viewing angle during manipulation.

To facilitate the mounting and instrumentation of the power modules, the sensor is equipped with a bracket that allows for **quick and precise angle adjustment** while ensuring the **required stability**.

Delivering unprecedented repeatability and reliability in the most adverse conditions such as high levels of EM, RF, MR and microwave field environments, the sensor is deployed in many power electronics modules or converters for quality control, reliability assessment, or permanent surveillance of those critical devices.

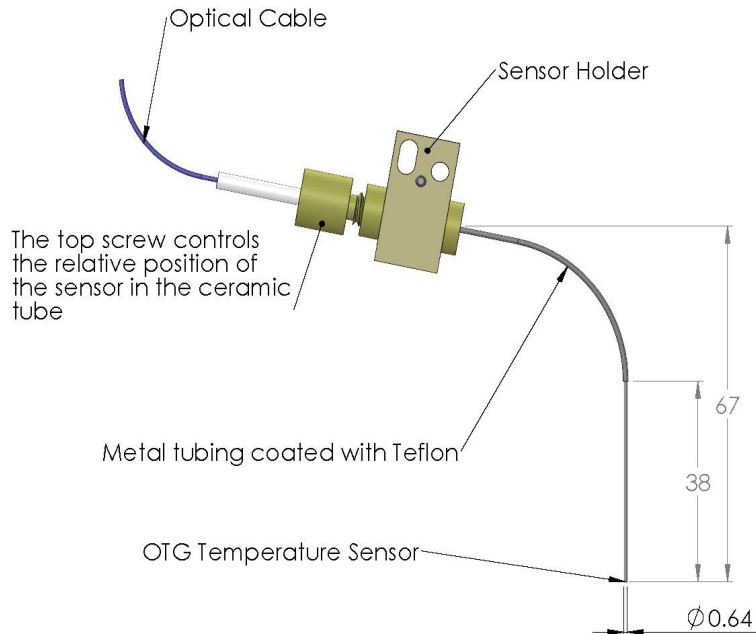
This compact and robust fiber optic temperature sensor is available with different optical cables and sheath options and is customizable according to customer specific applications or for OEM-type applications.

## APPLICATIONS

- Mission profiling
- Thermal stress analysis
- High voltage environments
- Junction temperature evaluation of transistor
- Temperature mission profile of power modules
- Quality control of integrated circuit
- Thermal modeling assessment
- Active monitoring of power electronics during service

# OTG-PM

## FIBER OPTIC TEMPERATURE SENSOR



All units are in millimeters

## SPECIFICATIONS

|  |  |
|--|--|
| TEMPERATURE OPERATING AND CALIBRATED RANGE | -40 °C to +250 °C (other ranges available upon request)                  |
| ACCURACY                                   | ± 0.8 °C or better (including both signal conditioner and sensor errors) |
| OPERATING HUMIDITY RANGE                   | 0-100 %  |
| EMI/RFI SUSCEPTIBILITY                     | Complete immunity  |
| CALIBRATION                                | NIST traceable   |
| CABLE LENGTH                               | 1.5 meters standard (other lengths available)                            |
| OPTICAL CONNECTOR                          | LCA, ST standard   |
| CABLE SHEATHING                            | Teflon™ PTFE (other materials for sheathing available)                   |
| SIGNAL CONDITIONER COMPATIBILITY           | All Opsens Solutions' GaAs (SCBG) signal conditioners                    |