

# FIBER OPTIC TEMPERATURE SENSOR

FAST RESPONSE TIME GaAs-BASED FIBER OPTIC TEMPERATURE SENSOR FOR R&D AND INDUSTRIAL APPLICATIONS



## KEY FEATURES

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

## OTG-M SERIES - (M170-M220-M360-M420-M600-MPK5-MPK8)

### DESCRIPTION

Opsens Solutions' OTG-M Series (OTG-M170, OTG-M220, OTG-M360, OTG-M420, OTG-M600, OTG-MPK5 & OTG-MPK8) fiber optic temperature sensors offers high performances. The OTG-M Series sensors 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**. The difference between each model of the OTG-M series is the response time and the diameter of the sensor (OD) are presented on the next page in the specifications section, the detail of each sensor.

Combined with Opsens Solutions' SCBG (Semiconductor Bandgap) signal conditioning technology and with the inherent advantages of fiber optic, the OTG-M Series delivers **unprecedented repeatability and reliability in the most adverse conditions** such as high levels of EM, RF, MR, and microwave field environments.

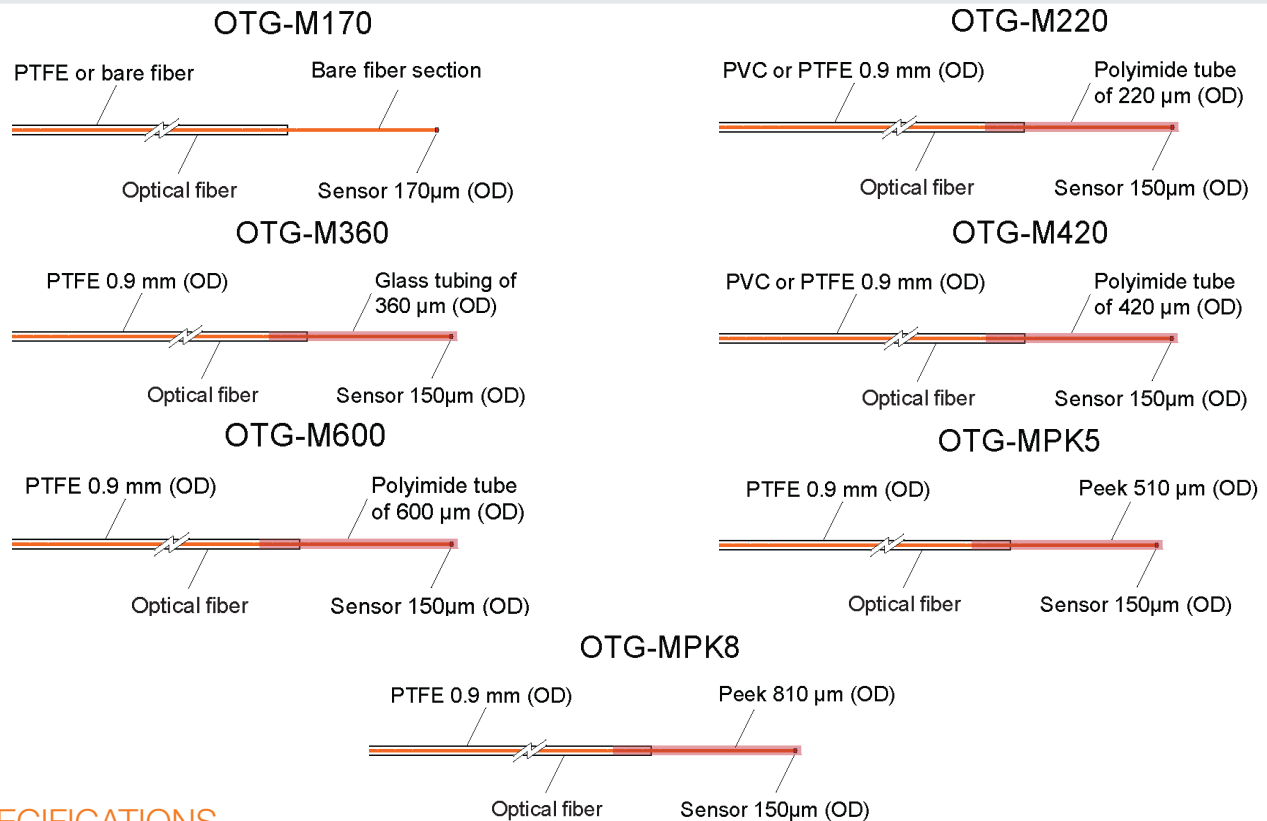
The OTG-M Series are made with industry standard optical fiber and is compatible with all Opsens Solutions' SCBG signal conditioners. This compact and **robust fiber optic temperature sensor** is available with different optical cables and sheath options and is customizable according to customer specific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

### APPLICATIONS

- Dynamic temperature monitoring
- EM, RF and microwave environments
- High voltage environments
- Applications that require small size sensors
- Low cost disposable sensor

# OTG-M (M170-M220-M360-M420-M600-MPK5-MPK8)

## FIBER OPTIC TEMPERATURE SENSOR



## SPECIFICATIONS

SENSOR MODEL	OTG-M170	OTG-M220	OTG-M360	OTG-M420	OTG-M600	OTG-MPK5	OTG-MPK8
RESPONSE TIME	≤ 35 ms	≤ 50 ms	< 100 ms	< 200 ms	200 ms	< 225 ms	< 500 ms
SENSOR DIAMETER	0.170 mm	0.220 mm	0.360 mm	0.420 mm	0.600 mm	0.510 mm	0.810 mm
SENSOR TIP MATERIAL (TUBE)	Bare fiber	Polyimide	Glass	Polyimide	Polyimide	PEEK	PEEK
TEMPERATURE OPERATING AND CALIBRATED RANGE	-40 °C to +250 °C (other ranges available upon request)						
ACCURACY	± 0.8 °C or better for other temperature range						
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™						
SIGNAL CONDITIONER COMPATIBILITY	All Opsens Solutions' GaAs (SCBG) signal conditioners						