


## Lsens-C Fiber Optic Temperature Sensor

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- Small tip Polyimide, protected
  - Outstanding repeatability with high flexibility
  - Complete immunity to RFI, EMI, NMR and microwave radiation
  - Does not require recalibration or complex inputs to operate
  - Cryogenic temperature range ( as low as 4 °Kelvin )

A multiple use fiber optic temperature sensor for measurement in a wide range of demanding applications, where immunity to electromagnetic fields is mandatory.

## Product Summary

A multiuse fiber optic temperature sensor designed for a wide range of applications, especially for the use in demanding applications. The sensor offers complete immunity to RFI, EMI, NMR and microwave radiation. The standard temperature sensor has a response time of 0.2 s. With a standard deviation of  $\pm 0.2$  °C it allows precise and repeatable measurements. The coating of the temperature sensor is made of PTFE, and the fiber tip has 0.3 mm x 0.3 mm area with a Polyimide coating. The fiber optic probe consists of a PTFE protected glass fiber and a GaAs-crystal (Gallium Arsenide) at the sensor tip. It is totally free of metal and is immune to external fields. Therefore, the probes are explicitly suitable for use in large temperature ranges as well as in aggressive operating environments. The sensor length can be from several meters to 1 kilometer in length without impacting the accuracy of the measurement result. Other sensor lengths and connector types are available upon request.

## Applications

- Electric Vehicle and Battery Testing
- High voltage environments
- Nuclear and hazardous environments
- Medical applications
- Chemical and Process Industries
- RF and Microwave drying applications
- Cryogenic and vacuum environment available ( Optional )

## Benefits

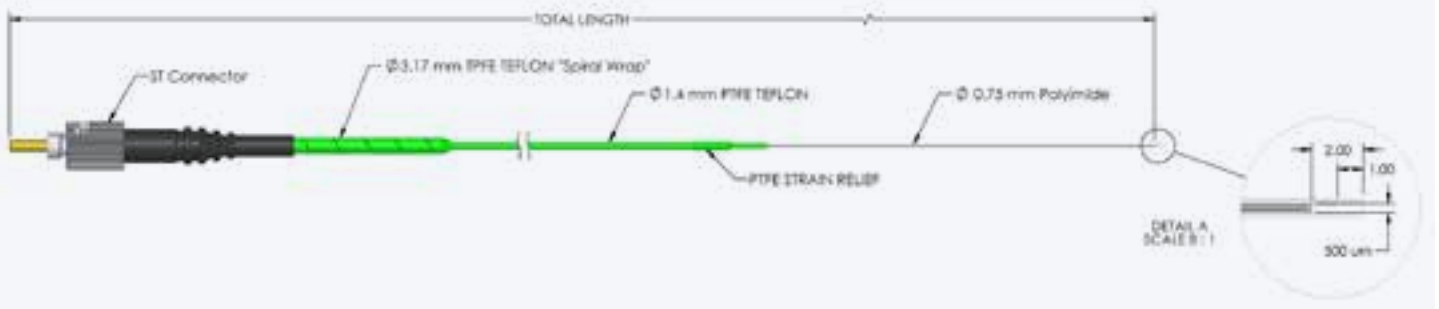
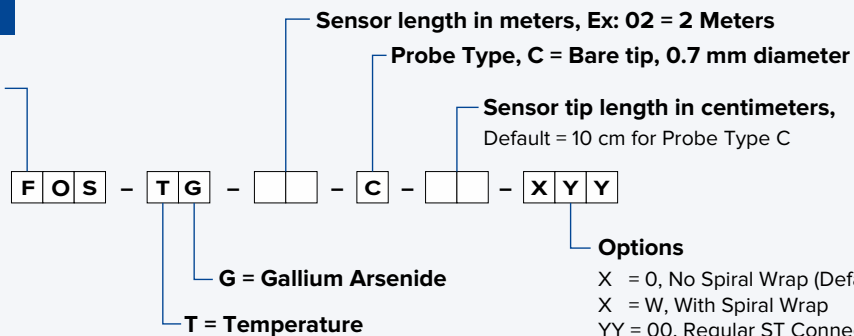
- Sensors do not require any recalibration
- No shift over time, high stability
- Optional spiral wrap
- Robust fiber optic temperature sensor
- Available in different cables and sheath options
- Customizable according to customer specific applications
- Suitable for OEM-type applications

## TECHNICAL SPECIFICATIONS

Temperature range	-200 °C to +250 °C
Temperature range (Optional Range extensions)	Down to 4 °K / Up to +85 °C
Repeatability	0.2 °C
Accuracy absolute temperature	+/- 0.8 °C
Accuracy relative temperature	+/- 0.2 °C
Probe sheathing material	Teflon Coated, with Polyimide protection for sensor tip
Connector	Stainless Alloy / Optional - Dielectric
Response time	Up to 0.2 Sec
Probe sensitive area - Diameter	0.7 mm
Protective Tube - Diameter	Teflon / 1.4 mm
Longevity	Probe accuracy & repeatability constant over time

## ORDERING CODE

FOS = Fiber Optic Sensor



### Rugged Monitoring Services

Rugged Monitoring provides customization of sensors, monitors & software. In addition we offer on-site commissioning services, maintenance contracts and technical support to all customers worldwide.



### About Rugged Monitoring

Industry leading team of fiber optic experts with 100+ years of combined experience committed to delivering customizable solutions for challenging applications. We offer a range of reliable, high performance, customizable sensors and monitoring solutions that are immune to external influence.

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