

FIBER OPTIC TEMPERATURE SENSOR

TS2P

Key Features

- Temperature range: -200 °C to +300 °C
- Electrically non-conductive
- Immunity to RFI, EMI, NMR and micro-wave radiation
- Resistance to high temperatures
- High accuracy
- Stable and repeatable measurements
- GaAs-based temperature sensor

Applications

- EMI, RFI and microwave environments
- High voltage environments
- Process monitoring
- Medical applications (MRT)



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sensors

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TS2P

DESCRIPTION

The fiber optic temperature probe TS2P is designed for fast measurements with direct contact to the heated element and offers immunity to RFI, EMI, NMR and microwave radiation. The standard temperature sensor TS2P has a measurement speed of up to 20 K/s. With an accuracy*² of +/- 0.2 K it allows precise and repeatable measurements.

The coating of TS2P temperature sensor is made of PTFE, the fiber tip/crystal cube has an edge length of 0.3mm x 0.3mm and has a ST-connector. For mechanical stability and applications e.g. in oil special protective coatings and hoses are available.

The fiber optic probe TS2P consists of a PTFE protected glass fiber and a plain GaAs-crystal (gallium arsenide) at the sensor tip. It is totally free of metal and immune to RFI, EMI, NMR and microwave radiation – therefore TS2P probes are explicit suitable for the use in high temperature ranges (-200 °C to +300 °C) as well as in aggressive and rough test Environments.

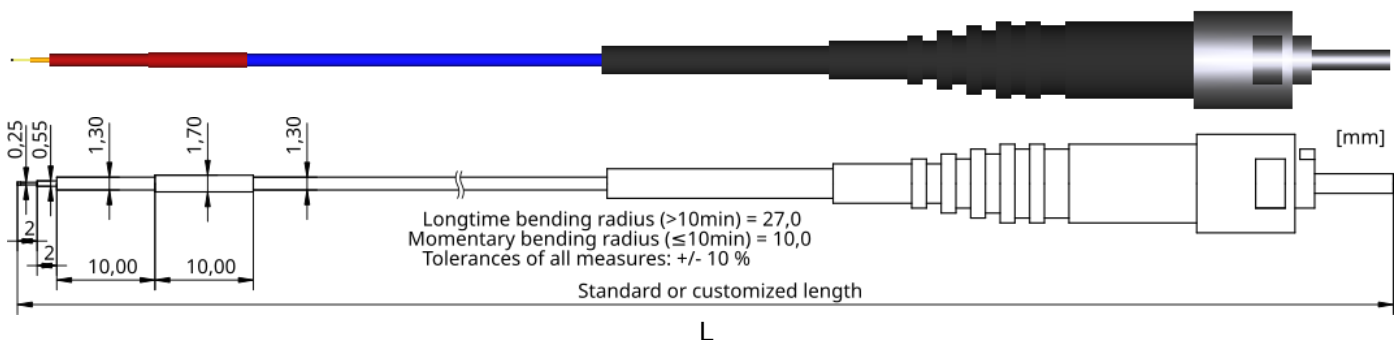
All fiber optical temperature sensors can be connected to the fiber optic temperature measurement devices (FOTEMP), delivers accurate and complete reliable, stable and repeatable values. Starting at a light wave length of 850 nm GaAs becomes optical translucent. Since the position of the band gap is temperature dependent, it shifts about 0.4 nm/K. The sensor cable can be produced in different lengths without influencing the accuracy of the measurement result. Other sensor lengths and connector types are available upon request.

We are always anxious to adjust our offer to your special needs. In case of any further questions about individual measurement problems, lengths of sensors or connector types, please contact us.

*¹ Long-term temperature range -200 °C up to +260 °C, short-term temperature range +260 °C up to +300 °C

*² Statement only possible with analysis unit. See data sheet of the measurement device for information about technical data.

DIMENSIONS



ORDERING CODE

TS2P-xx
where L=xx in m

Quick Ship Configurations:
TS2p-02
Other lengths on request.

TECHNICAL SPECIFICATION

Name of sensor	TS2P
Measurement range * ¹	-200 °C to +300 °C
Thermal response	Up to 20 °C/s
Accuracy * ²	± 0.2 °C
Fiber Ø	200/220/240µm, Polyimide-coated fiber
Sensor standard lengths	Standard: 2m Special lengths to 20m
Connector type	ST with metallic ferrule (-40 to 85 °C)
Signal conditioner	Compatible with all Weidmann FOTEMP signal conditioners

Specifications subject to change without notice