



FIBER OPTIC TEMPERATURE SENSOR

TS3

Key Features

- Temperature range: -200°C to +300°C
- Non-conductive
- Immunity to RFI, EMI, NMR and microwave radiation
- Resistance to high temperatures
- High accuracy
- Stable and repeatable measurement
- GaAs-based temperature sensor

Applications

- Microwave and RF environments
- Food pasteurization
- NMR analytical chemistry applications
- Food cooking and conditioning in microwave ovens
- Microwave assisted chemistry
- Pharmaceutical drying of powders, herbs and granulated mixtures



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TECHNICAL SPECIFICATION

Name of sensor	TS3, The flexible
Temperature range	-200°C to +300°C**
Standard deviation*	+/-0.2 °K
Response time	<= 2,0s
Fiber Ø	200 um
Measurement speed	<= 4 °K/s
Sensor standard lengths	2m and 10m (Other lengths on request)
Connector type	ST
Signal conditioner	Compatible with all Optocon and Weidmann fiber optic thermometers

DESCRIPTION

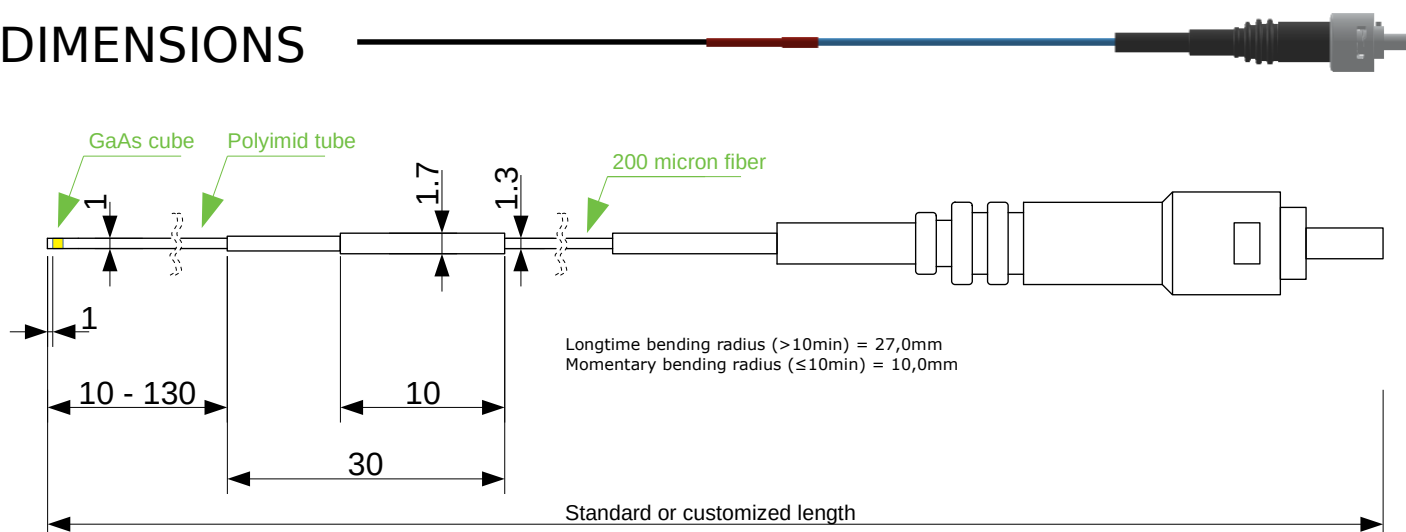
The fiber optic temperature probe TS3 stands for expanded flexibility with usual Weidmann quality and is the best choice for application in RFI, EMI, NMR and microwave environments.

The fiber optic sensor TS3 allows exact temperature measurements within a range of -200°C to +300°C at a standard deviation* of +/-0.2°C. The jacket of the TS3 temperature probe consists completely of PTFE and ensures immunity to RFI, EMI, NMR and microwave radiation.

Unlike the fiber optic sensor TS2, the TS3 comes with the possibility of a customizable length of the probe tip from 10mm to 130mm. Thanks to their fast response time of <2s and a tip diameter of 1.0mm the TS3 temperature probe is small enough to fit in even the thinnest openings inside a measurement environment to deliver reliable data in real time. 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 850nm GaAs becomes optical translucent. Since the position of the band gap is temperature dependent, it shifts about 0.4nm/Kelvin. Beyond that, Weidmann provides suitable extensions in different lengths without influencing the accuracy of the measurement result.

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.

DIMENSIONS



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

*2 Long-term temperature range -200°C up to +260°C, Short-term temperature range +260°C up to +300°C

*3 Measurement accuracy and standard deviation depend on calibration range and spreading of calibration points