



## FIBER OPTIC TEMPERATURE SENSOR

# TS4

### 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

- Harsh chemical conditions, e.g. nuclear
- Offshore temperature measurements
- Natural gas distribution pipelines and storage tanks
- Battery testing



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# TECHNICAL SPECIFICATION

Name of sensor	TS4, The resistant
Temperature range	-200°C to +300°C**
Standard deviation*	+/-0.2 °K
Response time	<= 2,0s
Fiber Ø	200 um
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 TS4 is especially designed for the use in chemical aggressive and nuclear Environments. Its increased resistance comes with no loss in accuracy and temperature range.

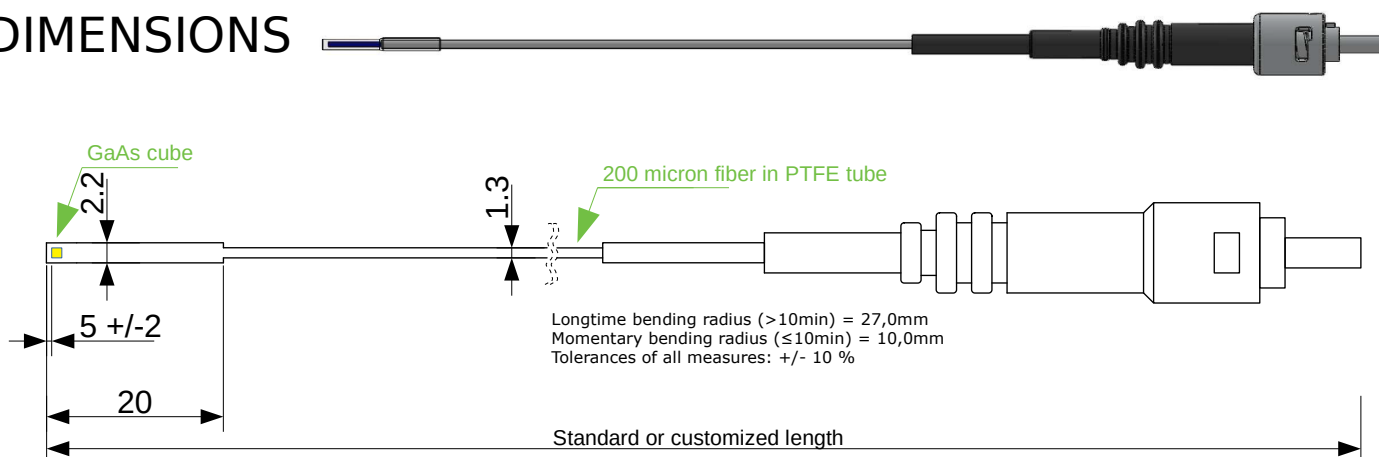
Its mechanical setup results in a immunity to RFI, EMI, NMR and microwave radiation. The temperature sensor guarantees a measuring range from -200°C to +300°C with a standard deviaton\* of +/-0.2°C. The fiber optic temperature probe is completely non-conductive. Thanks to its special PTFE protection the TS4 probe resists even aggressive chemical concentrations inside the measurement environment - with a maximum diameter of 2mm.

All fiber optic 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.

The sensor cable can be produced 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