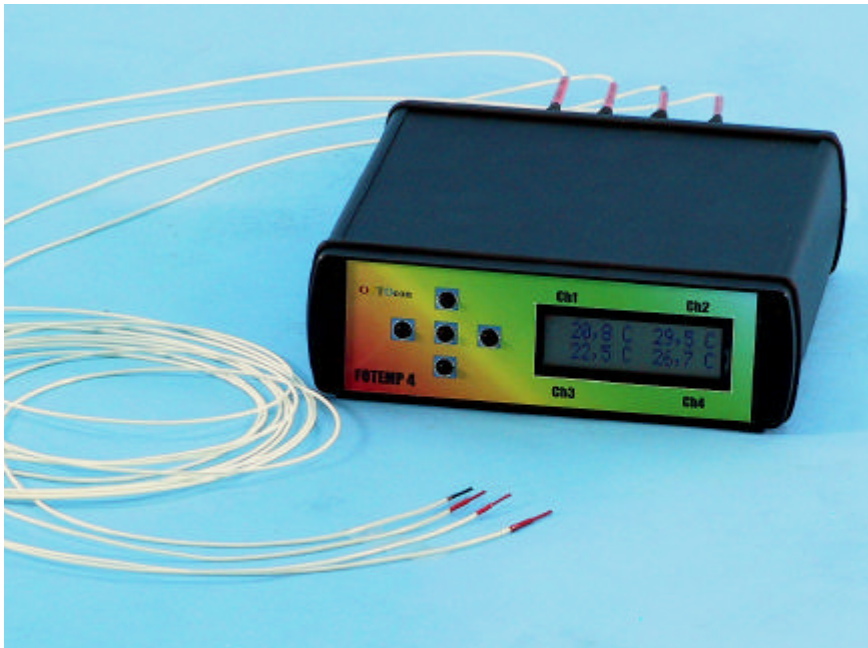


Fiberoptical Thermometer FoTemp 4



Fotemp 4
Is an 4 channel-fiberoptical thermometer used for temperature measurement in high electromagnetic interfered environment, in microwave fields and places where measurement with electric temperature probes is not possible.

Fotemp 4 is an user-friendly, easy operating and compact measurement instrument for different fields of application. Fotemp 4 will be adjusted to your special requirements (interfaces, probe length).

Measuring method

The fiber optic temperature sensor consists of a fiber optic probe with a GaAs (gallium arsenide) probe tip. The probe consists completely of non metallic material.

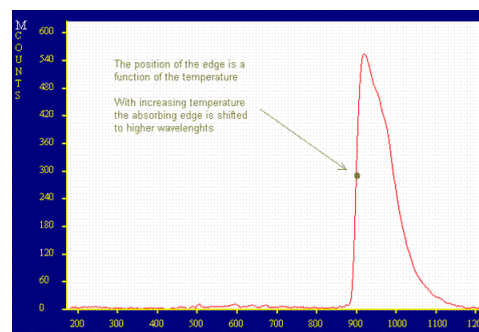
Having a wave length of 850 nm and more GaAs becomes optical transmission. This is due to the position of the band edge in the material. The position of the band edge is dependent to temperature and shifts about 0.4 nm per Kelvin.

The measurement instrument contains four light sources and a device which is used for the spectral detection of the band edge's position. From this the temperature is calculated.

The probes consists completely of non metallic material.

Application fields

- Medical Engineering (nuclear spin tomography)
- Microwave - and high frequency applications
- Processmonitoring
- Generator -and transformer techniques
- Electric motors
- Application in aeronautics
- Chemistry and petrochemistry



Technical data

Instrument:

Number of channels: 4
Power Requirements: 9 VDC, plug-in power supply inclusive
Power input: 900 mA
Display range: 0 to 300°C
Accuracy: +/- 1°C
Resolution: 0,1°C
Analog output: 0 - 10V or 4-20mA, BNC, different options on request
Communication: RS-232
Calibration: One-point calibration feasible by user
Display: LCD display 2x16 digits, background lighting
Storage temperature: -20°C to +50°C
Operating temperature: 0°C to +50°C
Instrument: weight 1,1 kg
dimensions 210 x 171 x 54 mm
Material: aluminium and plastic

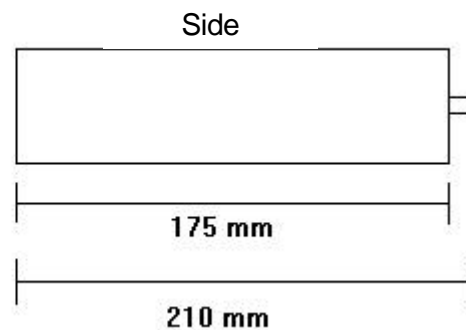
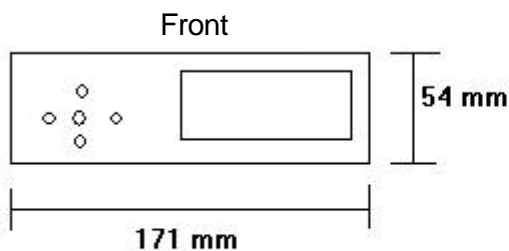
Probe:

Length: 2m, 5m or 10 m, different probe lengths and configurations on request
Diameter: 1,3 mm (probe tip 2cm, AD 1,5mm), completely consisting of nonmetallic material

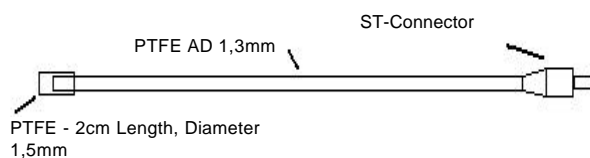
Temperature range

(probe): 0°C to 300°C
Connector: ST-Connector

System-accuracy: ± 2°C in the temperature range 0°C - 300°C
(Instrument and probe)



Probe construction



Kontakt

OPTOcon GmbH
Optische Sensoren und Meßsysteme
Beratung • Entwicklung • Vertrieb
Pohlandstraße 17 • 01309 Dresden
Tel.: +49 351 3 10 19 57
Fax: +49 351 3 11 19 51
E-Mail: info@optocon.de
<http://www.optocon.de>