HIGH ACCURACY GAAS-BASED FIBER OPTIC TEMPERATURE SENSOR FOR MEDICAL APPLICATIONS

Compatible with Opsens' GaAs (SCBG) series signal conditioners

Key Features

- ± 0,3 °C total system accuracy
- Small and robust design
- Outstanding repeatability
- MRI/EMI/RFI and microwave immune
- Intrinsically safe
- OEM-type and custom disposable versions

Applications

- Surface and core temperature monitoring in MRI environments
- RF, ultrasound and electro surgery environments
- Temperature monitoring for preclinical and research applications
- MR coil temperature monitoring
- Applications that require small size sensor

Description

Opsens' OTG-M420 fiber optic temperature sensors offers the highest performances in the industry. The OTG-M420 model uses the well proven technique based on the temperature-dependent bandgap of GaAs crystal as the temperature transduction mechanism. Its small sensing GaAs crystal located at the tip of the optical fiber makes it convenient for tip measurement applications.

Combined with Opsens' GaAs (SCBG) signal conditioning technology and the inherent advantages of fiber optic, the OTG-M420 delivers unprecedented repeatability and reliability in the most adverse conditions such as high level of EM, RF, MR and microwave field environments.

The OTG-M420 is made with industry standard optical fiber and is compatible with all Opsens' GaAs (SCBG) signal conditioners. This compact and robust fiber optic temperature sensor, available with different optical cables and sheath options, may be customized to customer specific requirements or for OEM-type applications.

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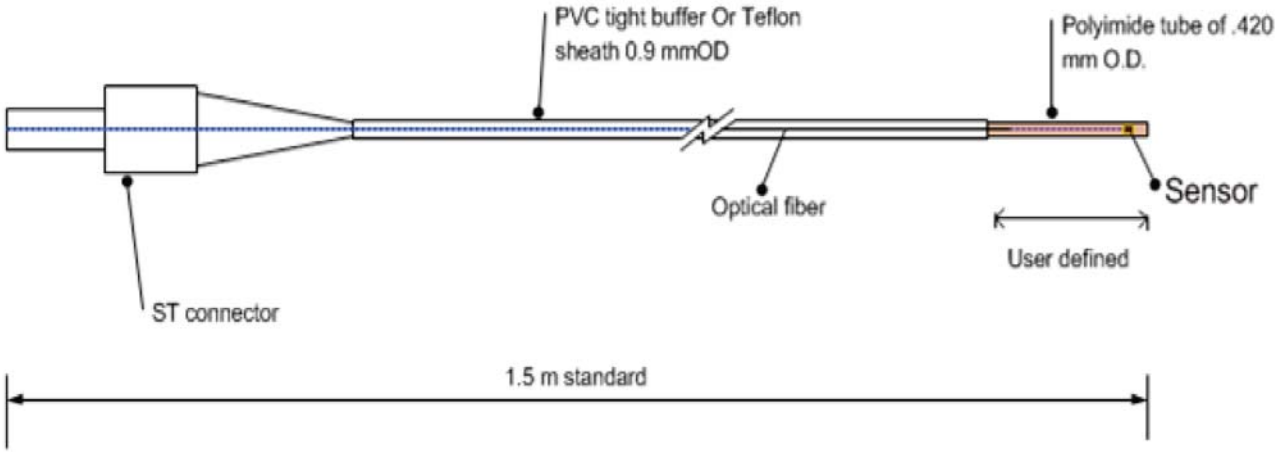

Specifications

Temperature operating range	20 °C to +45 °C (higher temperature ranges available upon request)
Resolution	0.01 °C
Accuracy	±0.3°C (Total accuracy over the full range from 20 to 45 °C including both signal conditioner and sensor errors) ±0.8°C and better (Total accuracy including both signal conditioner and sensor errors for higher temperature range)
Response time	< 200 ms
Operating humidity range	0-100 %
MRI/EMI/RFI susceptibility	Complete immunity
Calibration	NIST traceable
Cable length	1.5 meters standard (other lengths available)
Optical connector	ST standard
Sensor diameter	0.42 mm O.D.
Cable sheathing	PVC tight buffer (≤ 85°C) or Teflon™ (> 85°C)
Signal conditioner compatibility	All Opsens GaAs (SCBG) signal conditioners

Product specifications are subject to change without prior notice

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