

FIBER OPTIC
TEMPERATURE SENSOR

TS5m

+ Catheter

Key Features

- Temperature range: -200°C to +200°C
- Non-conductive
- Immunity to RFI, EMI, NMR and microwave radiation
- Throw-away catheter with Luer-Lock
- Stable and repeatable measurement
- GaAs-based temperature sensor

Applications

- Animal health environments
- Catheter instrumentation
- Monitoring of animal body temperatures



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TECHNICAL SPECIFICATION

Name of sensor	TS5, The medical
Temperature range	-200°C to +200°C (sensor only)
Standard deviation*	+/-0.2 °K
Response time *2	<= 40,0 K/s
Fiber Ø	200 µm
Sensor standard lengths	2m and 10m (Other lengths on request)
Connector type	Type: ST Operating range: -40 - 85 °C Material: metal
Signal conditioner	Compatible with all Optocon and Weidmann fiber optic thermometers

DESCRIPTION

The fiber optic temperature probe TS5m combines high resistance with a minimal probe diameter - especially suitable for catheter applications within a modern animal health technology setup.

The fiber optic probe TS5m provides measurement data at the speed of light with a response time of <2s and a standard deviation* of +/-0.2°C without catheter. The sensor tip with GaAs-Crystal (gallium arsenide) comes with a diameter of 0.55mm being the thinnest fiber optic temperature probe of the Weidmann product line.

The matching catheter is bio-compatible and can be delivered from 350 mm to a length of up to 4800 mm always with LUER-LOCK adapter. The catheter is delivered steril and meant for one-time usage. So the more expensive TS5m sensor can be reused more often.

The small size of the TS5m temperature sensor enable for the usage in animal health applications, e.g. body temperature monitoring - the needed requirements on flexibility are completely guaranteed.

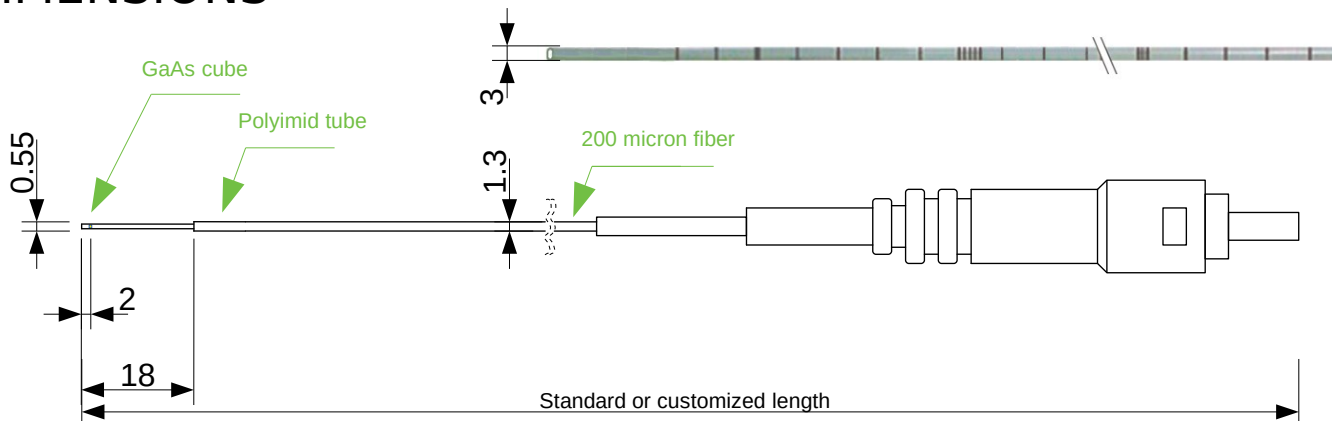
Through its mechanical setup it is immune to RFI, EMI, NMR and microwave radiation. All fiber optic temperature sensors can be connected to the fiber optic temperature measurement devices (FOTEMP) and provide accurate, reliable and repeatable data. The sensor cable can be produced in different lengths 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.

IMPORTANT NOTE: This product is not certified to be used in human body!



DIMENSIONS



- *1 Statement only possible with analysis unit. See data sheet of the measurement device for information about technical data.
- *2 depends on temperature difference in setup
- *3 Measurement accuracy and standard deviation depend on calibration range and spreading of calibration points

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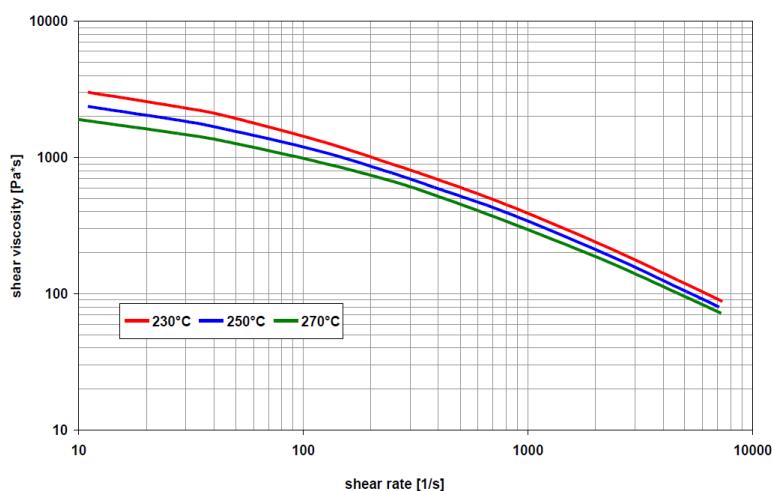
HLB-Catheter

DESCRIPTION

The fiber optic temperature probe TS5m is tested and can be combined with the Grilamid L25 catheter consisting of polyamide 12. The reaction time of the TS5m plus catheter was evaluated to about 2 K/s.
The used material has a very strong visibility in Röntgen usage.

IMPORTANT NOTE: This product is not certified to be used in human body!

Property	Value	Unit	Remarks
Melting point	178	°C	ISO11357
Density	1.01	g/cm ³	ISO1183
Water absorption	1.5	%	ISO62
O ₂ -Transmission rate	350-370	cm ³ /m ³ 24h bar	DIS/ISO15105-1
CO ₂ -Transmission rate	1500-1600	cm ³ /m ³ 24h bar	DIS/ISO15105-1
Tensile E-Modulus	1100	MPa	ISO527-2
Stress at yield	6	%	ISO527-3
Stress at break	70-80	MPa	ISO527-3
Operating temperature range	-40 .. +65	°C	



DIMENSIONS

