

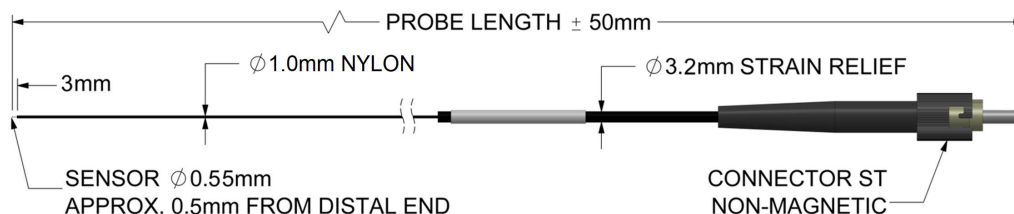
MRI Temperature Sensing

Non-magnetic, Non-Conducting, Optical Fiber Probes with Exceptional Precision

OSENSA's fast response PRB-521 contact temperature probes provide accurate and reliable temperature sensing for MRI, research and laser ablation applications requiring immunity to high intensity laser radiation, electro-magnetic fields, and RF energy. These probes accurately measure temperatures from -40 °C up to 100 °C when exposed directly to laser radiation from 950nm to 1200nm. Typical applications include sensing tissue temperatures during fiber guided laser ablation procedures using 980nm or 1064nm fiber coupled laser sources with up to 20W of optical power.

Product Specifications

PRB-521-2M-STM-MRI



System Specifications	PRB-521-2M-STM-MRI
General Accuracy (-40 °C to 100 °C)	± 0.25 °C
Calibrated Accuracy ^{1,2} (20 °C to 60 °C)	± 0.15 °C
Stability (15min)	± 0.02 °C
Noise (1 second averaging)	± 0.02 °C
Measurement Range	-40 °C to 100 °C
Measurement Rate of Change	50 °C / s
Immersion Response Time Constant	250 ms
Fiber Core Diameter	500 μm
Tip Diameter	550 μm
Minimum Bend Radius	10 mm
Probe Materials	Nylon

Notes:

1. Calibrated accuracy is valid within $\pm 20^\circ\text{C}$ of calibration point.
2. Submersion in aqueous solutions like PAA gel or Saline will shift the temperature reading 0.2°C higher with stability reached in 30min. After removing from water, the probe will return to original calibration after 1 hour drying at 40°C.
3. Must be used with OSENSA's FTX-300-LUX+HGLA series fiber optic signal conditioners.
4. Custom lengths and Nylon jacket strip lengths available to fit small diameter catheter applications.
5. For longer distances add extension cable EXT-500-5M-STM-STM, in lengths from 5m to 15m.

TECHNICAL SUPPORT

OSENSA Innovations offers on-site support, commissioning, and training for all of its products. For immediate assistance with any technical issue, please contact support@osensa.com or call 1-888-732-0016.

WARRANTY INFORMATION

OSENSA Innovations stands behind its products and services. All fiber optic temperature probes and signal conditioners ship with a full one year repair or replacement warranty. You may also purchase an extended five year warranty. Some conditions apply.

CUSTOM OEM SOLUTIONS

OSENSA offers cost-effective design and consulting services at discounted rates for high-volume OEM customers. Let the engineering team at OSENSA Innovations help you rapidly develop custom probes for your research application. OSENSA's team has many years of experience designing fiber optic temperature probes for various laboratory environments.

FURTHER INFORMATION

For more information on any of our products or services please visit our website: www.osensa.com or email: info@osensa.com.

