

## Description

The T830 is a high-accuracy single-mode (SM) fiber based Fiber Bragg Grating (FBG) Absolute Temperature Sensor for use in environments from -40°C to +120°C.

Available in a wide range of optical specifications. Packaged to eliminate strain and other influences from the ambient environment. Ready for surface mounting or for embedding into concrete and other materials. Exhibiting excellent wavelength to temperature linearity. Calibration certificate available upon request. The full-scale (FS) accuracy and precision specifications take into account any hysteresis, non-linearities, and the repeatability of the sensor. The T830 installation is fast, easy and intuitive. Delivers the advantages inherent to FBG sensors. Immune to EMI.

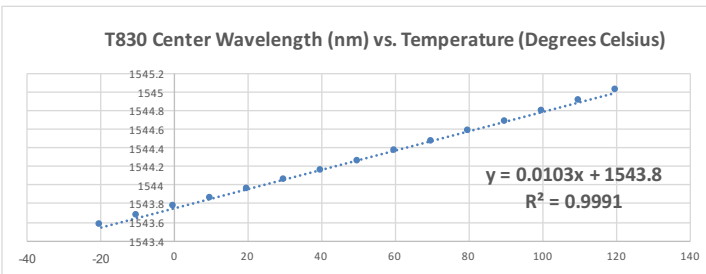
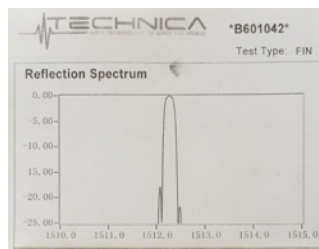
T830 series Temperature Sensors are fabricated using licensed and proprietary state-of-the-art laser manufacturing technologies and thermal designs. The sensor packaging described herein represents the most popular configuration and can be customized.



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## Key Features

**Temperature accuracy.** The precision made FBG written into the fibers' core for producing the T830 and our state-of-the-art sensor packaging technology yields a simple transducer configuration of high resolution, high-accuracy and repeatability. Customer specified BW for clear signal processing.



Available as single point sensor or can be multiplexed in-line with many other same or different type sensors. Well suited for projects that include the need to monitor temperature at key discrete locations, or can be provided in custom made cable arrays of various lengths and with a flexible number of sensors for measuring absolute temperatures at many points.

**Low cost and long-term stability.** The T830 optical sensor core is protected by a rugged stainless steel construction. Ideal for demanding projects that require both low-cost per temperature sensing point and stable operation over the long-term.

Parameter	Specifications
Temperature Range	-40°C to +120°C
Temperature Accuracy	0.3% FS (0.15% FS typical)
Temperature Precision	0.08% FS
Resolution and Sensitivity	0.01°C, 10pm/°C
Wavelengths and Tolerance	1458nm to 1622nm, +/-0.5nm; 980, 1060, 1310nm, other
Bandwidth @ 3dB (FWHM)	0.1nm to 2.0nm; other opt.
Reflectivity %	50% std, 1% to 99% options
SLSR	>15dB, other options
Sensor Configurations	Double-Ended, or Multi-Sensor In-Line Array
Sensor Pigtail (L, DIA)	1 m and 0.9mm, other options
Cable Bend Radius	15mm std, options to 2mm
Optical Connector	FC/APC, LC/APC, other
Housing Material	Stainless Steel 304, also available in SS316
Dimensions (L, DIA)	40.15mm x 3.175mm
Ingress Protection Rating	IP67

## Applications in Civil and Geo Engineering, Energy, Transportation, Industrial, and Research

Technica undertakes a rigorous development process before products release. The company is also firmly committed to continuous improvements after release to insure performance to the highest standards, hence, specifications are subject to update without notice.

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