

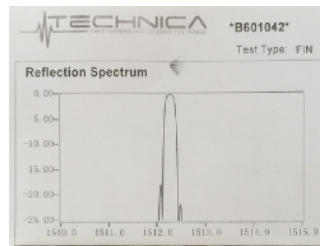
Description

The T85 is a Singlemode (SM) Polarization Maintaining Fiber based Fiber Bragg Grating (FBG).

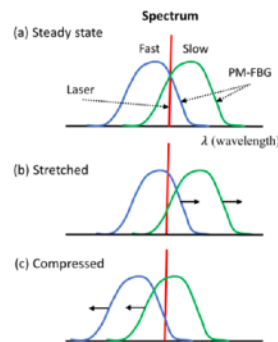
Available in a wide range of optical specifications. Naturally packaged (written) directly in fiber, these sensors and filters can be used as they are or they can be packaged into a variety of higher level sensors for use in optical sensing systems. Small-size and fast response time. Excellent wavelength to temperature and wavelength to strain linearity. The T85 PM-FBG makes handling and installation fast, easy and intuitive. Delivers the many advantages inherent to all FBG based sensors with the added feature of directional alignment. Can be configured to operate as ultra-sensitive (20x higher resolution than standard FBGs) strain and temperature measurement sensor. Immune to EMI.

Key Features

Temperature and Strain Linearity. The precision made FBG structure written into the PM fibers' core for producing the T85 yields a simple transducer configuration of high resolution, linearity, and measurement repeatability. High SLSR for clear signal processing.

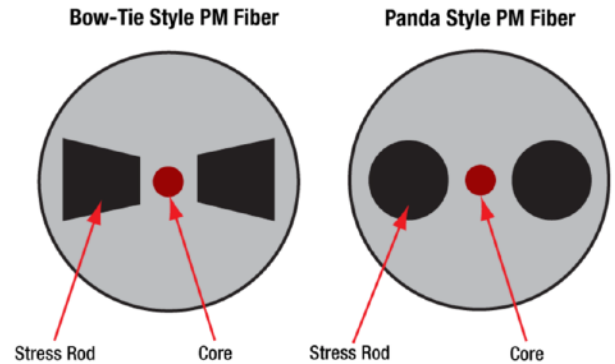


Reliable from -55 to +300 Degrees Celsius. Coated with heat resistant polyimide, the T85 PM-FBG sensor is well suited for optical sensing systems that are required to operate in environments up to 300°C, ideally balancing cost, performance, and reliability for creating attractive commercial solutions. Inquire with us about our FBG products for applications from -269°C to +700°C, +850°C, and +1,000°C.



Easy to daisy-chain. Well suited for projects that include the need to monitor strain, temperature and other engineering parameters at many points. The T85 can be provided in FBG Arrays of various lengths and with a flexible number of FBGs, and terminated with slow-axis aligned FC/APC connectors.

Proven field performance. The T85 Polarization Maintaining FBG sensors and filters have been in production for several years and continue to receive excellent customer feedback with practically no returns since initial release. They are rugged core fiberoptic sensing elements in an expanding range of applications, featuring stable operation and high accuracy for long-term use.



FBGs manufactured and sold by Technica under International License from Raytheon Technologies Corporation

Parameter	Specifications
Wavelengths / Tolerance (CWs specified at slow axis)	1460 to 1620 nm, +/-0.5; 980, 1060, 1310nm, other
Reflection BW (FWHM)	0.1nm to 1.6nm; other
Reflectivity %	>50%; other options
FBG Length	1-24 mm
SLSR	15 dB; other options
Response Time (for Strain, Temperature)	0.001 ms, 0.01ms
Temperature Range / Sensitivity	-55°C to +300°C; ~10 pm/°C
Strain Range / Sensitivity	>15,000 microstrain; 1.2pm / microstrain
Fiber Type and Cladding Diameter Options	Single-Mode PM 125µm DIA
Fiber Coating, Total DIA	Polyimide, 155µm DIA Acrylate Option, 255µm DIA
Fiber Pigtail Length	1 m, other options
Fiber Bend Radius	>17mm, other options
Optical Connector	FC/APC, slow-axis aligned

Applications in Structural Engineering, Materials Test Labs, Energy, 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.