

## Description

The T98 is a Single-Mode (SM) Fiber based Fiber Bragg Grating (FBG) usable in environments to 1,000°C.

Available in a wide range of optical specifications. Annealed up to 1,100C, or produced without annealing, as the application requires. Naturally packaged (written) directly in fiber, these sensors 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 linearity after annealing or regeneration. The T98 FBG handling and installation is fast, easy and intuitive. Delivers the advantages inherent to FBG based sensors. Immune to EMI.

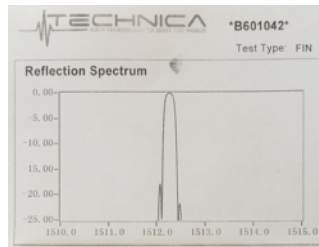
T98 series FBGs are fabricated using licensed and proprietary state-of-the-art laser manufacturing technologies and thermal designs in a variety of fibers, coatings and protection materials to fit a wide range of high-temperature applications.



High Temperature FBGs manufactured and sold by Technica under International Licenses from United Technologies Corporation, Inc and Senseire Ltd.

## Key Features

**Temperature linearity.** The precision made FBG structure written into the fibers' core for producing the T98 yields a simple transducer configuration of high resolution, linearity, and measurement repeatability. High SLSR and customer specified BW for clear signal processing.



**Designed for applications to 1,000 Degrees Celsius.** Factory annealing and regeneration for systems requiring pre-calibrated FBG sensors that are ready to measure out of the box; also available without FBG annealing for applications that require a high-level of fiber flexibility during installation.

**High temperature protection options.** The T98 is Coated/protected with heat resistant polyimide, gold, steel, or delivered in bare fiber format for secondary OEM packaging. Well fit for optical sensing systems that are required to operate in environments up to 1,000°C, ideally balancing cost, performance, and reliability for creating attractive commercial solutions.

**Available as single point sensor or as multi sensor array.** Well suited for projects that include the need to monitor high temperatures at key discrete locations, or for measuring temperatures distributed at many points. The T98 can be provided in arrays of various lengths with a flexible number of FBGs (T160).

**Ready for OEM designs.** The T98 FBG is a core sensing element that can be used AS IS or can be further packaged into higher level sensors. Inquire with us about high-temperature FBGs in OEM fibers, OEM coatings, and OEM packaging.

Parameter	Specifications
Wavelengths / Tolerance	1460 to 1620 nm, +/-1 nm; 980, 1060, 1310 nm, other
Reflection BW (FWHM)	0.1 nm to 2.0 nm; other opt.
Reflectivity %	>40%; other options
FBG Length	5 mm - 10 mm
SLSR	15 dB; other options
Response Time	1 ms
Maximum Temperature Options	Up to +300°C Up to +500°C Up to +700°C Up to +850°C Up to +1,000°C
Fiber Coating and Protection Options	Polyimide, Gold, Steel, Bare Fiber
Fiber Type and Cladding Diameter Options	Single-Mode Non-PM / PM 125 (std), 80, 50µm DIA
Sensor Configurations	Single-Ended, Double-Ended, or Multi-Sensor Array
Fiber Pigtail Length	1 m, other options
Fiber Bend Radius	> 17 mm, other options
Optical Connector	FC/APC, or custom

## Applications in Materials and Equipment Test Labs, Aviation, 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.

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