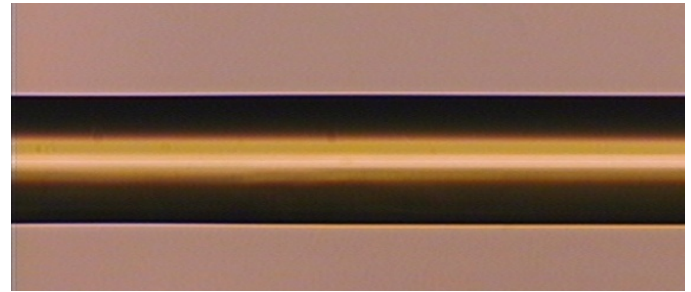


## Description

**The T20 is a Polyimide Coated Single-Mode (SM) Fiber based Fiber Bragg Grating (FBG) usable in environments to 300°C.**

Available in a wide range of optical specifications. 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 and wavelength to strain linearity. The T20 FBG is designed to make handling and installation fast, easy and intuitive. Delivers the many advantages inherent to all FBG based sensors. Equally sensitive as traditional strain and temperature sensors but immune to EMI.

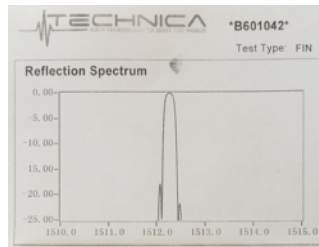
Due to the inherent material properties of polyimide coatings, the T20 can also be used as a relative humidity sensor. Otherwise, the T20 should be used in configurations that protect the sensor from humidity or which properly compensate for the effects of humidity.



FBGs manufactured and sold by Technica under International License from United Technologies Corporation, Inc.

## Key Features

**Temperature and Strain Linearity.** The precision made FBG structure written into the fibers' core for producing the T20 yields a simple transducer configuration of high resolution, linearity, and measurement repeatability. High SLSR for clear signal processing.



**Reliable to 300 Degrees Celsius.** Annealed and coated with heat resistant polyimide, the T20 is a preferred FBG sensor 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 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 T20 can be provided in FBG Arrays of various lengths and with a flexible number of FBGs. The T20 is a rugged low-cost FBG with stable operation for highly accurate long-term use.

**Proven field performance.** The T20 sensor has been in production for several years and continues to receive excellent customer feedback. Currently installed in thousands of applications with practically no returns since its initial release. The T20 is a core element for an expanding range of applications.

Parameter	Specifications
Wavelengths / Tolerance	1460 to 1620 nm, +/-0.5; 980, 1060, 1310nm, other
Reflection BW (FWHM)	0.1nm to 0.8nm; other opt.
Reflectivity %	>70%; other options
FBG Length	1-24 mm
SLSR	15 dB; other options
Response Time (for Strain, Temperature)	0.01 ms, 0.1ms
Temperature Range / Sensitivity	-40°C to +275°C; ~10 pm/°C
Strain Range / Sensitivity	>15,000 microstrain; 1.2pm / microstrain
Fiber Type and Cladding Diameter Options	Single-Mode Non-PM / PM 125 (std), 80, 50, 40 µm DIA
Fiber Coating	Polyimide
Fiber Pigtail Length	1 m, other options
Fiber Bend Radius	>17mm, other options
Optical Connector	FC/APC, or custom

## 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.

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