

## Description

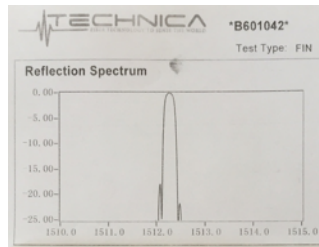
The T10 is our core Fiber Bragg Grating. It is a key building block for hundreds of types of optical sensors and optical filtering applications.

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 T10 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.

Widely used in security, robotics, medical, civil & geotechnical engineering for bridges, buildings, tunnels, mines, slope monitoring, in oil & gas, aerospace and airplanes, railways and trains, roadways and advanced vehicles, marine vessels & racing yachts, wind turbines and structures, pipelines, nuclear facilities, and research laboratories worldwide.

## Key Features

**Temperature and Strain Linearity.** The precision made FBG structure written into the fibers' core for producing the T10 yields a simple transducer configuration of high resolution, linearity, and measurement repeatability. High SLSR for clear signal processing.



**Easy to daisy-chain.** Well suited for projects that include the need to monitor strain, temperature and other engineering parameters at many points. The T10 can be provided as single FBGs according to customer specifications or in FBG Arrays of various lengths and with a flexible number of FBGs.

**Low cost, easy installation, and long lifetime.** The T10 was designed for projects that require both the availability of low-cost FBGs and stable operation for highly accurate measurements over the long-term. The original design makes handling and installation very easy. Fastening methods are by simple fiber bonding, laying, or embedding. Technica is happy to provide support and advice with regard to application specific installation and monitoring requirements.

**Proven field performance.** The T10 sensor has been in production for several years and continues to receive excellent customer feedback. Hundreds of thousands of FBGs have been manufactured and delivered from our state-of-the-art production facility with practically no returns since initial release. The T10 is a reliable core element for an expanding range of applications.



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

Parameter	Specifications
Wavelengths / Tolerance	1460 to 1620 nm, +/-0.5; 980, 1060, 1310nm, other
Reflection BW (FWHM)	0.1 nm to 1.0 nm; other opt.
Reflectivity %	1% to 99%
FBG Length	1-24 mm
SLSR	>15 dB; other options
Response Time (Strain, Temp)	0.01 ms, 0.1ms
Temperature Range / Sensitivity	-40°C to +275°C; ~10 pm/°C other options available
Strain Range / Sensitivity	>15,000 µε with 1.2pm/ µε; other options available
Fiber Type and Cladding Diameter Options	Single-Mode Non-PM / PM 125 (std), 80, 50, 40 µm DIA
Fiber Coating	Acrylate, Polyimide, Gold
Fiber Pigtail Length	1 m, other options
Fiber Bend Radius	>17mm, other options
Optical Connector	FC/APC, or custom

## Applications in Security, Structures, Robotics, Materials Test Labs, Energy, Research, Other

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.

Technica Optical Components / 3657 Peachtree Rd, Suite 10A, Atlanta, 30319, USA, info@technicasa.com, www.technicasa.com