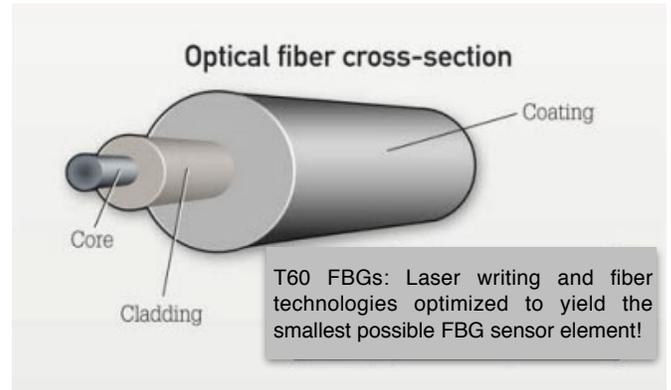


Description

The T60 is a Thin Fiber based Fiber Bragg Grating (FBG) available in a wide range of optical specifications. Naturally packaged directly in bare fiber, these sensors are ultra-small and designed for use in tight spaces with minimal intrusion.

The T60 optical sensor consists of an FBG sensing element embedded in single-mode (SM) acrylate, polyimide, or metal coated fiber. The sensor yields excellent wavelength to temperature and wavelength to strain linearity. Its small-size and fast response time makes it useful for industrial process control in new generation composites for space, air, water and land high-performance vehicles, energy, medical, and an increasing range of advanced robotic applications.

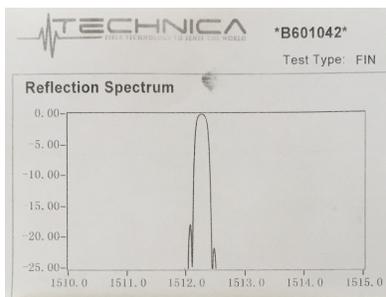
The T60 FBG is designed to make handling and installation fast, easy and intuitive. It delivers the many advantages inherent to all FBG based sensors. Equally sensitive to most traditional strain and temperature sensors but immune to EMI.



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 these specialty fibers' core in producing the T60 yields a simple transducer configuration of high resolution, linearity, and measurement repeatability. High SLSR for clear signal processing.



Fiber outer diameter (OD) options for acrylate coat fiber. Other configurations depending on availability of specialty fibers.

	Core	Cladding	Coating
Standard	8.2 μm	125 μm	250 μm
Thin	7.8 μm	80 μm	125 μm
Ultra-Thin	4.0 μm	40 μm	90 μm

Fiber outer diameter (OD) options for polyimide or metal coated fibers. Other configurations with customer provided fibers.

	Core	Cladding	Coating
Standard	8.2 μm	125 μm	150 μm
Thin	7.8 μm	80 μm	100 μm
Ultra-Thin	4.0 μm	40 μm	55 μm

Easy to daisy-chain. Well suited for projects that include the need to monitor many points as the T60 can also be provided in FBG Arrays of various lengths and with a flexible number of FBGs. Additionally, we provide optional transition splicing services for terminating the thin fibers with normal SMF28 compatible fiber, for ease of further processing by the customer. The T60 is a rugged low-cost FBG with stable operation for highly accurate long-term use. Field-proven in many customers' applications worldwide.

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 (Acrylate, polyimide, metalized)	-40 to +85°C; ~10 pm/°C -40 to +275°C; ~10 pm/°C
Strain Range / Sensitivity	10,000 microstrain; 1.2pm / microstrain
Fiber Type	Single-Mode Non-PM / PM
Fiber Coating	Acrylate, polyimide, metal
Fiber Pigtail Length	1 m, other options
Fiber Bend Radius	>17mm
Optical Connector	FC/APC, or custom

Applications in Robotics, Energy, Medical, Micro-Industrial, and Composites 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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