

Description

The T110 is a super high sensitivity cable sensor designed for fast and easy strain monitoring for security projects that target perimeter or fence intrusion alert systems.

At its core, the T110 optical cable consists of an array of Fiber Bragg Grating (FBG) sensors. The mid-layer of the cable is a PE, PU, or Teflon coat which protects the FBG sensors and ruggedizes the overall construction of the cable. The outer layer is armored for further cable reinforcement and protection.

The T110 is designed to make handling and deployment fast, easy and intuitive. It delivers the many advantages inherent to all FBG based sensors while elevating the degree of ruggedness to be consistent with, if not exceeding, industry expectations.

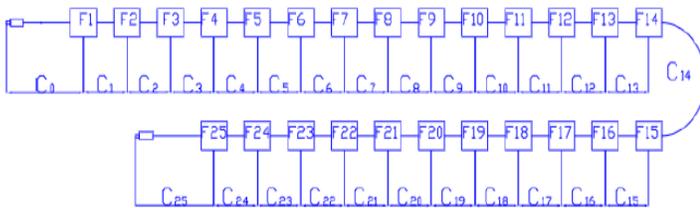
The cable specifications listed herein represent the most popular configuration. The manufacturing process for the T110 allows for significant variations in cable construction including sensors at other wavelengths, termination by other types of optical connectors, as well as cable availability in custom lengths and with customer defined spacing between sensing points.



Key Features

Armored high sensitivity cable. Yields high-sensitivity and fast response time where using an unprotected fiber merely coated with acrylate, polyimide, ormocer, or other “first layer” materials is not enough physical protection for survivability in the field. The cable can be installed as hanging or laid. Low cost per sensing point and stable operation over the long term.

Cable ordering example:



ACFBGS-①①-②②-③③-④④-Table below
 ①①: Reflectivity. ②②: FBG length in mm. ③③: Bandwidth. ④④: Connector type
 A: FC/APC on both end, A1: FC/APC on F1 side, No connector on F25 side.
 B: FC/UPC on both end, B1: FC/UPC on F1 side, No connector on F25 side.

Table to define the Center Wavelength (CW in nm) and distance (C in cm) as below

CW nm	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18	F19	F20	F21	F22	F23	F24	F25	
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C in cm	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25

Parameter	Specifications
Wavelength / Tolerance	1460 to 1620 nm, +/-0.5, other options available
Strain Sensing Sensitivity	~8 pm/g
Reflectivity %	10 to 90
Reflection FWHM	0.2 to 0.3 nm, other
FBG Length	5 to 10 mm
Each FBG Sidelobe Suppression Ratio	Minimum 15 dB
Inner-Cable Fiber Type	SMF-28
Mid-Layer Cable Extrusion Material	PE, PU or Teflon with up to 1.5mm OD
Outer-Cable Diameter	3 mm, 4mm, 5mm, other
Pull Strength	>100 kpsi
Temperature Compensation	Yes, with various options
Optical Connector	FC/APC, FC/UPC

Top applications in Perimeter Monitoring, Building Security, Energy, and Civil Engineering

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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