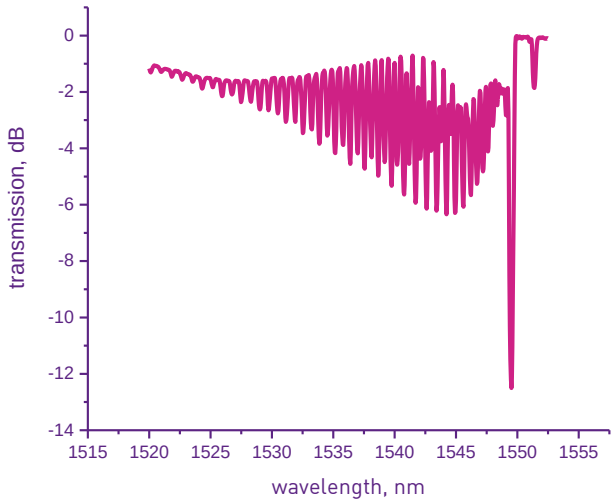
FIBER BRAGG GRATINGS (FBG)

TILTED FBG

ARTICLE GTL-FBG-TL-860

Fiber Bragg Gratings have many applications in optical communication, laser technique and sensing systems. The FBGs are widely used like in-fiber mirrors or optical filters with narrow band optical spectrum. FBGs can be used like a sensitive element for strain and temperature measuring.



The Tilted FBG has an angle between wave vector of the grating and fiber axis. Therefore cladding modes resonances peaks become more intensive compared to ordinary gratings. TFBG cladding modes resonances wavelength are highly sensitive to the refractive index of the medium outside the fiber cladding. TFBGs are useful in sensing applications. Possible value of tilt angle is 1º ÷ 45º. The TFBG transmission spectrum of 10mm length with tilt angle of 3º is presented in the graph.

FBG CHARACTERISTICS	GTL-FBG-TL-860	TOLERANCE/NOTE
Wavelength range, nm	600 ÷ 2300	± 0.1 ÷ ± 1 custom request
Types of fiber	Single-Mode, PM, Double clad, LMA	or custom
Wavelength to quick order, nm	633, 780, 852, 940, 976, 1030, 1060, 1064, 1080, 1125, 1150, 1178, 1240, 1270, 1310, 1484,1510 ÷ 1580, 1650, 1900, 1908, 1952, 2300	± 0.1 ÷ ± 1 custom request
Tilt angle, °	1 ÷ 45	custom request
Reflectivity, %	5 ÷ 99	2 ÷ 5 custom request
Bandwidth (WFHM), nm	0.1 ÷0.8	custom request
SLSR, dB	› 8	custom request
FBG Length	1 ÷ 20	custom request
FBG Pigtail Length, m	≥ 0.5	or custom
FBG Recoating	None, Acrylate, Polyimide, Aluminium, Copper	or custom
Tensile Strength, kpsi	› 100	
Optical Connector	Bare fiber, FC/APC, LC/APC	or custom

The configuration can be changed at the customer's request. The parameters specified in this specification can be changed in accordance with the terms of reference.