

Tilted FBG

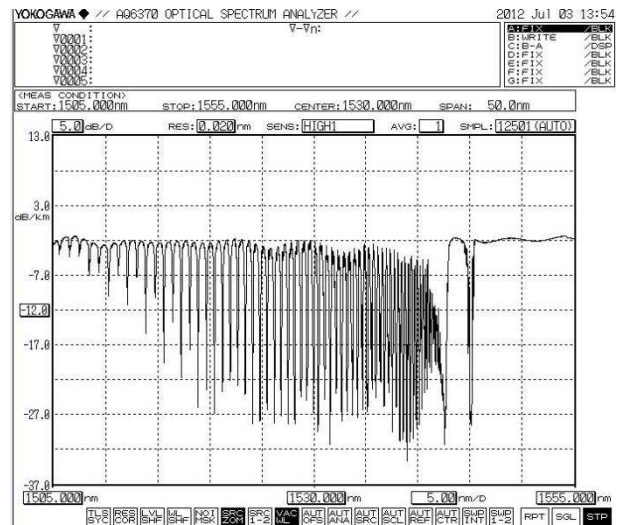
Tilted fiber Bragg grating (TFBG) is a special fiber grating whose grating fringes form a certain angle with the fiber axis. Due to the introduction of the grating tilt angle, the forward-conducting incident light is effectively excited to the backward-conducting cladding mode, and the backward-conducting core mode satisfying the Bragg condition is retained. Since the core mode and the cladding mode have different sensing characteristics, TFBG combines the advantages of FBG and LPG two types of fiber gratings, and can realize the simultaneous measurement of multiple parameters (temperature, strain, refractive index, etc.).

Key Features

- High accuracy
- Easy to install
- Easy to daisy-chain
- Long lifetime

Applications

- Biosensing
- Chemicals
- Gas Detection
- Commercial Sensing



Specifications

Parameter	Unit	Value
Center Wavelength	nm	1525 ~ 1565
Tilted Angle	°	1 ~ 10
Core Transmission	dB	5 ~ 30
FBG Length	mm	10 ~ 20
Cladding Transmission	dB	5 ~ 30
Reflectivity	%	>5
Bandwidth (FWHM)	nm	0.1 ~ 0.8
SLSR	dB	>8
FBG Recoating	--	None, Acrylate, Polyimide, or custom
Tensile Strength	kpsi	≥ 100
Fiber Type	--	Single-Mode
Fiber Coating	--	Acrylate, Polyimide, or custom
Pigtail Length	m	Standard 1m both ends, or custom
Optical Connector	--	Bare Fiber, FC/APC, SC/APC, or custom