

FBG

Alxenses's offers a series of fiber-optics products based on fiber Bragg grating (FBG) technology. FBG is produced in optical silica fibers by creating periodic refractive index variations in the fiber core using UV laser light. FBG is an in-line optical filter and its reflection wavelength and spectral shape depends on the periodicity, length as well as depth of the refractive index changes of the grating structure. FBG exhibits very low loss and is low-cost compared to the bulk-optics counterparts. By altering the grating periodicity and refractive index change, FBGs for various fiber-optics communication and sensing applications can be easily produced.

Features

- High reliability and stability
- High reflectivity
- High side-lobe suppression ratio
- Low insertion loss
- Narrow bandwidth optical filter
- Immunity to EMI
- Multiplexing capability

Applications

- Strain fiber optics sensor
- Temperature fiber optics sensor
- Displacement fiber optics sensor
- Humidity fiber optics sensor

SPECIFICATIONS

Standard FBG (single FBG)

Parameters	Values	Units
Wavelength Range	1510~1590	nm
FBG Profile	Apodized	--
Wavelength Tolerance	+/-0.5	nm
FBG Length	<15	mm
Reflectivity	>90	%
Bandwidth@-3dB	<0.3	nm
Side Lobe Suppress Ratio (SLSR)	>15	dB
Recoating	Acrylate or Polyimide	--
Proof test	>100	kpsi
Pigtail Length from FBG	1m / Customized length	m
Fiber Type	SMF-28e compatible or polyimide fiber	--
Fiber Termination	Bare Fiber, FC/UPC, or FC/APC	--