



Fiber Bragg Grating (FBG)

We manufacture a wide variety of Fiber Bragg Gratings according to customer requirements. Our FBGs are based on a state-of-the-art proprietary set-up that makes the highest quality products. We produce FBGs for DWDM and sensing applications.

DWDM Fiber Bragg Gratings

Fiber Bragg Gratings are basic components in many optical devices because they are in-fiber components and have unique filtering characteristics. Our set up is capable of making all types of FBG for DWDM (25,50,100 GHz), laser wavelength stabilizers, gain flattening, etc. FBGs are available with passive temperature compensation packaging.

Features

- Precision wavelength centering
- Low adjacent channel crosstalk
- Low insertion loss
- Recoated fiber, Standard package, or athermally packaged
- Compliant to Telcordia GR-1209 & 1221 standards

Applications

- Pump laser wavelength stabilizers
- Wavelength locker
- Wavelength splitter
- Add/drop multiplexers
- Gain-flattening filters

DWDM Fiber Bragg Grating Datasheet

Central wavelength (nm)	ITU-T Grid +/- 0.05
Reflection Bandwidth (dB)	Meet Telcordia GR-1209 standard
Adjacent channel isolation (dB)	>25
Non Adjacent channel isolation (dB)	>35
Maximum reflectivity (%)	0-99.99
Pigtail length (m)	0.5-10
Packaging	Temperature compensated, 3mm standard tubing, coated fiber
Housing (optional)	Box
Termination	Bare fiber, FC/PC, FC/APC, SC, SC/APC, ST, 8 deg. Cut, non

Optical grating sensors and arrays

Fiber Bragg gratings sensors are excellent sensing elements for measuring static and dynamic fields, such as temperature, strain, and pressure. The measured value is wavelength encoded, that is the central wavelength of the grating is dependent on the measured value.

These sensors are independent of the power sources and connector losses. And using these in-fiber sensors gives the ability to multiplex many of them into one single mode fiber, which is then called sensor array. All the advantages of the fiber are also advantages for this type of sensors such as immunity to electromagnetic interference (EMI) and high radiation environment, lightweight, flexibility, stability and high temperature tolerance.

The small size of the fiber diameter makes it suitable for sensing where small sensors are required. Moreover, its response is linear from part per million to a few percentage, which is much larger than strain gauge sensors. Civil engineers are also using this type of sensors to monitor strain in a structure, and to find the damage point for a structure by embedding it inside the material. Fiber grating sensors are also used in the process control and aerospace industries.

Key Features

- Customized design
- Variety of wavelengths
- Optimized reflectivity
- Optimized wavelength
- High strength and reliability

Fiber Bragg Grating for sensors datasheet

Operating Wavelength (nm)	C band
Bandwidth (nm)	0.2-1
Reflectivity (%)	0-99.99
FBG length (mm)	<15
Pigtail length (m)	0.5-10
Maximum strain (%)	<1
Operating temperature ()	-20 - 100
Package	Without packaging, 3mm standard tubing, coated fiber
Number of sensors per array	1-unlimited
Termination	Bare fiber, FC/PC, FC/APC, SC, SC/APC, ST, 8 deg. Cut, non

Notes:

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