FBG Reflector for Fiber Lasers

TeraXion's advanced fiber Bragg gratings are used by OEMs to create reliable fiber-based lasers. TeraXion offers the flexibility to adapt FBG reflectors to the specific needs of each laser design. Choose from a variety of singlemode, polarization maintaining, large area mode, and double-clad fibers while specifying filter wavelength, bandwidth and reflectivity. For pulsed laser systems the dispersion characteristics of the FBG can also be tailored to stretch or compress the reflected pulses. As an established supplier of fiber Bragg gratings, TeraXion employs manufacturing practices that ensure reliable long-term product performance. The FBG reflectors are suitable for > 100W high powered fiber-laser systems.

Features:

- Double- or single-clad fibers
- Customized optical parameters
- High power handling and low pump loss
- Optimized recoating process for reliable pump guiding

Applications:

- High power fiber lasers
- Ultrafast fiber lasers
- Chirped pulse amplification
- Long coherence length lasers
- Raman resonators

Specifications:

Optical Parameters	
Center wavelength	920 - 2000 nm
FWHM bandwidth	> 0.02 nm
Peak reflectivity	1 - 99.9%
Mechanical Parameters	
Available fiber types	SM, PM, and LMA (single- or double-clad)
Recoating material	Acrylate or low-index polymer
Available Options	
Athermal package for standard single clad fibers	< 0.4 pm/°C
Dispersion	± 0.1 to 2000 ps/nm

FBG based DWDM Filters

For applications with 50GHz grid, the thin film filter (TFF) technology cannot offer a suitable solution. This is where Fiber Bragg Grating (FBG) based filters may be used for channel selection. The filter is designed and tested to guarantee spectral efficiency and dispersion characteristics in addition to other optical parameters. It is easily tailored for 50 GHz or greater channel spacing for today's and tomorrow's 10 and 40 Gb/s optical systems. The TF-WDM can be customized to meet critical chromatic dispersion requirements

Features:

- 50/100GHz ITU channel spacing
- customization possible
- polarization insensitive

Applications:

- add/drop filtering
- 10 and 40 Gb/s systems
- stop band filter for wavelength blocking and band pass for wavelength routing
- low channel-count interleaver