

FIBER BRAGG GRATINGS (FBG)

CHIRPED FBG



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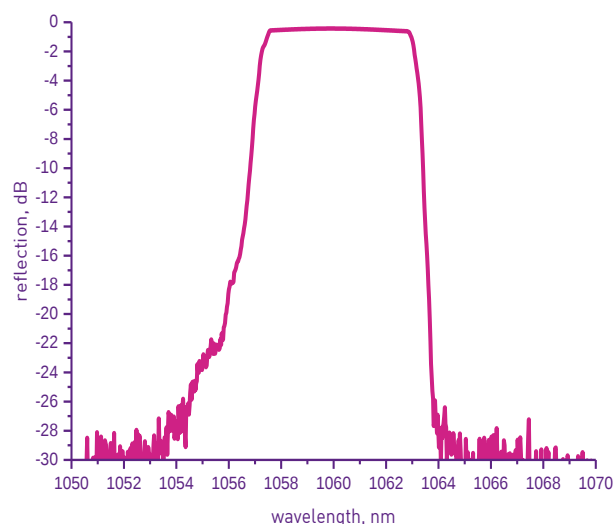
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ARTICLE GTL-FBG-CR-840

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 Chirped FBG has linear variation of the FBG period along the grating length. Chirped FBG is manufactured by using non – periodic phase mask. Available chirp rate of the phase mask period can be 0.01nm/cm – 30nm/cm. Therefore such FBGs have wide spectrum bandwidth and special dispersion characteristic. Chirped FBGs are useful for gain flattening EDFA and ASE light sources, band stop filters, in ultrafast mode – locked fiber lasers, powerful laser and chromatic dispersion compensation telecom systems. The optical spectrum of high reflection Chirped FBG for powerful fiber laser is presented in the graph.



FBG CHARACTERISTICS	GTL-FBG-CR-840	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	1069 Chirp rate: 2.9 nm/cm, 1081 Chirp rate: 1.02 nm/cm, 1529 Chirp rate: 19.96 nm/cm, 1875 Chirp rate: 4.08 nm/cm	± 0.1 ÷ ± 1 custom request
Reflectivity, %	5 ÷ 99	2 ÷ 5 custom request
Chirp Rate, nm/cm	0.01 ÷ 30	custom request
Bandwidth (WFHM), nm	2 ÷ 50	custom request
Grating (FBG) Length, mm	2 ÷ 50	custom request
SLSR, dB	~ 8	custom request
FBG Pigtail Length, m	≥ 0.5	or custom
FBG Recoating	None, Acrylate, Polyimide	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.