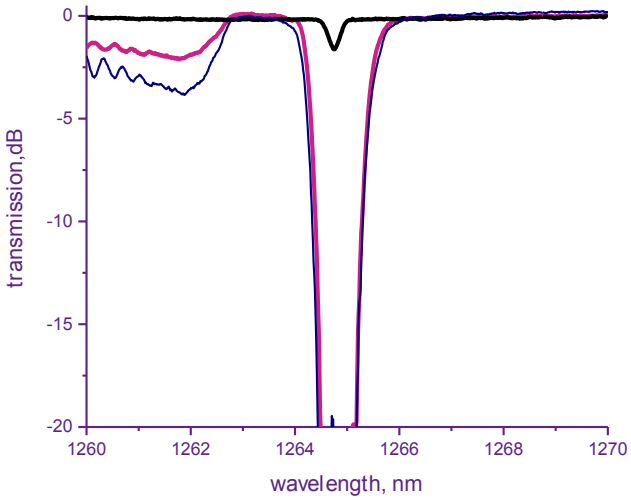
FIBER BRAGG GRATINGS (FBG)

FIBER LASER MATCHED FBG PAIRS

ARTICLE GTL-FBG-LP-830

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.



Our Laser Matched FBG pairs are an ideal solution for fiber laser fabrication. Minimum insertion losses and optimal parameters are for lasers with output power of several tens watt. High reflection grating has bandwidth at level -20dB about 0.5 ÷ 0.7 nm. High reflection grating has level -20dB about 0.5 – 0.7nm. Output grating with reflectivity 5% - 40% has FWHM 0.15 ÷ 0.35nm. Mismatching LR grating relative to HR one is up to ± 0.1nm. For fiber lasers with narrow line we are presented FBG pairs with FWHM around or less 0.1nm with ideal matching without adjustment. The transmission spectrum of FBGs Pair for Yb laser and Raman converter are presented in the graph.

FBG CHARACTERISTICS	GTL-FBG-LP-830		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	633, 780, 852, 940, 976, 1030, 1060, 1064, 1080, 1125, 1150,1178, 1240, 1270, 1310, 1484, 1510 ÷ 1580, 1650, 1900, 1908, 1952, 2300		± 0.1 ÷ ± 1 custom request
Reflectivity, %	Low-reflection(LR)	High-reflection(HR)	
	5 ÷ 40	› 99	2 ÷ 5 custom request
Bandwidth (FWHM), nm	0.1 ÷ 0.8	0.7 ÷1.2	
Mismatching (LR Relative to HR), nm	‹ 0.2		or custom
FBG Pigtail Length, m	≥ 0.5		or custom
FBG Recoating	None, low index polymer, Acrylate, Polyimide		or custom
Tensile Strength, kpsi	› 100		
Optical Connector	Bare fiber		or custom
Package dimensions (LxWxH), mm	25 x 11x 6.5 (for 1 FBG) or 25 x 15x 6.5 (for 2 FBG)		

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.