O/E LAND INC.
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[**OEFBG-DCG-100**]

Dispersion Compensation FBG Filter

Features:

- Customizable Dispersion Compensation
- Linear and Nonlinear Dispersion Compensation
- Higher-Order Dispersion Design and Control
- High-Precision Grating Design and Fabrication
- Optimized for CPA Systems
- Enhanced Pulse Quality
- Different packages available

Applications:

- In fiber optics telecommunication systems
- For dispersion compensation
- Ultrafast laser applications
- In CPA systems

Product description:

In optical fiber telecommunication systems, the chromatic dispersion effects must be corrected for data rates of 10Gb/s or more. O/E Land Inc. has applied its expertise in Fiber Bragg Gratings (FBGs) to offer the dispersion compensation FBG filters, with model number **OEFBG-DCG-100**, to correct chromatic dispersion. The dispersion compensation FBG filter features a compact size, small insertion loss and customized dispersion slope. Our unique fiber grating apodization technology enables us to fabricate dispersion compensation grating filters with high isolation, low side lobes and low ripples.

Our dispersion compensation FBG filter, engineered for chirped pulse amplification (CPA) in optical systems, provides precise dispersion management tailored for compensating group velocity dispersion (GVD), β_2, and higher-order dispersions (β_3, β_4, and β_5). In CPA, higher-order dispersions play a critical role in suppressing the side lobes of the compressed pulse, which can otherwise degrade pulse quality and introduce unwanted temporal distortions. By accurately compensating for these higher-order dispersions, our high-precision grating filter ensures cleaner, more symmetric pulse shapes with minimal side lobe energy, enabling superior performance in ultrafast laser applications. Customizable to specific dispersion needs, this filter empowers customers to achieve high-fidelity pulse compression and enhanced stability in their CPA systems.

All dispersion compensation FBGs are tested to assure they conform to the highest quality standards. Technical support is available to meet every customer's specific application: from prototype development to full product manufacturing.

Product specifications:

Parameter	Unit	Specifications	
Wavelength range	nm	**C+L Band**	**400 - 2500**
Maximum Dispersion (≥ 1 nm)	ps/nm	1800	Custom
Maximum 2nd order dispersion β_2	ps^2	~2300	Custom
Nonlinear higher order dispersions β_3, β_4, and β_5		As per customer design	
Insertion loss	dB	< 0.3	< 0.6
Fiber Type	-	SM, PM	
FBG custom spectral shaping	-	As requested	
Package	-	Optional; upon request	

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Product spectrum:

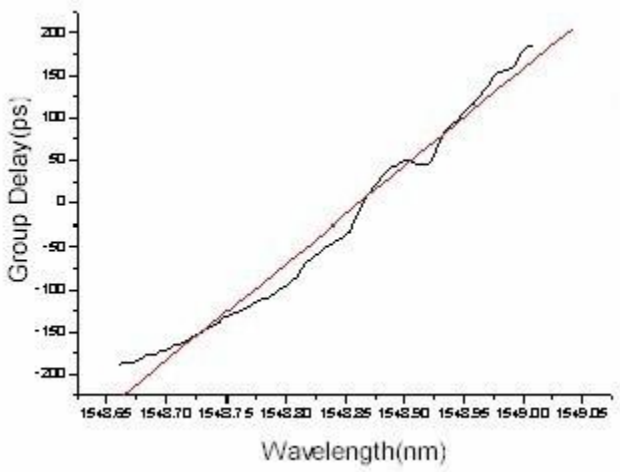

Figure 1: Dispersion curve of OEFBG-DCG-100

Figure 2: OEFBG-DCG-100 in Athermal package (optional)

Ordering number:

OEFBG-DCG-100	**WL-BW-R-D-Pkg-F-C**
Where:	WL: Center wavelength (nm) BW: Bandwidth (nm) R: Reflectivity (%) D: Dispersion (ps/nm) Pkg: Package type: N-no package, Y-others by request F: Fiber type C: Connector type
Example:	OEFBG-DCG-100-1550-10-90-500-N-SM-FC/APC