7639 Cordner
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O/E LAND INC.

[OEFBG-PSC-100]

Pulse Stretching and Recompressing FBGs

Features:

- Customizable negative or positive Dispersion
- Precise center wavelength matching
- Nonlinear dispersion compensation
- Standard and Custom specification
- Large wavelength range selection
- Higher-Order Dispersion Control
- High-Precision Grating Design
- Optimized for CPA Systems
- Enhanced Pulse Quality
- High power handling
- Different packages available

Applications:

- Ultra fast fiber laser system
- Dispersion management
- Industrial and biomedical
- Non-linear optics

Product description:

Optical pulse stretcher fiber Bragg grating is used to stretch pulse in chirped-pulse amplification (CPA) for effective optical pulse amplification. Pulse compressing fiber Bragg grating is used to compress pulse after power amplification step. For ultrafast fiber laser system, all fiber pulse stretcher and pulse compressing fiber Bragg grating are very important for low insertion loss and high system efficiency. O/E Land Inc. has both standard and custom-made pulse stretching and pulse compressing fiber Bragg grating products.

In CPA, higher-order dispersions (β_3, β_4, and β_5) 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.

Our dispersion management grating FBGs, engineered for chirped pulse amplification (CPA) and compressing in optical systems, provides precise dispersion management tailored for managing group velocity dispersion (GVD), β_2, and higher-order dispersions (β_3, β_4, and β_5).

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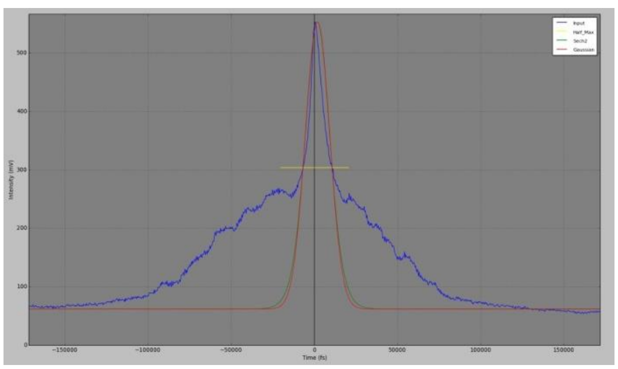
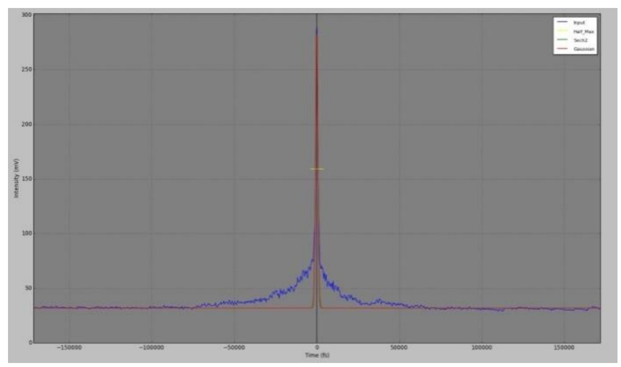
Product specifications:

Parameter	Unit	Specifications
Wavelength Range	nm	920 ± 30; 1030 ± 20; 1064 ± 30; 1550 ± 30; 2000 ± 100
Bandwidth	nm	1 - 20
Reflectivity	%	50 - 99
Input pulse width	ps	0.1 50
Maximum Nonlinear 2nd order dispersion β_2	ps^2	~2300 (≥ 1nm)
Nonlinear higher order dispersions β_3, β_4, and β_5		As per customer design
Fiber Type	-	SM, PM, DCF
Package	-	Standard, High Power, Athermal

Product spectrum:



Input pulse, FWHM=15 ps



Output pulse, FWHM=0.75 ps, after ~ 11 ps/nm dispersion

Ordering number:

OEFBG-PSC-100	WL-BW-R-IP-B2-B3-B4-B5-Pkg-F-C
Where:	WL: Center wavelength (nm) BW: Bandwidth (nm) R: Reflectivity (%) IP: Input pulse width (ps) B2: GVD (β_2) (ps^2) B3: β_3 (ps^3) B4: β_4 (ps^4) B5: β_5 (ps^5) Pkg: Package type: N-no package, S-standard, HP-high power, AT-Athermal packaging F: Fiber type C: Connector type
Example:	OEFBG-PSC-100-1540.23-5.5-85-10-2-0.3-0-0-0-AT-SM-FC/APC