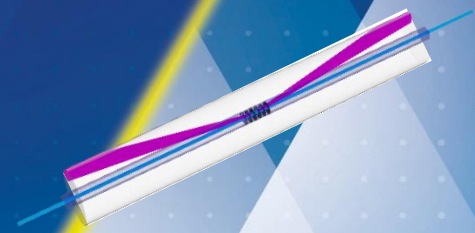


## ASE SHIELD All-Fiber ASE Suppression Filter



**The ASE Shield is an all-fiber, Fiber Bragg Grating (FBG)-based filter that eliminates Amplified Spontaneous Emission (ASE) signal at the source.**

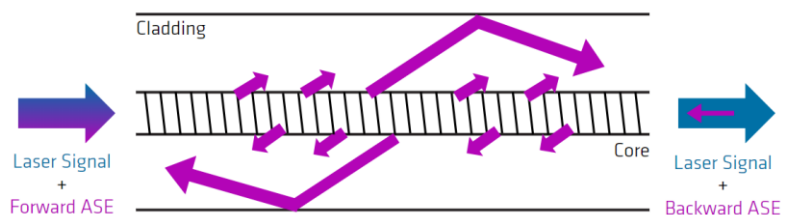
Fiber laser manufacturers can now significantly increase the output power and the stability of their lasers by reducing ASE signal at the source.

Using TeraXion's exclusive chirped tilted Fiber Bragg Grating (FBG) filter technology <sup>(1), (2)</sup>, the ASE Shield cleverly guides unwanted signals into the cladding of the fiber where it can finally be safely extracted out of the laser.

Applications include lasers and amplifiers at wavelengths where ASE is problematic such as 1018nm, 1030nm, 15XXnm, 17XX, high-power EYDFA, etc.

### Advantages

- All-fiber solution
- High power handling
- In-line filter
- Low insertion loss
- Low return loss
- Available at different wavelengths and configurations to match your application requirements



(1) Patents granted: US10663654, US11215749, CA3156196

(2) Patents pending: CA3175294

General Specifications

Optical Parameters	Specification	Units
Operation signal wavelength (CWL <sub>pass</sub> )	700 to 1800	nm
Stopband center wavelength (CWL <sub>stop</sub> ) at room temperature <sup>(1), (2)</sup>	700 to 1800	nm
Stopband bandwidth	5 to 40	nm
Stopband attenuation	≥ 20	nm
Separation between Passband and Stopband (transition zone) <sup>(3)</sup>	≥ 5	nm
Insertion loss	≤ 0.15	dB
Return loss input side	≥ 30	dB
Return loss output side	≥ 30	dB
Wavelength referenced to	Air	
<b>Power handling (4),(5)</b>		
Maximum cladding power	Up to 3000	W
Maximum signal power	Up to 2000	W
<b>Mechanical parameters</b>		
Pigtails length	Standard: 1	m
Package type	Low index recoat, 100 mm long <sup>(6)</sup>	
<b>Standard fiber parameters (7)</b>		
Core diameter	8 to 25	um
Core NA	0.06 to 0.15	
Cladding diameter	125 to 600	um
Cladding NA	≥ 0.42	
<b>Product compliance</b>		
RoHS compliant	Yes	

- (1) LP<sub>01</sub> mode
- (2) Room temperature = 20 °C to 23 °C
- (3) Transition zone width is dependent on the insertion loss level. Trade-offs can be made, contact TeraXion for details.
- (4) Power handling depends on fiber type. In general, the maximum cladding power handling depends on the maximal signal power handling and vice versa. Several grades and combinations are available, contact TeraXion for details.
- (5) With proper cooling on a water-cooled cold plate to ensure that the filter temperature is kept below 70 °C in operation.
- (6) The recoat diameter depends on the fiber parameters in general.
- (7) Several (but not all) combinations of core diameter, core NA and cladding diameter are available. Contact TeraXion for details.

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