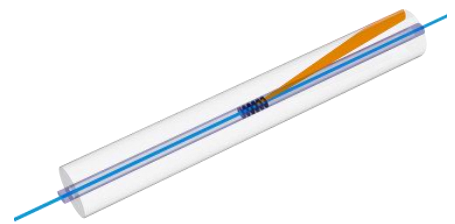


TeraXion

PowerSpectrum™

RSS Raman Scattering Suppressor



The PowerSpectrum™ RSS is an all-fiber, FBG-based unique bandpass filter that eliminates the Stimulated Raman Scattering (SRS) while transmitting the laser signal in high-power fiber lasers. It is the only cost-effective solution that eliminates the SRS at its source and enables immunity from back reflection from the work piece.

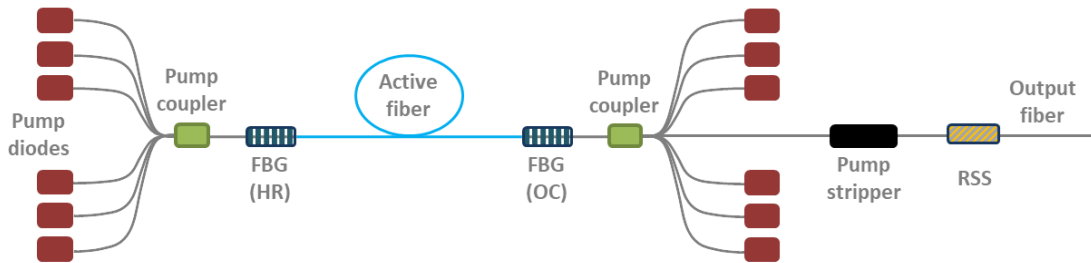
Manufacturers can now significantly increase the output power of their lasers by reducing SRS Stimulated Raman Scattering.

The PowerSpectrum™ RSS cleverly guides SRS through the cladding of the fiber where it can finally be safely extracted out of the laser.

Top 5 Features

- **Value:** Allows to increase the usable output power of fiber laser oscillators by up to 40%
- **Improves Reliability:** Enables immunity from back reflection from the work piece
- **Increases Power:** Suitable for oscillators up to 3 kW & MOPA up to 5 kW
- **Efficient:** Ensures that all photons generated are used for the process
- **Partnership:** TeraXion will offer support through the entire product development process, from prototyping to mass production

High-power fiber laser with RSS filter



Specifications

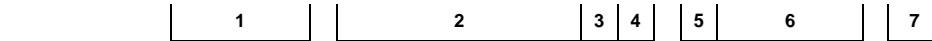
Optical Parameters	Specification range	Units
Laser wavelength (RSS passband)	1064 to 1080	nm
Insertion loss @ laser wavelength ⁽¹⁾	≤ 0.15	dB
Attenuation bandwidth (-13.6 THz from Laser WL)	≥ 15	nm
Attenuation level (over the specified bandwidth) ⁽¹⁾	≥ 20	dB
Power handling⁽²⁾		
Maximum pump power	2000	W
Maximum signal power	3000	W
Mechanical parameters		
Pigtails length	≥ 1	m
Protection	100 mm Low index recoat	
Proof test	50	kPSI
Compatible fibers		
Core sizes	20 to 25	um
Core NA range	0.06 to 0.07	
Cladding sizes	350 to 600	um
Cladding NA range	≥ 0.42	
Product compliance		
RoHS compliant	Yes	

(1) LP01 mode, both directions

(2) With proper cooling on a water-cooled cold-plate

Use the chart below when ordering your customized item

RSS	-	x	x	x	x	-	X	x	x	/	x	x	x	X	X	-	X	x	x	x	x	-	x
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- 1 = Laser signal center wavelength (xxxx nm)**
- 2 = Fiber dimensions (Xxx/xxx μm)***
 X = Fiber supplier
 xx/xxx = (∅ core / ∅ first glass cladding)
 * Please specify your desired fiber parameters and supplier if required. Otherwise, TeraXion will suggest the best option.
- 3 = Fiber cladding**
 D = Double clad
 T = Triple clad
- 4 = Fiber type**
 P = Polarization-maintaining fiber (PM)
 N = Non-polarization-maintaining fiber (Non-PM)
- 5 = Filter/Protection**
 L = Low index coating
 B = Bare
- 6 = Laser signal power handling (xxxx W)**
- 7 = Pigtail length (m) (cavity-side / outside of cavity)**
 1 = 0.5 / 0.5
 2 = 1.0 / 1.0
 3 = 1.5 / 1.5
 C = x.x m / x.x m

Ordering information

For orders, questions, specific requirements or to learn more about TeraXion’s products, contact us at info@teraxion.com



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