

IXC-MIR-1000-HP

HIGH POWER FIBER BRAGG GRATINGS @ 1 μ m

FBG MIRRORS FOR HIGH POWER FIBER LASER APPLICATION



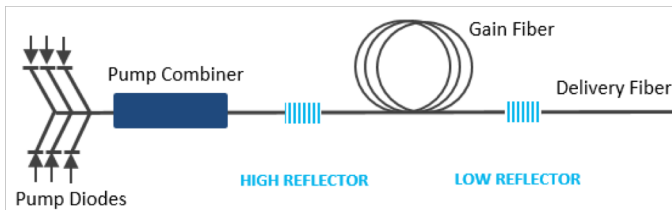
DESCRIPTION

- Cavity mirrors based on Fiber Bragg Grating (FBG) technology are key components for monolithic high brilliance CW fiber lasers.
- High and Low Reflection (HR/LR) mirrors are written in ixblue specialty double-clad optical fiber to promote high performance, robust and reliable single-mode Ytterbium fiber lasers.
- FBG specifically designed for high power handling.
- Optimized FBG writing process

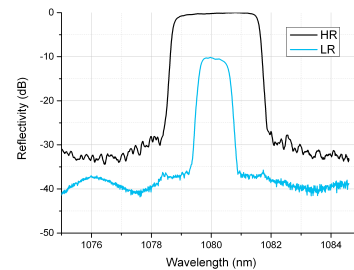
KEY FEATURES & BENEFITS

- Higher laser efficiency
- Custom design
- Wavelength bandwidth
- Accurate wavelength matching
- Precision matched passive to active Fiber
- Heat Dissipative Package (IXC-DIS-PKG)
- Associated active fibers

HIGH POWER FIBER LASER CONFIGURATION



MATCHED HR/LR SPECTRUM



SPECIFICATIONS

Fiber Type ¹	Passive 10/130 μ m 0.10/0.46NA		Passive 20/400 μ m 0.065/0.46NA	
	1070 - 1080 nm			
Wavelength Range	1070 - 1080 nm			
Bandwidth (High Reflector / Low Reflector)	HR	LR	HR	LR
Peak Reflectivity	> 99 %	4 - 20 %	> 99 %	4 - 20 %
Reflection Bandwidth (FWHM)	1 - 3.5 nm	0.2 - 3 nm	1 - 3.5 nm	0.2 - 3 nm
Wavelength Matching (HR/LR)	+/- 0.2 nm			
Grating protection ²	Low refractive index polymer			
Thermal slope (915nm pump, NA < 0.46) ³	< 0.2 °C/W		< 0.05 °C/W	
Thermal slope (core signal at 1 μ m) ³	< 0.5 °C/W		< 0.15 °C/W	
Maximum CW 915nm pump power ³⁻⁴ (recoated)	100 W		1500 W	
Maximum CW 915nm pump power ⁴ (packaged)	250 W		2500 W	
Side Mode Suppression Ratio	> 15 dB		> 15 dB	

- (1) Other types of fiber available upon request (PM fiber, other optical parameters)
- (2) Heat dissipative package upon request
- (3) Determined from suspended fiber in still air (fiber must be maintain <85°C)
- (4) Maximum power derived from intrinsic FBG thermal slope