

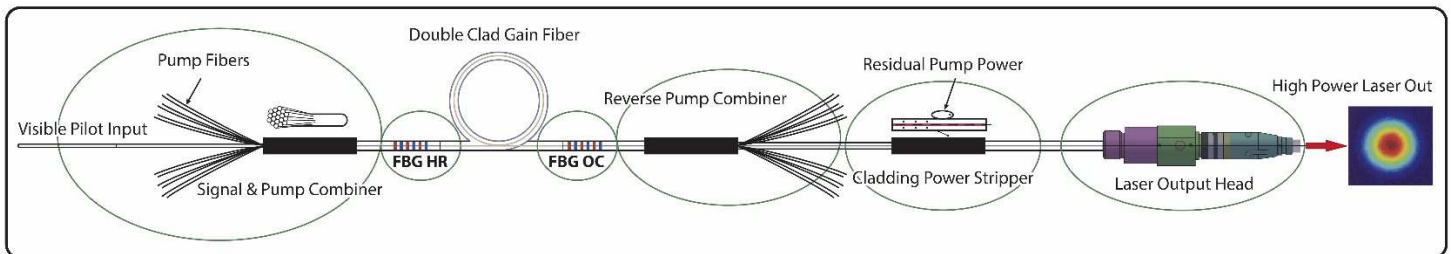
Features

- Wide Reflectivity and Bandwidth Range
- Large Variety of Fiber Types
- Precise Wavelength Matching of HR & OC Mirrors
- Packaging Options: Re-coated FBG or Heat Dissipative Package
- Custom Design upon Request



Fiber Bragg Grating (FBG) mirrors in a fiber laser system are distributed reflectors fabricated in an optical fiber that permit the reflection of particular wavelengths and the transmission of the remainder. FBG mirrors can be utilized as a high reflector (HR) and low reflectivity output coupler (OC) to produce a laser cavity in a fiber laser. No alignment is needed for this all-fiber system when compared to a free space mirror approach.

Lightel's FBG mirrors have been optimized to address the requirements of low noise and high efficiency fiber laser applications. Lightel's FBG mirrors feature low thermal slope, precise wavelength matching with a wide reflectivity and bandwidth range. Our process also allows us to fabricate FBG mirrors on a large variety of standard, custom or harsh environment fibers. Lightel's FBG mirrors can be delivered in our high-power thermal dissipative package (also provides mechanical and shock protection and reduced wavelength drift) or simply re-coated with a rugged low index polymer. We can also write the FBG mirrors on the output fiber of the pump combiner, thereby eliminating a splice, increasing the fiber laser assembly reliability and reducing assembly time.

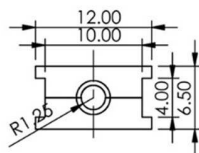
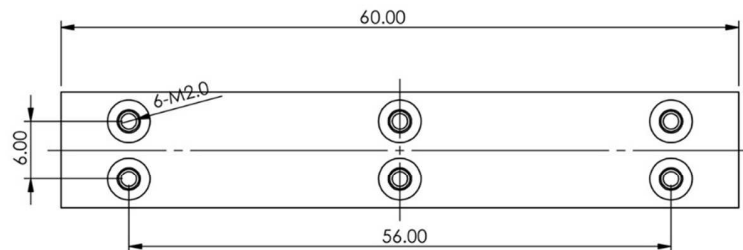
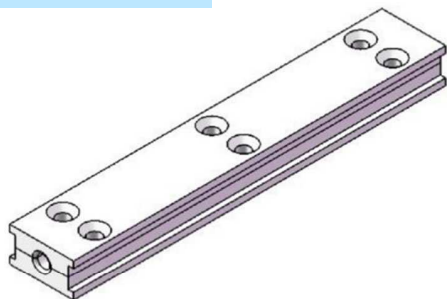


Components of a Fiber Laser

➔ Specifications

Parameter		Specification	
Port Configuration		1x1	
Wavelength		1064 ± 1 nm or 1080 ± 1 nm	
Reflector Type		HR	OC
Reflectivity		≥ 99.5%	5 - 30%
Bandwidth		2 - 3 nm	1 - 2 nm
Wavelength Mismatch (HR relative to OC)		≤ 0.2 nm	
Pump Pass Efficiency		≥ 98%	
Package Size		Recoated or 60 x 12 x 6.5 mm	
Pigtail		1 m	
Operating Temperature		20 - 23°C	
Fiber/Power Handling	LMA-GDF-10/130-M	≤ 10 W	
	PASSIVE-14/250DC	≤ 1 kW	
	LMA-GDF-20/400-M	≤ 2 kW	

➔ Mechanical



➔ Ordering Information

F	B	G	L	-		-		-		-		-	
					Center λ (nm)		Bandwidth (nm) <i>(e.g. 1.25 for 1.25 nm)</i>		Reflectivity <i>(e.g. 98.5 for 98.5%)</i>		Fiber Type 1: LMA-GDF-10/130-M 2: PASSIVE-14/250DC 3: LMA-GDF-20/400-M		Package 1: Metal Package 2: Re-coated

Note: These are our most popular configurations. Contact Lightel Sales for custom port counts or alternative fibers.