



Labs

MULTIMODE COMPONENTS

Fiber Laser Mirror Gratings

FBG Mirrors are based on the reflective properties of the Fiber Bragg Grating (FBG) written in the core of an optic fiber waveguide. FBG mirrors' principal property is to use a high reflector and low reflector to form a stable laser cavity having the lasing wavelength selected by the low reflector.

In addition to its many years experience in manufacturing reliable high performance FBGs in high volume, ITF Labs has worldwide leading technologies in multi-mode fiber coupling, optic test & measurement as well as mode field adaptation. ITF Labs has developed a family of FBG mirrors for fiber laser and high power amplifiers.



For more information on this or other products and their availability, please contact our customer service at **514.748.4848** (Int'l) / **1.888.922.1044** (Canada and USA only) or via e-mail at info@itflabs.com

KEY FEATURES

- **Ultra-precise Wavelength Matching**
- **Wide Bandwidth & Reflectivity Range**
- **Wide Variety of Fiber Types**
- **High Power Handling**
- **RoHS Compliant**

MULTIMODE COMPONENTS

Fiber Laser Mirror Gratings

SPECIFICATIONS

PARAMETERS	STANDARD CONFIGURATIONS			
Wavelength range	Ytterbium, (erbium and thulium on request)			
Fiber Type ^{1,2}	5/125 μm - 6/130 μm - 10/125 μm		20/400 μm NA=0.06/0.46	
Coupling from LP01 to other modes	NA		< 20 dB ³	
PM version available	Yes		Under development	
High Reflector / Output Coupler	HR	OC	HR	OC
LP01 Reflectivity	> 99.9%	3% - 20%	> 99.5%	3% - 20%
Bandwidth (FWHM)	1-3 nm	0.2-1 nm	1-3 nm	0.2-1 nm
Wavelength matching HR-OC	0.2 nm			
Package / Recoat	Low index polymer recoat		High power package (60 x 12 x 6.5 mm)	
Temperature increase per watt (915 nm pump, NA < 0.46)	< 0.1°C/W ^{3,4} (fiber on heat sink) < 0.2°C/W ³ (fiber in air)		< 0.05°C/W ^{3,4}	
Wavelength dependance with temperature	< 10 pm/°C ^{4,5}		< 15 pm/°C ^{4,5}	

¹Other fibers on request.

²Fluorine free.

³Preliminary specification, subject to change.

⁴Depends on heat sinking efficiency.

⁵At ~1080 nm.

PRINTED IN CANADA Jan 09

ORDERING INFORMATION

ITF Labs can custom produce your gratings according to your specifications in low and high volume. We also offer gratings integrated inside our combiners.



ITF Labs

400 Montpellier Blvd
Montreal, Quebec H4N 2G7 CANADA

Tel: 514.748.4848

Fax: 514.744.2080

1.888.922.1044

www.itflabs.com info@itflabs.com