



ClearCut™ High Power Package Free Fiber Bragg Grating (PFCG Series)

Description

Rev 11C

The ClearCut™ High Power Package Free Fiber Bragg Grating products are ultra low insertion loss fiber bragg gratings for high power fiber lasers. With AFR's ClearCut™ designing and special process, the devices can handle kilowatt level pump power and signal power with recoated only.

Key Features

- High Power Handling
- Package Free Designing/Ultra Low Temperature Slo
- Flexible and Good Mechanical Performance
- Outstanding Reliability

Applications

- Continuous Wave Fiber Laser
- High Power Fiber Laser

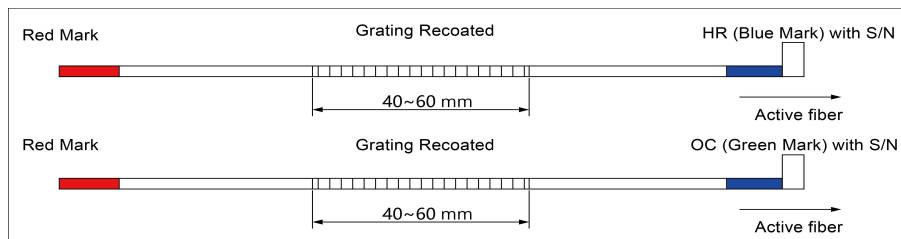
Specifications

Parameter	Unit	Value			
Center Wavelength	nm	1018, 1030, 1064, 1070, 1080			
Tolerance on Center Wavelength	nm	1.0			
Max. Wavelength Mismatch (OC Relative HR)	nm	0.2			
High Reflector (HR) / Output Coupler (OC)	-	HR	OC		
Peak Reflectivity	%	≥ 99.0	(5.0 - 30.0) ± 2.0		
Reflection Bandwidth at 95%	nm	1.5 - 4.0	-		
Reflection Bandwidth at 50%	nm	-	0.2 - 2.0		
Tolerance on Reflection Bandwidth	nm	0.1 - 0.4	0.1 - 0.2		
Min. Side Mode Suppression Ratio	dB	20	10		
Fiber Core/Cladding Dimension	μm	10/125	14/250	20/400	25/400
Temperature Slope Suspended in Air ¹	°C/W	≤ 0.1	≤ 0.03	≤ 0.02	≤ 0.02
Max. Core Signal Power Handling ²	W	300	1000	3000	3000
Max. Clad Pump Power Handling	W	450	1500	3000	3000
Fiber Type	-	PM or Non-PM			
Recoating Length	mm	40 - 60			
Storage Temperature	°C	- 40 to + 85			

¹For total power: the signal power in the core and the pump power in the cladding. (The slope efficiency is about 70 %)

²The grating area should be kept on active cooling plates. (The cooling temperature ≤ 25 °C)

Package Dimensions



Ordering Information

PFCG-①①①①.①-②.②/②.②-③③-④④/④④④-⑤-P⑥⑥⑥⑥-⑦

①①①①.①: Center Wavelength ②.②/②.②: Reflectivity Bandwidth HR/OC ③③: Peak Reflectivity of OC

XXXX.X - XXXX.X nm X.X/X.X - X.X nm HR/X.X nm OC XX - XX%

SSSS.S - Specify S.S/S.S - Specify SS - Specify

④④/④④④: Fiber Core/Cladding Dimension ⑤: Fiber Type ⑥⑥⑥⑥: Pump Power Handling ⑦: Pigtails Length (Each Side)

XX/XXX - XX μm/XXX μm N - Non-PM XXXX - XXXX W A - 1 m B - 1.2 m C - 1.4 m

SS/SSS - Specify P - PM SSSS - Specify S - Specify (≤ 1.7 m)

¹ClearCut™ is a product trade mark of AFR representing an unique technology used in its FBG products.