



ClearCut kW Package-Free Fiber Bragg Grating (PFCG Series)

Rev 11C

Description

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

Key Features

- High Power Handling
- Low Temperature Slope
- Exceptional Reliability

Applications

- Fiber Laser

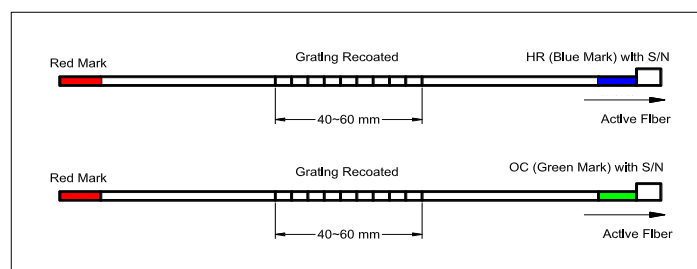
Specifications

Parameter	Unit	Value			
Center Wavelength	nm	1018, 1030, 1064, 1070, 1080, 1090			
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	
Max. Core Signal Power Handling ²	W	300	1000	3000	
Max. Clad Pump Power Handling	W	450	1500	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

XXXX.X - XXXX.X nm

SSSS.S - Specify

②.②/②.②: Reflectivity Bandwidth HR/OC

X.X/X.X - X.X nm HR/X.X nm OC

S.S/S.S - Specify

③③: Peak Reflectivity of OC

XX - XX%

SS - Specify

④④/④④④: Fiber Core/Cladding Dimension

XX/XXX - XX μ m/XXX μ m

SS/SSS - Specify

⑤: Fiber Type

N - Non-PM

P - PM

⑥⑥⑥⑥: Pump Power Handling

XXXX - XXXX W

SSSS - Specify

⑦: Pigtails Length (Each Side)

A - 1 m

B - 1.2 m

C - 1.4 m

S - Specify (≤ 1.7 m)

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