

1.5um High Power CW Single Frequency Polarization Maintaining Fiber Amplifier



Product Description:

Connet 1.5um CW Single Frequency Polarization Maintaining Fiber Amplifier Module is suitable for single-frequency narrow-linewidth optical signal amplification with the linewidth being narrow to kHz. The optimized multi-stage fiber amplifier can suppress the nonlinear effects, for example, Brillouin scattering (SBS) to achieve the high power output and meanwhile maintain the spectral characteristics of the signal light.

The unique large mode area (LMA) fiber mode control technology and mode field adaptation technology of Connet enable the 1.5um CW single-frequency polarization-maintaining fiber amplifiers to achieve the near-diffraction-limited output beam quality. The amplifier is also available in the OEM modular package for harsh operating environments and is an ideal amplifier for long-range coherent communications, coherent Doppler LIDAR and other sensing systems, etc.

Applications:

- Coherent communication
- Space laser communication
- Interferometric sensing
- Coherent LIDAR
- Atom cooling and trapping
- Scientific research

Features:

- Eye-safe wavelength 1550nm
- Output power up 10W
- Suitable for down to kHz signal
- No SBS
- Good beam quality $M^2 < 1.5$

Specifications:

Parameter	Unit	Specification		
		Min	Typ.	Max
Part no.		MFAP-1550-M-SF-HP		
Operating wavelength	nm	1540	1545/1550	1565
Output power	W	-	-	10
Input signal power	mW	0	-	200
Input signal linewidth	kHz	0.01	-	-
Output beam quality	M2	-	1.2	1.5
Polarization Extinction Ratio (PER)	dB	18	20	-
Output power stability	%	-	-	±1
Output isolation	dB	45	-	-
Power supply	V _{DC}	12-24		
Control mode		ACC/APC		
Communication interface		RS232		
Operating temperature	°C	-35	-	+65
Storage temperature	°C	-40	-	+85
Input fiber type		PM1550-XP 8/125um NA=0.13		
Input fiber length	m	>0.5		
Input fiber connector		FC/APC		
Output fiber type		PLMA 25um NA=0.09		
Output fiber length	m	>0.5		
Optical connector		FC/APC or Collimator		
Dimension	mm	200(L)x135(W)x41(H)		

Option:

- High power 3-port Optical Circulator can be integrated.

Ordering Information:

- MFAP-1550-M-SF-xxx-HP-FA (-Col)
- xxx: Output power, e.g.: 005-5W, 010-10W
- FA: FC/APC connector, Col: Collimator
- Please contact us for further information like the optional integrated 3-port PLMA fiber optic circulator, the output beam diameter and the divergence angle of the output collimator.