

2.0um Band Single Frequency PM Fiber Amplifier (0.1-2W)



Product Description:

Connet MARS Series High-power Single Frequency Polarization Maintaining Fiber Amplifier is a power amplifier specially designed for ultra-narrow linewidth and single-frequency signal light (such as fiber laser based on DFB and DBR principle). The amplifier is capable of amplifying low-power optical signals in kHz level up to 50W output power and meanwhile maintaining the spectral characteristics of the input signal light. The MARS series amplifiers adopt the high-power, high-performance single-mode and multi-mode pump lasers internally with the cascaded core pumped and double-clad fiber amplification technology and the integrated design of full polarization-maintaining structure to achieve the continuous output power. The MARS Series Fiber Amplifier is a complete Turn-Key system with microprocessor control inside and one LCD and some control buttons on the front panel.

Connet optimizes the design of high-power polarization-maintaining fiber amplifiers with rich experience of double-clad fiber processing to achieve high-efficiency output and suppress nonlinear effects of optical fibers. The unique heat treatment process ensures long-term stable operation of fiber amplifiers. The professionally designed high-speed response protection circuit automatically monitors the input optical signal power and output power to ensure that the high-power pumping operation is quickly cut off when the input optical signal is dropped, thereby ensuring the safety of the entire system.

The MARS series high-power single frequency polarization-maintaining fiber amplifier of Connet uses the unique polarization control technology and a leading polarization-maintaining fiber fusion process to ensure the stable linear polarization output under high power conditions.

MARS series high power polarization-maintaining fiber amplifiers can be widely used in scientific research, coherent combination, LIDAR, coherent detection and sensing systems, etc.

Applications:

- Coherent detection system
- LIDAR
- Atom cooling and trapping
- Fiber optic sensing
- High efficiency frequency doubling

Features:

- True single-mode output
- Low noise
- Turn-Key system
- All PM fiber, high PER
- Highly stable output



Specifications:

Parameter	Unit	Specification		
		Min	Typ.	Max
Part no.		MFAP-Tm-2000-B-SF-LP		
Operating wavelength	nm	1900	-	2050
Output power	W	0.1	-	2
Input isolation	dB	35	-	-
Output isolation	dB	35	-	-
Operation mode		CW		
Output power tunable range	%	10	-	100
Polarization		Linear Polarization		
Polarization Extinction Ratio (PER)	dB	20	23	-
Input signal power	mW	0.1	-	50
Input signal linewidth	kHz	0.1	-	-
Output power stability	%	-	±0.5	±1
Output beam quality		Single-mode, TEM ₀₀ , M ₂ <1.05		
Input fiber type		PM1550-XP or PM1950		
Input fiber connector		FC/APC		
Output fiber type		PM1950, 7/125um NA=0.20		
Output fiber connector		FC/APC (other options available)		
Power supply	V _{AC}	100-240V		
Operating temperature	°C	0	-	+50
Storage temperature	°C	-20	-	+70
Cooling mode		Air-cooling		
Dimension		19" 2U		

Ordering Information:

- MFAP-Tm-xxxx-B-SF-LP
- B: Benchtop
- xxx: Operating wavelength, e.g.: 1940nm, 1908nm
- SF: Single frequency
- LP: Low output power