

2.0um High Power Single Frequency Polarization Maintaining Fiber Amplifier



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.

The 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:

- Good beam quality
- Low noise
- Turn-Key system
- All PM fiber, high PER
- Highly stable output



Specifications:

Parameter	Unit	Specification			
		MFAP-Tm-1-SF	MFAP-Tm-10-SF	MFAP-Tm-20-SF	MFAP-Tm-50-SF
Part no.		MFAP-Tm-1-SF	MFAP-Tm-10-SF	MFAP-Tm-20-SF	MFAP-Tm-50-SF
Operating wavelength ¹	nm	1900 ~2100			
Output power ²	W	1	10	20	50
Input signal power	mW	>1			
Input signal linewidth	kHz	0.1 ~50			
Operating mode		CW			
Polarization		Linear Polarization			
Input isolation	dB	>30			
Output isolation	dB	>30			
Output power tunable range	%	10~100			
Polarization Extinction Ratio (PER)	dB	20	20	17	17
Output power stability	%	±1.0	±1.5	±2	±2
Output beam quality	M ²	1.1	1.1	1.3	1.3
Input fiber type		PM1550-XP or PM1950			
Input fiber connector		FC/APC			
Output fiber type		PLMA			
Output fiber connector		FC/APC or Collimator			
Power supply	V _{AC}	100~240			
Operating temperature	°C	0 ~+50			
Storage temperature	°C	-20~+70			
Cooling mode		Air-cooling			Water-cooling
Dimension		19" 2U		19" 3U	

Specifications:

1. Typical operating wavelength: 1908nm, 1940nm, 2051nm
2. Typical output power :1W,10W,50W. The output power is subject to the wavelength.

Ordering Information:

MFAP-Tm-xxxx-B-PW-SF:PM

- B: Benchtop
- xxxx: Operating wavelength in nm: 1908nm,1940nm, 2051nm
- B : Benchtop
- PW: output power in W
- SF: Single frequency