

Ultra-low Noise High Gain Pulsed PreAmp EDFA



Product Description:

Connet MARS Series Ultra-low Noise High Gain Pulsed PreAmp Erbium-doped Fiber Amplifier (EDFA) uses a unique optical path design with the proprietary ultra-low noise Erbium-doped fiber, featuring with low noise figure and high gain, which can be used for effectively amplifying such weak signal as -50dBm. The comprehensive performance of this EDFA surpasses the similar products in the market.

The ultra-low noise high-gain Erbium-doped amplifier of Connet is suitable for pre-amplification of weak pulse signals, like the pulse signal generated by modulating a continuous seed laser. This EDFA can effectively suppress the ASE and obtain a better signal-to-noise ratio of the amplified signal while maintaining the high gain. It is an ideal fiber amplifier for weak optical signal acquisition that is widely used in coherent communication, heterodyne detection and Coherent Doppler LIDAR systems, etc.

Applications:

- Coherent Doppler LIDAR for Wind Sensing
- Coherent Communication
- Coherent Detection
- BOTDR/BOTDA Sensing System
- Other Scientific Research

Features:

- C-Band
- Low Noise: $NF < 4.0\text{dB}$
- Pulse Operation
- Low ASE
- High Stability, High Reliability

Specifications:

Parameter	Unit	Specification		
		Min	Typ.	Max
Part no.		MFAS-ER-C-M-PA-PL		
Operation mode		Pulse		
Operating wavelength	nm	1528	-	1560
Input average power	dBm	-50	-	-10
Small signal gain@-50dBm	dB	50	-	-
Small signal gain@-10dBm	dB	30	-	-
Noise figure (NF)	dB	-	3.5	4.0
Polarization dependence gain	dB	-	0.3	0.5
PMD	ps	-	-	0.3
Input isolation	dB	35	-	-
Output isolation	dB	35	-	-
Control mode		ACC		
Power supply	V _{DC}	5-12		
Operating temperature	°C	-35	-	+65
Storage temperature	°C	-40	-	+85
Input fiber type		SMF-28e or PMF-1550		
Input fiber length	m	>0.5		
Input fiber connector		FC/APC		
Output fiber type		SMF-28e or PMF-1550		
Polarization Extinction Ratio (PER)	dB	23	-	-
Output fiber length	m	>0.5		
Output fiber connector		FC/APC		
Dimension	mm	90x70x15 or 150x125x20		

Ordering Information:

- MFAS-ER-C-M-PA-PL Single-mode Ultra-low Noise High Gain Pulsed PreAmp EDFA
- MFAP-ER-C-M-PA-PL Polarization Maintaining Ultra-low Noise High Gain Pulsed PreAmp EDFA