

Polarization Maintaining Erbium-doped Fiber Amplifier Product ——HC EDFA PM Series

- HC-EDFA-PM polarization maintaining erbium-doped fiber amplifier is a single-polarization amplification erbium-doped fiber amplifier. The main optical path of the amplifier is a fully polarization-maintaining optical path (slow axis operation). High-quality polarization maintaining devices are used to ensure that the polarization extinction ratio of the whole optical path is better than 20 dB, and the maximum output of 33 dBm can be achieved.
- For different applications, a variety of amplification structures can be provided for selection: 1. Conventional single-stage amplification structure; 2. Single-stage low-noise optimization structure; 3. Double-stage amplification structure; 4. Three-stage amplification and other structures. For different applications, the lowest noise can achieve a noise figure of 3.6 dB, and the high gain can achieve a gain of more than 45 dB. The multistage amplification structure has the effect of improving the OSNR, and can realize lower ASE noise output by being matched with a narrow-band ASE filter at the same time, and can provide amplification of weak linearly polarized optical signals for some special application fields, such as coherent optical communication, laser radar, meteorological wind direction detection and other application fields.

Product features

- Operating wavelength 1540 ~ 1565 nm
- Gain up to 45dB
- Low noise figure of 3.6 dB
- Multiple amplification structures are available
- Polarization extinction ratio > 23 dB
- Maximum output up to 33 dBm
- Adjustable output power
- Module, desktop optional
- Can be customized processing

Scope of application

- Long-distance coherent optical fiber communication
- Laser radar
- Meteorological wind direction detection



Technical parameters

Parameter	Symbol	Unit	Minimum value	Typical value	Maximum value	
Optical parameters						
Operating wavelength	λ_c	nm	1540		1565	
Input signal power *	Pi	dBm	-40		10	
Gain **	G	dB		30	45	
Saturated optical power output (adjustable)	Po	dBm			33	
Polarization extinction ratio	PEXR	dB	23			
Noise Index ***	NF	dB	3.6		6.5	
Output optical power stability	ΔP	dB			± 0.1	
Input/output optical isolation	ISO	dB	30			
Return loss	RL	dB	40			
Input pump leakage	P _{L_in}	dBm			-30	
Leakage of output pump	P _{L_out}	dBm			-40	
Electrical parameters						
Operating voltage	Module	V _o	V	4.75	5	5.25
	Desktop	V _o	V(AC)	80		240
Power supply interface	Module			5-pin connector		
Communication interface				RS232 serial communication		
Interface type						
Fiber type				Fujikura PMF 900um		
Fiber optic interface	Module			900 um casing, tail fiber 1m		
	Desktop			Fiber Optic Flange Interface		
Fiber optic connector				FC/APC		
Mechanical dimensions						

Package size	Module		mm	90×70×18
	Desktop		mm	240×300×90

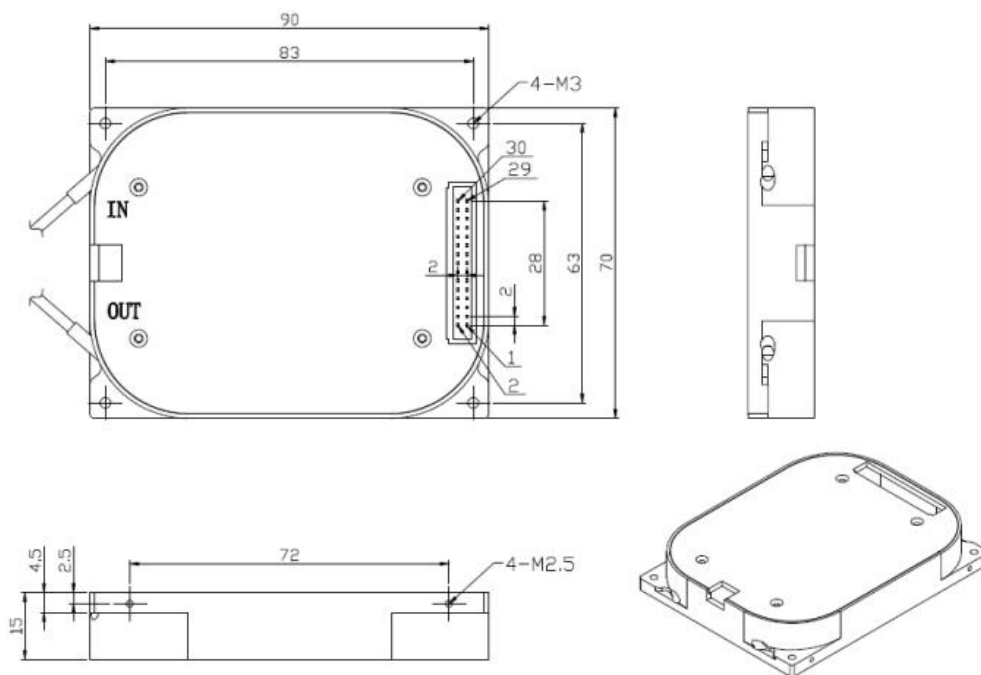


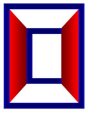
- * Optional input optical power
- ** Gain selectable
- *** Noise figure is tested for gain greater than 25 dB

Environmental conditions

Parameter	Symbol	Unit	Minimum value	Typical value	Maximum value
Operating temperature	Top	°C	0		50
Storage temperature	Tst	°C	-20		70
Humidity	RH	%	5		98

Mechanical dimensions in mm





Ordering Information HC-EDFA-XX – XX – X-X

AB = Type: BA = Power Amplifier, PA = Pre-amplifier, BI = Bidirectional, HP = High Power, PL = Pulse, PM = Polarization Maintaining

OUT = Output Power: 0 = 0dBm, ... 33=33dBm

M/D = Construction form: M = Module, D = Desktop

E = Other requirements: G = Flat with gain, etc.