

1064nm(1.0um) High Power Single-Frequency Polarization Maintaining Ytterbium Fiber Amplifier



Description

The high power single frequency polarization maintaining fiber amplifiers of Idealphotonics Laser are designed specifically for the ultra-narrow linewidth single frequency laser source, such as the fiber lasers based on the principle of DFB or DBR. This kind of amplifiers has the capability of boosting the low power optical signal at kHz magnitude up to 50W output power and preserves the spectral property of the input signal. The amplifiers use high power high performance multi-mode pump internally, employ the technology of double cladding fiber amplification, and have the integrated design of all polarization-maintaining structure. The output power can be continuously tuning. MARS series fiber amplifiers are integral Turn-Key system with the microprocessor inside for controlling. The front panel is equipped with the switch to start the laser, the LCD to display the state of the power and the knob to adjust the output power.

Thanks to the extensive experience of handling the double cladding fiber, Idealphotonics Laser conducts proper optimal design to the high power polarization maintaining fiber amplifiers, thus achieving high efficiency output while suppressing the nonlinear effects of the fiber. The unique thermal treatment technology guarantees that the desktop fiber amplifier can operate stably for a long time. The high-speed response protection circuit monitor the power of input and output signal automatically so that it can cut down the operation of the high power pump in case of the falling off of the input signal, thus ensures the safety of the whole system.



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This high power desktop polarization-maintaining fiber amplifiers of Idealphotonics Laser can be widely used in scientific research, coherent beam combining, coherent detection sensing system, etc.

Feature

- High peak output power: 0.5W~50W
- Low noise figure
- Turn-Key system
- Total PM fiber structure, high PER
- High stability, high reliability

Application

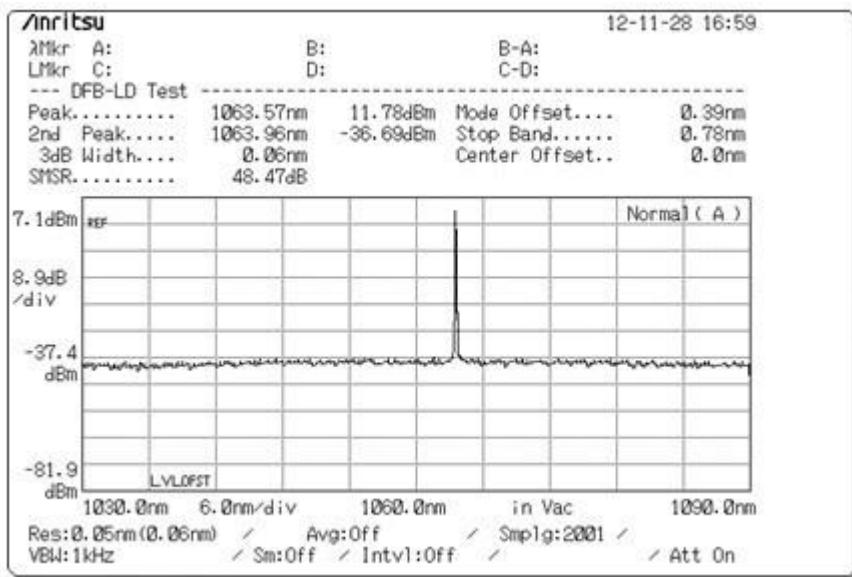
- Coherent detection
- Coherent combining
- Atomic trapping
- Fiber sensing
- Frequency doubler

Specification

Parameter	Unit	Specification			
		Min	Typ.	Max	
Part NO.		IDP-Yb-10xx-SF			
Operating wavelength ¹	nm	1035	1064	1083	
Input power ²	mW	1~10	10~50	50~200	
Output power ³	W	0.5	-	50	
Input Isolation	dB	30	-	-	
Output Isolation	dB	30	-	-	
Output power tunable range	%	2	-	100	
Polarization Extinction Ratio(PER)	dB	15	20	-	
Output power stability ⁴ (8h)	%	-	±1	±2	
Beam quality	M ²		<1.2		
Input fiber type		PM980			
Output fiber type		PM980 or other			
Length of the output fiber	m	>1			
Optical connectors		FC/APC((other options available)			
Power supply	VAC	170	220	260	
Power consumption	W	-	-	150	
Operation temperature	°C	0	-	30	
Storage temperature	°C	-40	-	+85	
Dimension	mm	420(L)×485(W)×105(H)			
Cooling mode		Air-Cooled			

- 1.Typical operating wavelength: 1053nm、1064nm、1083nm;
- 2.The input power is related to the output power;
- 3.Typical Output power: 0.5W、1W、10W、50W;
- 4.The output power stability is measured under 25°C, 30minites after warm-up.

Spectrum :



Ordering Information :

IDP-Yb-10xx-B-PW-SF: PM

10xx:Operating wavelength in nm, example:1053nm、1064nm、
1083nm

B:B-Benchtop

PW:Output power in W, example:0.5-0.5W、1-1W、10-10W

SF:Single Frequen