Ytterbium-doped Fiber Amplifier

1. Description:

Ytterbium-doped fiber amplifier (YDFA) generates gain by pumping ytterbium-doped fiber with semiconductor laser. It is used to amplify optical signals in the 1030~1080nm band. The output power is continuously adjustable and has the advantages of high gain and low noise. The benchtop package YDFA is convenient for experimental operation. Users can adjust the pump current and output power through the panel buttons. A more compact modular YDFA is also available to facilitate user system integration. Both the benchtop YDFA and the modular YDFA can support host computer software control and serial port command control.

2. Features:

- Wide wavelength range;
- High output power;
- Low noise figure.

3. Applications:

- Nonlinear optics;
- Optical fiber sensor;
- Fiber laser.

4. Electro-Optical Characteristics:

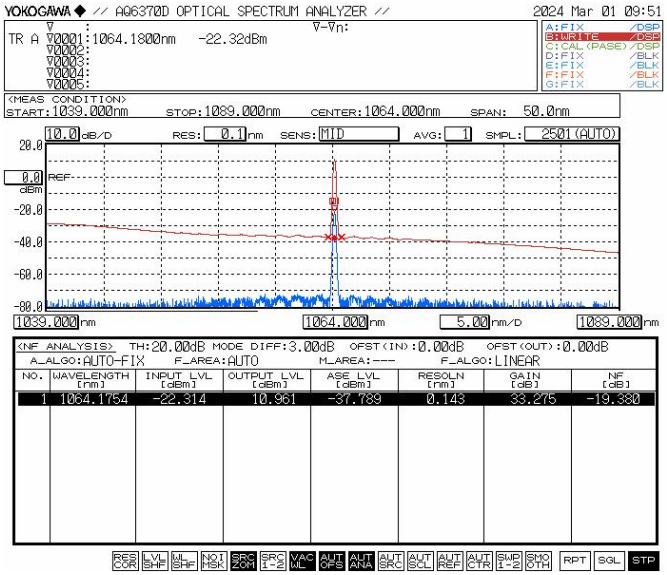
Parameters	Unit	Values	Notes
Operating wavelength	nm	1030~1070, 1040~1080	
Input power	dBm	0~10	Customizable
Saturated output power	dBm	17/20/23/25/26/27/30/33/37/40	@0dBm Input
Noise figure	dB	≤5.0	
Polarization dependent gain	dB	<0.3	SM fiber
Polarization extinction ratio	dB	>20	PM fiber
Input/Output isolation	dB	>35	
Fiber type	-	Hi1060 or PM980	
Connector	-	FC/APC	
Operating mode	-	ACC/APC(1)	
Dimensions	mm	260(W)×280(D)×120(H)	Benchtop(17-26dBm)
		260(W)×320(D)×120(H)	Benchtop(27-33dBm)
		376(W)×340(D)×112(H)	Benchtop(37-40dBm)
		125(W)×150(D)×20(H)	Module(17~20dBm)
		139(W)×206(D)×27(H)	Module(23~26dBm)
		139(W)×235(D)×70(H)	Module(27~40dBm)

Power supply	V	AC 110~240V, <30W	Benchtop
		5V DC, <15W	Module
Control mode	-	RS232 Serial communication	Module
Communication Interface	-	DB9 Female	Module
Operating temperature	℃	-5~+35	
Operating humidity range	%	0~70	

(1) .ACC mode-automatic current control: EDFA pumping working current is set by the user and automatically locked by EDFA to achieve constant pumping current. When the input optical power fluctuates, the output power will also fluctuate accordingly, which is applicable to all EDFA models.

(2) APC mode-automatic power control: the user sets the EDFA signal light output power, PD automatically monitors and feeds back the output power, EDFA control and adaptive adjustment of the pump to stabilize the output signal. When the input optical power fluctuates, the APC mode will reduce the output power fluctuation as much as possible, which is suitable for power type and line type EDFA.

5. Typ. Curve:



6. Ordering information:

YDFA	Output power	Fiber type	Dimension
YDFA	**-XX**	**-XX**	**-X**
Ytterbium-doped fiber amplifier	17: 17dBm 20: 20dBm 23: 23dBm ... 40: 40dBm	SM: Hi1060 PM:PM980	M: Module B: Benchtop