



北京锐欧飞光电科技有限公司  
Beijing Rofea Optoelectronics Co., Ltd.

# Erbium Doped Fiber Amplifier

## Product manual

[www.bjrofec.com](http://www.bjrofec.com)

## Product description

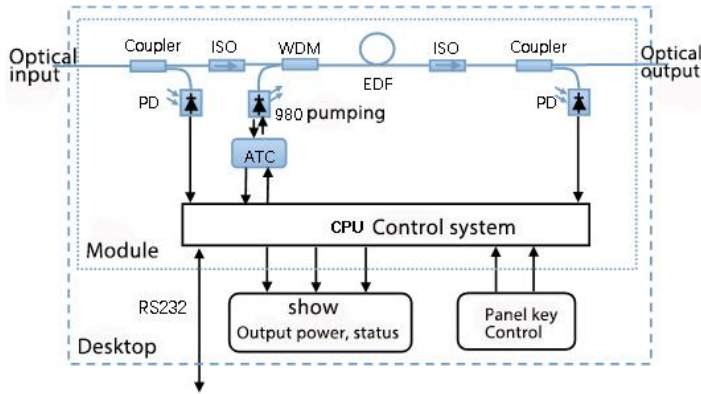


Rofea Optoelectronics independently developed Rof-EDFA series products are specially designed for the laboratory and factory test environment of optical fiber power amplification equipment, internal integration of high-performance pumping laser, high-gain erbium-doped fiber, and unique control and protection circuit, to achieve low noise, high stability output, AGC, ACC, APC three working modes can be selected. It is widely used in optical fiber sensing and optical fiber communication.



The benchtop fiber amplifier has LCD display, power and mode adjustment knobs for easy operation, and provides an RS232 interface for remote control. Module products have the characteristics of small size, low power consumption, easy integration, programmable control and so on.

### Principle and structure diagram



### Feature

**Low noise index**

**Low power consumption**

**Programmable control**

**Multiple modes are available**

**Desktop or module optional**

**Automatic shut off pump protection**

### Product list

Model	Description	parameter
ROF-EDFA-P	Ordinary power output	17/20/23dBm output
ROF-EDFA-HP	High power output	30dBm/33dBm/37dBm output
ROF-EDFA-A	Front-end power amplification	-35dBm/-40dBm/-45dBm input
ROF-YDFA	Ytterbium-doped fiber amplifier	1064nm, The highest 33dBm output



# ROF-EDFA-P Ordinary power output fiber amplifier

## paramete

Parameter		Unit	Minimum	Typical	Maximum
Operating wavelength range		nm	1530		1565
Input signal power range		dBm	-10	0	5
Small-signal gain		dB		30	35
Saturation optical power output range *		dBm		20	
Noise index **		dB		5.0	5.5
Input optical isolation		dB	30		
Output optical isolation		dB	30		
Polarization dependent gain		dB		0.3	0.5
Polarization mode dispersion		ps			0.3
Input pump leakage		dBm			-30
Output pump leakage		dBm			-40
Operating voltage	module	V		5	
	desktop	V( AC )	80		240
Fiber type			SMF-28		
Output interface			FC/APC		
Package size	module	mm	90×70×14		
	desktop	mm	320×220×90		

## Limiting condition

Parameter	symbol	Unit	Minimum	Typical	Maximum
Operating temperature	Top	°C	-5		55
Storage temperature	Tst	°C	-40		80
Humidity	RH	%	5		90

## Ordering information

ROF	EDFA	X	XX	X	XX	XX
	Erbium Doped Fiber Amplifier	P--Ordinary power output	Output power: 17.....17dBm 20....20dBm	Package size: D---desktop M---module	Optical fiber connector: FA---FC/APC	Null - non-gain flat Gf-gain flat



# Rof-EDFA-HP High power output fiber amplifier

## Parameter

Parameter		Unit	Minimum	Typical	Maximum
Operating wavelength range		nm	1540		1565
Input signal power range		dBm	-10		10
Saturated output optical power		dBm			33
Saturation output optical power stability		dB			±0.3
Noise index @ Input 0 dBm		dB		5	6.0
Input optical isolation		dB	30		
Output optical isolation		dB	30		
Input return loss		dB	40		
Output return loss		dB	40		
Polarization dependent gain		dB		0.3	0.5
Polarization mode dispersion		ps			0.3
Input pump leakage		dBm			-30
Output pump leakage		dBm			-30
Operating voltage	module	V( AC )	80		240
	desktop	V(DC)	10	12	13
Fiber type			SMF-28		
Output interface			FC/APC		
Communication interface			RS232		
Package size	module	mm	320×220×90		
	desktop	mm	150×125×16		

\* Optical power size depends on customer requirements, the specific size depends on the output power size

## Limiting condition

Parameter	symbol	Unit	Minimum	Typical	Maximum
Operating temperature	Top	°C	-5		55
Storage temperature	Tst	°C	-40		80
Humidity	RH	%	5		90



### Ordering information

ROF	EDFA	X	XX	X	XX
	Erbium Doped Fiber Amplifier	HP--High power output	Output power: 30---30dBm 33---33dBm 37---37dBm	Package size: D---desktop M---module	Optical fiber connector: FA---FC/APC FP---FC/PC SP---User assignment

\* If you have any special requirements, please contact our sales staff



# ROF-EDFA-B Preventive fiber amplifier

## Parameter

Parameter		Unit	Minimum	Typical	Maximum
Operating wavelength range		nm	1525		1565
Input signal power range		dBm	-45		
Small-signal gain		dB		30	45
Saturation optical power output range *		dBm		0	17
Noise index **		dB		5.0	5.5
Input optical isolation		dB	30		
Output optical isolation		dB	30		
Polarization dependent gain		dB		0.3	0.5
Polarization mode dispersion		ps			0.3
Input pump leakage		dBm			-30
Output pump leakage		dBm			-40
Operating voltage	module	V	4.75	5	5.25
	desktop	V( AC )	80		240
Fiber type			SMF-28 (PM可选)		
Output interface			FC/APC		
Package size	module	mm	90×70×14		
	desktop	mm	320×220×90		

## Limiting condition

Parameter	symbol	Unit	Minimum	Typical	Maximum
Operating temperature	Top	°C	-5		55
Storage temperature	Tst	°C	-40		80
Humidity	RH	%	5		90

## Ordering information

ROF	EDFA	X	XX	XX	X	XX
	Erbium Doped Fiber Amplifier	B--Preventive	Input power: -45....-45dBm -40....-40dBm -35....-35dBm .....	Output power: -10....-10dBm 00....0dBm .....	Package size: D---desktop M---module	Optical fiber connector: FA---FC/APC

\*If you have any special requirements, please contact our sales staff



# ROF-YDFA Ytterbium-Doped Fiber Amplifier

## Parameter

Parameter		Unit	Minimum	Typical	Maximum
Operating wavelength range		nm	1050		1100
Input signal power range		dBm	-3	0	10
Saturated output optical power *		dBm		30	33
Noise index @ Input 0 dBm		dB		5.0	6.0
Input optical isolation		dB	30		
Output optical isolation		dB	30		
Return loss		dB	40		
Polarization dependent gain		dB		0.3	0.5
Input pump leakage		dBm			-30
Output pump leakage		dBm			-40
Operating voltage	desktop	V( AC )	80		240
Fiber type			HI1060		
Output interface			FC/APC		
Communication interface			RS232		
Package size	module	mm	90×70×18		
	desktop		320×220×90		

\*Optical power size depends on customer requirements, the specific size depends on the output power size

## Limiting condition

Parameter	symbol	Unit	Minimum	Typical	Maximum
Operating temperature	Top	°C	-5		55
Storage temperature	Tst	°C	-40		85
Humidity	RH	%	5		90

## Ordering information

ROF	YDFA	XX	XX	X	XX
	Ytterbium-Doped Fiber Amplifier	HP--High output type	Output power: 20---20dBm 23---23dBm 30---30dBm 33---33dBm	Package size D---desktop M---module	Optical fiber connector: FA---FC/APC

\*If you have any special requirements, please contact our sales staff