



# Erbium Doped Fiber Amplifier Single Mode for C-Band PA/BA



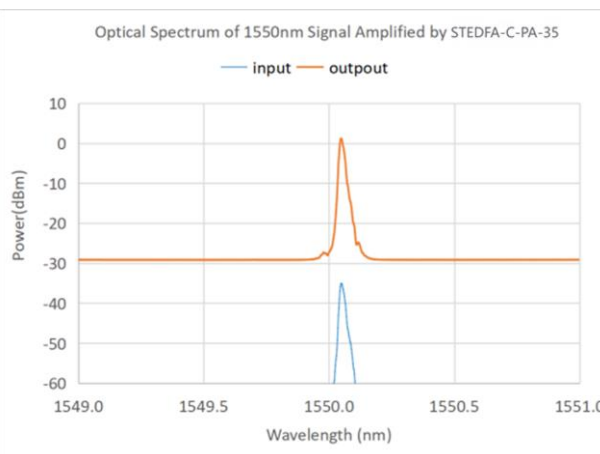
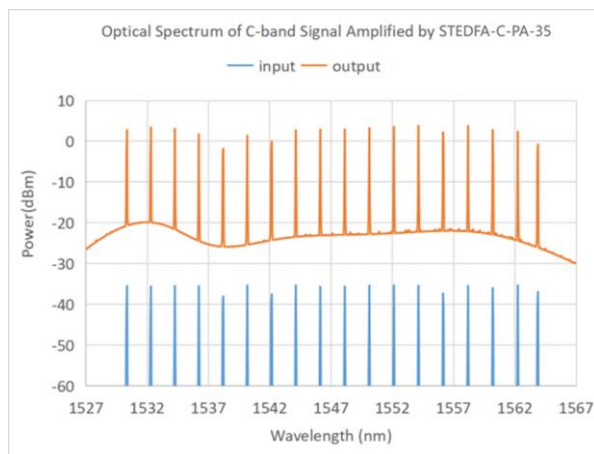
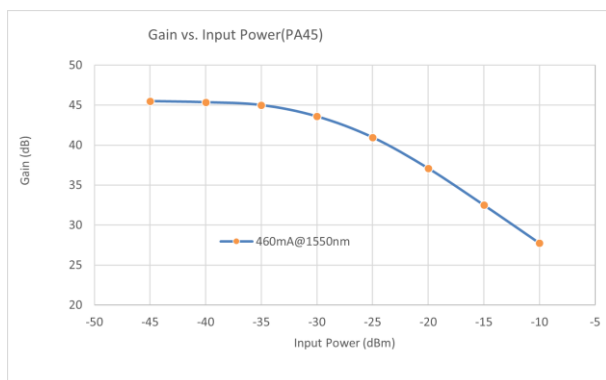
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## Erbium-doped Fiber Small Signal Amplifier (PA, Pre-Amplifier)

SIMTRUM's C-Band<sup>(\*Note1)</sup> Erbium-doped Fiber Small Signal Amplifier is expertly engineered for amplifying weak optical signals within the -45dBm to -25dBm range. Offering exceptional gains of 35 to 45 dB and a low noise figure, this amplifier is specifically designed to enhance the sensitivity of photodetectors to weak light signals, making it essential for high-precision optical applications.



\*Note 1: This EDFA product can be used to amplify any single or multiple wavelength signals within the operating wavelength range, but the flatness of the gain spectrum is not considered when inputting multi-wavelength signals. As shown in the picture on this page, the EDFA-C-PA-35 small-signal amplifier can achieve high-gain amplification for input signals of different wavelengths in the C-band (multiple wavelengths are not input to EDFA at the same time in the picture). The input power of a single wavelength is -35dBm. When , the effective gain is greater than 35dB, and the amplified signal-to-background noise ratio is greater than 30dB.

### Features

- Broad wavelength range
- High gain coefficient
- Low noise

### Application

- Optical fiber communication
- Fiber optic sensing
- Fiber laser

## Specifications

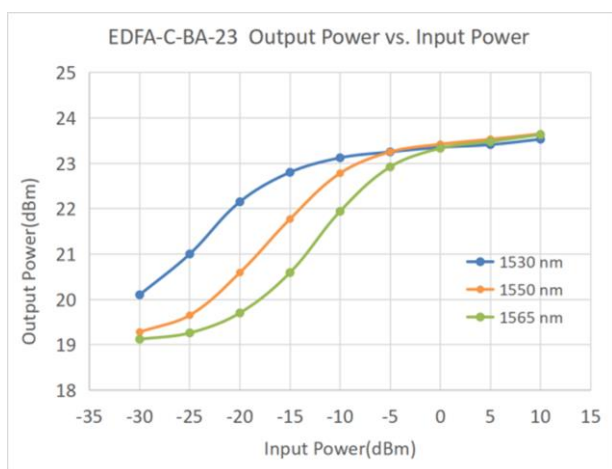
Optical Parameters	Unit	Typical Value		Remarks
Product Number	-	EDFA-PA-35	EDFA-PA-45	
Operating Wavelength	nm	1530~1565nm		C-band
Input Signal Power	dBm	-35~-25	-45~-25	
Saturation Output Power	dB	35@-35dBm input	45@-45dBm input	35@-25dBm input
Noise Figure	dB	≤4.5		
Polarization Dependent Gain	dB	≤0.3		
Polarization Mode Dispersion	ps	≤0.5		
Input/output Isolation	dB	>35		
Optical Power Monitoring	-	Output power		

## Ordering Information/ Product Code

Series	Wavelength(nm)	Amplifier Type	Small Signal Gain (dB)	Fiber	Packaging
STEDFA	C = C-band	PA = Pre Amplifier	35 = 35dB@-35dBm	SM = Single mode fiber	M - Module
			45 = 45dB@-45dBm		B - Desktop

## Erbium-doped Fiber Booster Amplifier for C-band

SIMTRUM's C-Band Erbium-Doped Fiber Booster Amplifier (BA Amplifier) efficiently amplifies optical signals in the power range of -6dBm to +3dBm or higher. With a maximum saturated output power of 26dBm, this amplifier is ideal for boosting the emission power of laser light sources, providing enhanced performance for demanding applications.



### Features

- Broad wavelength range
- High gain coefficient
- Low noise

### Application

- Optical fiber communication
- Fiber optic sensing
- Fiber laser

### Specifications

Optical Parameters	Unit	Typical Value	Remarks
Operating Wavelength	nm	1530~1565	C-band
Input Signal Power	dBm	-6~+3	
Saturation Output Power	dBm	15/17/20/23/25/26	@-3dBm input
Noise Figure	dB	≤5	@-3dBm input
Polarization Dependent Gain	dB	≤0.3	
Polarization Mode Dispersion	ps	≤0.5	
Input/output Isolation	dB	>35	
Optical Power Monitoring	-	Output power	
Optical Fiber	-	SMF-28 SM fiber	
Fiber Connectors	-	FC/APC	*Note2

## Specifications

General Parameters	Benchtop	Module
Control Function	Keystroke/ RS232 serial communication	RS232 serial communication
Remote Control Port	DB9 Female	DB9 Female
Power Supply	AC100~240V, <30W	DC5V, <15W
Dimensions	260(W)×280(D)×120(H)mm	125(W)×150(D)×20(H)mm
Operation Temperature	-5~+35°C	
Operation Humidity	0~70%	

Ordering Information/ Product Code					
Series	Wavelength(nm)	Amplifier Type	Small Signal Gain (dB)	Fiber	Packaging
STEDFA	C = C-band	BA = Booster Amplifier	15/17/20/23/25/26	SM = Single mode fiber	M - Module
					B - Desktop

\*Note 2: ACC mode – automatic current control: EDFA pump working current is set by the user and automatically locked by EDFA to achieve constant pump current. When the input optical power fluctuates, the output power will fluctuate accordingly. Applicable to all EDFA models, PA amplifier only supports ACC mode.

APC mode – automatic power control: the user sets the signal optical output power of EDFA, and the built-in PD monitoring and feedback control the output power. EDFA automatically adjusts the pump power to stabilize the output signal. The output power regulation range in APC mode is usually 10% - 100%. The advantage of APC mode is that when the input optical power fluctuates, EDFA will reduce the fluctuation of output power as much as possible. It is suitable for power type and line type EDFA, but not for low repetition rate pulse signal.