



30~33dBm High Power Fiber Amplifier Module

▶▶ Description

YEDFA-CA-EM-B-XX series of high power fiber amplifier are especially designed for FTTx, CATV, FDC and HFC analog amplification applications that require high reliability. Compared to conventional amplifiers, these modules are more compact, powerful, stable and reliable.

Both input and output signals are sampled and monitored with a feedback circuit. ACC (automatic current control) and APC (automatic power control) circuits are designed into the amplifier to ensure high stability and reliability of output power. Based on integrated power monitoring circuit, this amplifier features RS-232 interface enabling connectivity with customer's control system.

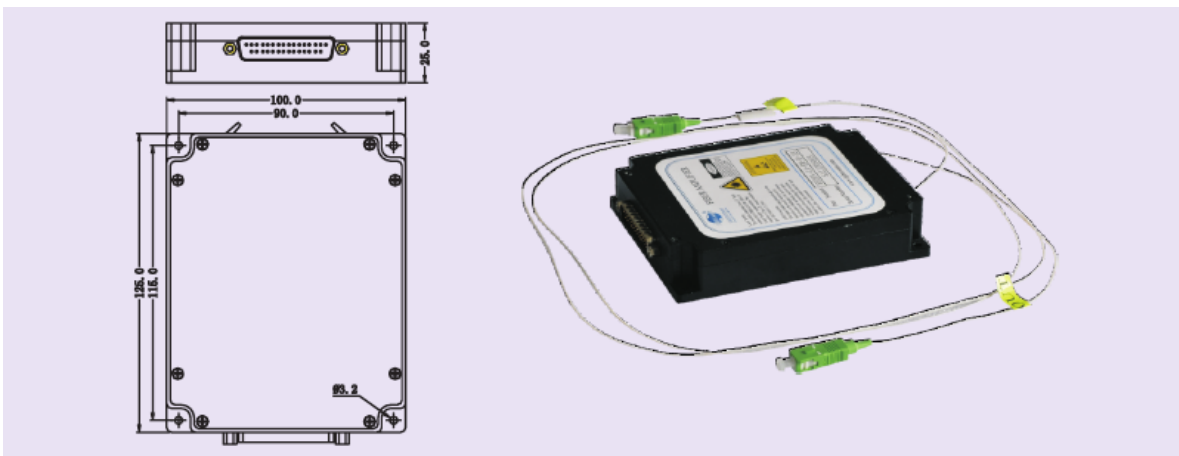
▶▶ Features

- Compact size: 125×100×25mm
- Wide operating temperature range
- High stability and reliability based on multi-mode pump and fiber combiner technology
- RS-232 interface
- Low noise figure

▶▶ Applications

- Data transmission
- Power actuator
- Test/Measurement for optical device/systems
- Detection for gas absorption
- Analog CATV long distance transmission Video
- optical transmission systems Optical distribution
- systems
- In-line amplification
- FTTx

▶▶ Typical Mechanical Structure



Mechanical Outline: 125×100×25mm Module

Notes: To mount the module, please use M2.5 or smaller screw.



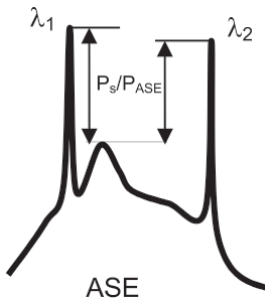
►► Specifications:

Optical Characteristics

Parameter	Unit	Typ.	Notes
Operating wavelength	nm	1543~1565	Other wavelength upon request. Refer to illustration below
Output power	dBm	+30, +33	
Input power	dBm	0 ~ +10	
Output power stability	dB	<0.4	APC mode, over 2 hours
Noise figure	dB		Discussion is needed
Control mode		Selectable	APC or ACC
Return loss	dB	>40	
Output fiber type		SMF-28e	900µm Jacket
Connector type		FC/APC, SC/APC	Other type upon request

Mechanical & Environmental characteristics

Parameter	Unit	Typ.	Notes
Dimensions(LxWxH)	mm	125x100x25	Gain block Module
Cooling		Conductive via bottom surface	Heat sink is needed
Operating temperature	℃	-5 to +55	
Storage temperature	℃	-20 to +70	
Humidity	%	10 to 90	



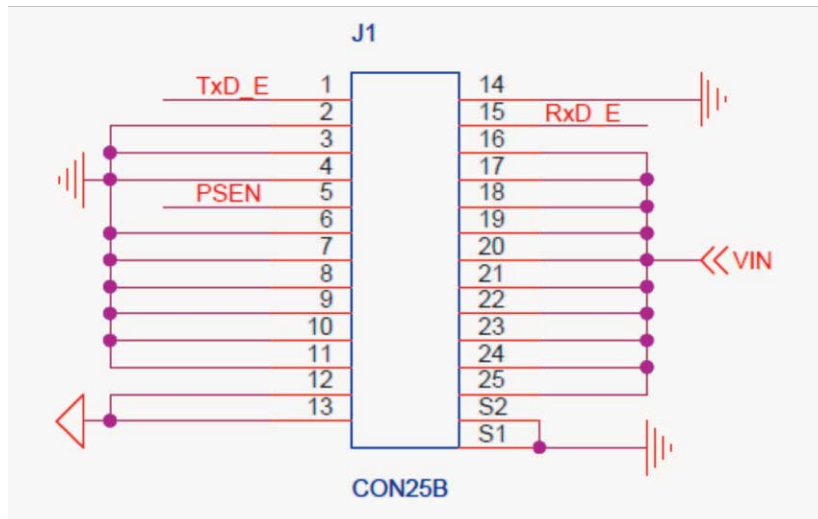
Operation wavelength range: $\Delta\lambda = \lambda_2 - \lambda_1$

Operation wavelength range depends on the output signal power (P_s)/ASE peak power (P_{ASE}). With low input power, P_s/P_{ASE} is small and the operation wavelength is relative narrow.

Operation wavelength is adjustable according to amplifier configuration. Full specification review is recommended.

►► Pin Out

Electrical PIN Assignment



**Pin Definitions**

NAME	PIN NO.	DESCRIPTION
TxD_E	1	Transmitter Data Output of the Serial (UART) Port.
DGND	2,3,4,6,7,8,9,10,11,14	Digital Ground. Ground reference point for the digital circuitry.
PSEN	5	Program Store Enable. This pin remains low during internal program execution. PSEN is used to enable serial download mode when pulled low to DGND on power-up or reset.
AGND	12,13	Analog Ground. Ground reference point for the analog circuitry.
RxD_E	15	Receiver Data Input of the Serial (UART) Port.
VIN	16,17,18,19,20,21,22,23,24,25	Positive Supply Voltage.
S1,S2		The connector mounting PIN, connected to the DGND in the module.

Electrical Characteristics (Module)

Parameters	Symbol	Min.	Typ.	Max.	Unit
Power supply	V	4.5	5	5.5	V
Power consumption	P	-	20	30	W
TTL input voltage	H	2.4	-	-	V
	L	-	-	0.8	V
TTL output voltage	H	2.4	-	-	V
	L	-	-	0.4	V

►► Order Information

YEDFA-CA-EM-B-XX-XX/XXX

- └─> Optical connector: FC/APC, SC/APC or upon request
- └─> Output power: 30 or 33dBm