



# Mini Size High Power Fiber Amplifier Module

## ▶▶ Description

YEDFA-CA-EM-B-27 series of fiber amplifiers 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 circuits, this amplifier features a RS-232 interface enabling connectivity to customer's control system.

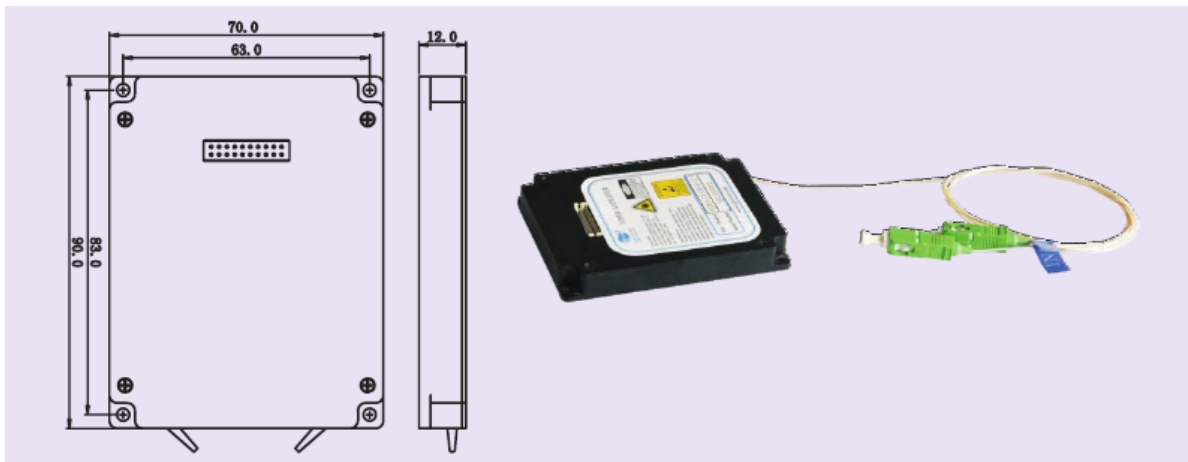
## ▶▶ Features

- Compact size: 90×70×12mm
- 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: 90×70×12mm Module

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



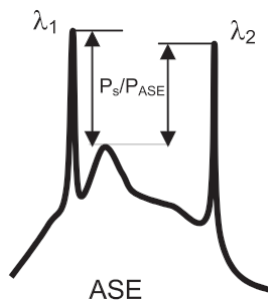
►► Specifications:

Optical Characteristics

Parameter	Unit	Typ.	Notes
Operating wavelength	nm	1543~1565	Other wavelength upon request. Refer to illustration below
Output power	dBm	+27	
Input power	dBm	0 ~ +10	Lower input power is possible, discussion in details
Output power stability	dB	<0.2	APC mode, over 2 hours
Noise figure	dB	<7.0	Pin=3dBm, 1550nm
Control mode		Selectable	APC or ACC
Return loss	dB	>40	
Output fiber type		SMF-28	900μm Jacket
Connector type		FC/APC, SC/APC	Other type upon request

Mechanical & Environmental characteristics

Parameter	Unit	Typ.	Notes
Dimensions(LxWxH)	mm	90x70x12	Module
Weight	g	145	
Cooling		Conductive via bottom surface	Heat sink is needed
Operating temperature	℃	-5 to +55	
Storage temperature	℃	-20 to +70	
Humidity	%	10 to 90	



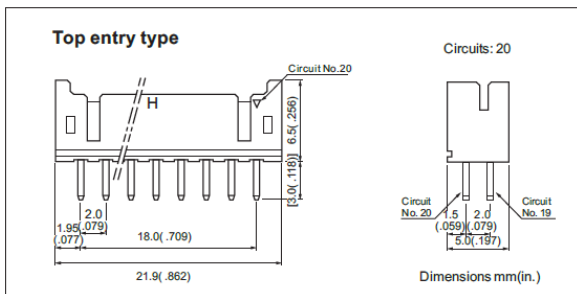
Operation wavelength range:  $\Delta\lambda = \lambda_2 - \lambda_1$

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.

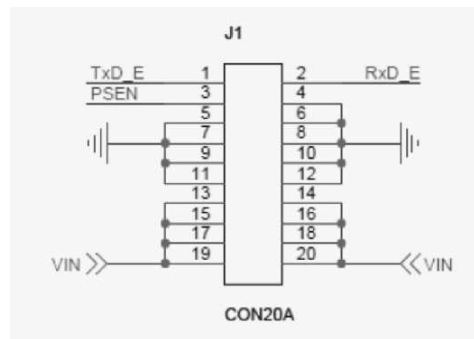
Operation wavelength is adjustable according to amplifier configuration. Full specification review is recommended.

►► Pin Out

Connector type



Electrical PIN Assignment



**Pin Definitions**

NAME	PIN NO.	DESCRIPTION
TxD_E	1	Transmitter Data Output of the Serial (UART) Port.
RxD_E	2	Receiver Data Input of the Serial (UART) Port.
PSEN	3	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.
GND	4,5,6,7,8,9,10, 11,12	Ground.
VIN	13,14,15,16,17,18,19,20	Positive Supply Voltage.

**Electrical Characteristics**

Parameters	Symbol	Min.	Typ.	Max.	Unit
Power supply	V	4.5	5	5.5	V
Power consumption	P	-	8	15	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-27-XX/XXX

↳ Optical connector: FC/APC, SC/APC or upon request