



27-30dBm High Power Fiber Amplifier Module

►► Description

The YEDFA-CA-EM-C-XX fiber amplifier series are highly reliable amplifiers especially designed for FTTx, CATV, FDC and HFC analog applications. Compared with conventional amplifiers, these modules are more compact, powerful, and have higher reliability and stability.

The high power fiber amplifiers are based on two stage amplification configuration, pre-amplifier and power amplifier. Both input and output signals are monitored with feedback circuit. ACC (automatic current control), APC (automatic power control) and AGC (automatic gain control) circuits are employed to ensure high stability and reliability of output power. Integrated power monitors inside enables ease of operation via the featured RS-232 interface linked to customer's control system.

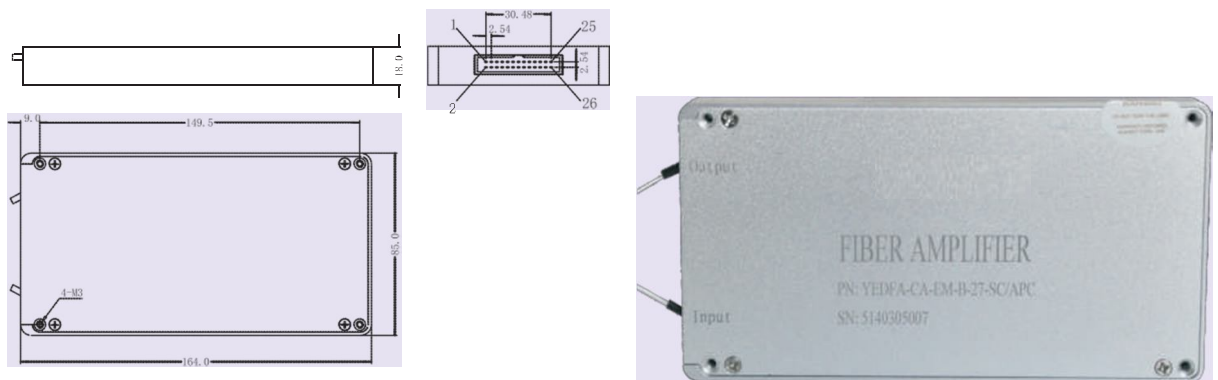
►► Features

- Compact size: 164×85×18mm
- 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
- Measurement for optical devices and system
- Detection for gas absorption
- Analog CATV long distance transmission
- Video optical transmission system
- Optical distributing system
- In-line Amplification
- FTTx

►► Typical Mechanical Structure



Mechanical Outline: 164×85×18mm Module

Notes: To mount the module, please use M3.0 or smaller screw



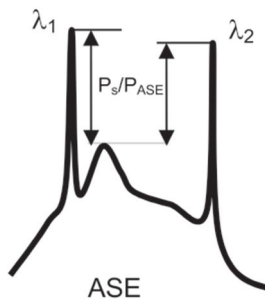
►► Specifications:

Optical Characteristics

Parameter	Unit	Typ.	Notes
Operating wavelength	nm	1543~1565	Other wavelength upon request. Refer to illustration below
Output power	dBm	+27 ~ +30	
Input power	dBm	-10 ~ +10	
Output power stability	dB	<0.2	APC mode, over 2 hours
Noise figure	dB	<7.0	Pin=0dBm, 1550nm
Control mode		Selectable	APC, ACC or AGC
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(L×W×H)	mm	164x85x18	Module
Weight	g	450	
Cooling		Conductive via bottom surface	Heat sink is needed
Operating temperature	℃	-5 to +55	
Storage temperature	℃	-20 to +70	
Humidity	%	10 to 90	



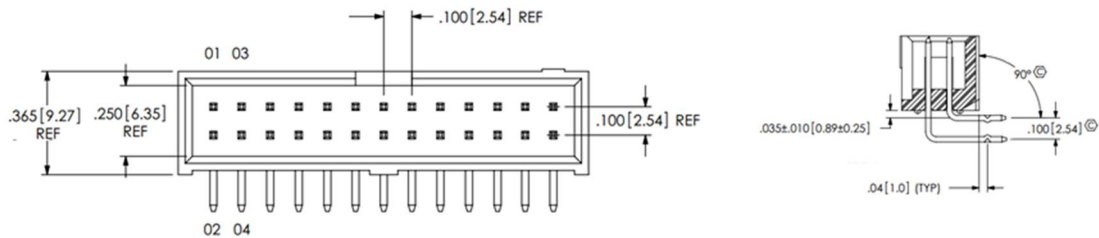
Operation wavelength range: $\Delta\lambda = \lambda_2 - \lambda_1$

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. When ordering, discussion is necessary.

►► Pin Out

Connector type



Samtec: TSS-113-04-L-D-RA

**Pin Definitions**

PIN NO.	DESCRIPTION	NOTE
1,2,3,4	+5V	+5V power supply
5,6	NC	Reserve
7	CASE Temperature Alarm	Active High, LVTTTL
8	Loss of Output Alarm	Active High, LVTTTL
9	Pump Current Alarm	Active High, LVTTTL
10	Pump Temperature Alarm	Active High, LVTTTL
11	Reset Input	Active Low, LVTTTL
12	+5V	+5V power supply
13-17	GND	Ground
18	Serial Output (TX)	Serial communications transmit line, LVTTTL
19	Loss of Input Alarm	Active High, LVTTTL
20	NC	Reserve
21	Amplifier Disable Input	Active Low, LVTTTL
22	Serial Input (RX)	Serial communications receive line, LVTTTL
23	NC	Reserve
24	+5V	+5V power supply
25,26	GND	Ground

Electrical Characteristics

Parameters	Symbol	Min.	Typ.	Max.	Unit
Power supply	V	4.75	5	5.25	V
Power consumption	P	-	-	25	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-C-XX-XX/XXX

- └─> Optical connector: FC/APC, SC/APC or upon request
- └─> Optical output power, e.g. 27dBm, 30dBm