

# CATV Erbium Doped Amplifier (EDFA)

## Key Features

- CATV-field-proven low noise figure
- Small foot print
- High output power
- High gain
- Wide operation range
- Highly reliable and durable

64-port CATV  
EDFA Casing



1550nm - CW

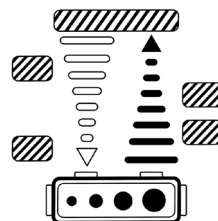
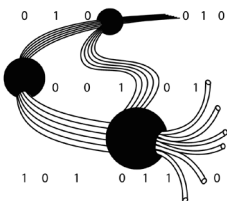
## Description

CATV EDFAs inherit the reliable design of Amonics' optical amplifier technology. They exhibit high output power, high gain with very low noise. They are thus ideal for CATV applications. CATV EDFAs are available in rackmount or module.

The CATV EDFA modules, operated on a single +5V power supply, are ideal building blocks for OEM systems integration of a wide range of applications as they come with the essential EDFA functions to serve various purposes and the interfaces ready for system integration.

Amonics CATV Rackmount EDFA area made with high power pump laser and stability pump combiners, robust in high power boosting. The result are EDFAs that possess high output power, high gain with very low noise, and are ideal for CATV applications. The turnkey microprocessor controlled rackmount EDFAs manage alarms and status indicators. An integrated RS232 or Ethernet computer interface enables easy control, diagnostic functions and data acquisition.

## Application



- CATV Networks
- SONET/SDH Systems
- LANs and MANs

- Fiber Optic Sensing

- Laboratory



ISO 9001 : 2015  
Certificate No.: CC 5346

Our product is manufactured under a HKQAA  
ISO 9001 certified quality management system.  
The ISO 9001:2015 certification applies to the  
Hong Kong production site only.

## CATV EDFA Specifications

Model	AEDFA-CA-13	AEDFA-CA-18	AEDFA-CA-23
Number Of Output Power	1	1, 2	1, 2, 4
Input Power	-6 dBm to +6 dBm	-6 dBm to +6 dBm	-6 dBm to +6 dBm
Saturated Output Power	Min. +13 dBm	Min. +18 dBm	Min. +23 dBm
Noise Figure (at 0dBm input signal)	Typ. 4.5 dB	Typ. 5.0 dB	Typ. 5.5 dB
Operating Wavelength	1535 nm to 1560 nm	1535 nm to 1560 nm	1535 nm to 1560 nm
Input Isolation	Min. 30 dB	Min. 30 dB	Min. 30 dB
Output Isolation	Min. 30 dB	Min. 30 dB	Min. 30 dB
Polarization Dependent Gain	Typ. 0.3 dB, Max. 0.5 dB	Typ. 0.3 dB, Max. 0.5 dB	Typ. 0.3 dB, Max. 0.5 dB
Control Mode	ACC, APC, AGC(optional)	ACC, APC, AGC(optional)	ACC, APC, AGC(optional)

\* Other output power models available upon request

- Option: 1) Gain Flattening Filtering  
 2) APC or AGC Control Mode  
 3) Output Power Monitoring

## Multi-port CATV EDFA Specifications

Model	AEDFA-MP32-17-M	AEDFA-MP64-17-M
Number of output ports	32 ports	64 ports
Each Port Output Power (at -6dBm input signal)	Min. 15 dBm, Typ. 17 dBm	Min. 15 dBm, Typ. 17 dBm
Total Output Power (at -6dBm input signal)	Min. 31 dBm, Typ. 33 dBm	Min. 34 dBm, Typ. 36 dBm
Input Signal Level	-6 to +10 dBm	-6 to +10 dBm
Noise Figure (at 0dBm input signal)	Typ. 5.0 dB, Max. 6.0 dB	Typ. 5.0 dB, Max. 6.0 dB
Operating Wavelength	1545 nm to 1565 nm	1545 nm to 1565 nm
Input / Output Isolation	Min. 30 dB	Min. 30 dB
Output Power Stability (over 8 hrs)	±0.04 dB (Output Power ≥ 14dBm per port)	±0.04 dB (Output Power ≥ 14dBm per port)
Polarization Dependent Loss	Max. 0.3 dB	Max. 0.3 dB
Polarization Mode Dispersion	Max. 0.3 ps	Max. 0.3 ps

- Option: 1) Gain Flattening Filtering  
 2) APC or AGC Control Mode  
 3) Output Power Monitoring

## General Parameters

	Value	Remarks
Operation Temperature	0 to 40 °C	
Storage Temperature	-10 to 70 °C	
Rackmount Power Supply	90 – 240 VAC, 47 – 63 Hz	
Module Power Supply	5 ± 0.1 VDC or 12 ± 0.25 VDC	
Rackmount Dimensions	485(W) x 360(D) x 45(H) mm	
Module Dimensions	100(W) x 120(D) x 18(H) mm	for AEDFA-CA-13
Module Dimensions	120(W) x 200(D) x 25(H) mm	for AEDFA-CA-18 Or AEDFA-CA-23
Module Dimensions	120(W) x 200(D) x 44(H) mm	for AEDFA-MP32-17-M
Module Dimensions	120(W) x 200(D) x 63(H) mm	for AEDFA-MP64-17-M
Mechanical Safety Control	Key-lock switch, BNC interlock key	Rackmount only
Optical Power Monitoring	Output power, Input power (optional)	
Remote Control Port	DB-9 female (RS232), Control software included, RJ-45 (TCP/IP Ethernet) (optional)	Rackmount only
Electrical Connector Interface	14-pin IDC socket	for AEDFA-CA-13
Electrical Connector Interface	16-pin IDC socket	for AEDFA-CA-18 or AEDFA-CA-23
Electrical Connector Interface	DB-25 (Male)	for AEDFA-MP32-17-M Or AEDFA-MP64-17-M
Protection	Pump laser (TEC) overheat	
Optical Connector	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	SMF-28 (min. 0.5m for Module)	

## Ordering Information

Product Code	AEDFA-CA-aa-b-cc AEDFA-MPdd-ee-M-cc	aa: Saturation output power in dBm b : M for Module, R for Rackmount dd: Number of port ee: Power on each port cc: FA for FC/APC, FC for FC/UPC, SA for SC/APC, SC for SC/UPC
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Amonics undertakes continuous and intensive product development to ensure its product performance at the highest technical standards. As a result, the specifications in this document are subject to change without notice.

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\*Class 3B product for AEDFA-CA-13/18/23