

# CATV EDFA 1550nm Optical Amplifier

This optical amplifier is applicable to GPON and EPON and compatible with any FTTx PON technology. Each output port has a built-in CWDM.



## Overview

### High-Performance 1550nm Optical Amplification

This 1550nm Optical Amplifier is a low-noise, high-power solution designed for FTTP and CATV applications. It is fully compatible with GPON, EPON, and any FTTx PON technology, making it a cost-effective choice for triple-play network integration. Built with world-class pump lasers and advanced APC, ACC, and ATC control, it ensures long-term stability and exceptional heat dissipation for reliable 24/7 operation.

## Key Features

### Core Features

- Built-in CWDM (1310nm/1490nm/1550nm) for each output port
- Compatible with FTTx PON Technology
- World-class pump laser for high stability
- Advanced APC, ACC, and ATC control systems
- SNMP remote management via RJ45
- Local management via RS232 interface
- Optional dual optical input with 2x1 switch
- Optional RF detection function

## Optical Performance

### Optical Metrics

<b>1550 nm</b> Operating Wavelength	<b>45 dB</b> Optical Return Loss	<b>6 dB</b> Noise Ratio
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## Technical Specifications

Item <sup>Ⓐ</sup>	Unit <sup>Ⓐ</sup>	Parameters <sup>Ⓐ</sup>	Remarks <sup>Ⓐ</sup>
Output Power <sup>Ⓐ</sup>	dBm <sup>Ⓐ</sup>	27~41 <sup>Ⓐ</sup>	Ⓐ
Output Power <sup>Ⓐ</sup>	mW <sup>Ⓐ</sup>	1260~13000 <sup>Ⓐ</sup>	Ⓐ
Input Power <sup>Ⓐ</sup>	dBm <sup>Ⓐ</sup>	-8~10 <sup>Ⓐ</sup>	Ⓐ
Wavelength <sup>Ⓐ</sup>	nm <sup>Ⓐ</sup>	1540~1563 <sup>Ⓐ</sup>	Ⓐ
Output Power Stability <sup>Ⓐ</sup>	dB <sup>Ⓐ</sup>	<±0.2 <sup>Ⓐ</sup>	Ⓐ
Bias Oscillation Sensitivity <sup>Ⓐ</sup>	dB <sup>Ⓐ</sup>	<0.2 <sup>Ⓐ</sup>	Ⓐ
Bias Oscillation Dispersion <sup>Ⓐ</sup>	PS <sup>Ⓐ</sup>	<0.5 <sup>Ⓐ</sup>	Ⓐ
Optical Return Loss <sup>Ⓐ</sup>	dB <sup>Ⓐ</sup>	≥45 <sup>Ⓐ</sup>	Ⓐ
Fiber Connector <sup>Ⓐ</sup>	Ⓐ	FC/APC、SC/APC <sup>Ⓐ</sup>	Or LC/APC <sup>Ⓐ</sup>
Noise Ratio <sup>Ⓐ</sup>	dB <sup>Ⓐ</sup>	<6.0(0dBm optical input) <sup>Ⓐ</sup>	0dbm @1550nm <sup>Ⓐ</sup>
Network management port <sup>Ⓐ</sup>	Ⓐ	RJ45 RS232 <sup>Ⓐ</sup>	SNMP <sup>Ⓐ</sup>
Power Loss <sup>Ⓐ</sup>	W <sup>Ⓐ</sup>	50~100 <sup>Ⓐ</sup>	Single PS working <sup>Ⓐ</sup>
Working Voltage <sup>Ⓐ</sup>	V <sup>Ⓐ</sup>	220VAC(90~265)、Ⓐ	Or -48Vdc <sup>Ⓐ</sup>
Working Temp <sup>Ⓐ</sup>	℃ <sup>Ⓐ</sup>	-5~55 <sup>Ⓐ</sup>	Ⓐ
Storage Temp <sup>Ⓐ</sup>	℃ <sup>Ⓐ</sup>	-20~85 <sup>Ⓐ</sup>	Ⓐ
Size <sup>Ⓐ</sup>	mm <sup>Ⓐ</sup>	483(W)×280(D)×88(H) <sup>Ⓐ</sup>	2RU <sup>Ⓐ</sup>

Detailed technical parameters including output power, wavelength stability, and environmental tolerances.

### Technical Data

Parameter	Value	Unit
Output Power	27 ~ 41	dBm
Input Power	-8 ~ 10	dBm
Wavelength Range	1540 ~ 1563	nm
Output Power Stability	<±0.2	dB
Power Loss	50 ~ 100	W

### Physical & Environmental

#### Rack Unit

2RU

#### Dimensions

483(W) x 280(D) x 88(H) mm

#### Working Temperature

55 °C

### Connectivity

#### Fiber Connectors

FC/APC, SC/APC, LC/APC

#### Management Interfaces

RJ45, RS232, SNMP

### Power Supply

#### Working Voltage

- 220VAC (90~265V)
- -48Vdc

### Quality & Service

#### Certifications

CE

#### Defective Rate

< 0.2%