

# EDFA Erbium Doped Fiber Amplifier

## CWDM/DWDM System



### Specification

EDFA amplifier card is an optical amplifier module for the long-distance transmission system of digital optical fiber communication with dispersion devices. The core device uses a high reliability Pump laser, and adopts a unique APC (automatic power control) and ATC (automatic temperature control) circuit, which makes the output power stable and reliable. Professional design of GFF (gain flattening filter), with excellent optical path design, flatness and noise are optimized optimally.

### Functions and features

- Supporting C-band DWDM system optical amplification.
- Supporting optional OSC signal input amplification.
- Supporting maximum saturated and output power +23dB, and the minimum input power -35dB.
- Supporting power amplification, line amplification (secondary optical amplification), and pre-amplification.
- Supporting SNMP-based unified network management platform, network management mode CLI, WEB, NetRiver (graphical interface).
- Monitoring: pump drive current, pump output power, pump switch, pump temperature, input optical power, output optical power, module temperature.
- Supporting to set pump switch, AGC mode and APC mode (input and output optical power is adjustable).
- Supporting optical monitoring port (MON).

## Parametres

System Parameter	Technical Index	
Wavelength range	1528nm~1565nm.	
Input power range	-35dBm~+6dBm.	
Output power range	+23dBm.	
Maximum gain	30dB.	
Noise figure	4.5dB~6dB.	
Gain flatness	1.0dB.	
Input/output isolation	30dB.	
Input/output return loss	45dB.	
Output pump leakage)	-30dBm.	
Polarization dependent loss(PDL	0.5dB.	
Polarization mode dispersion(PMD)	0.5ps.	
Network management mode	CLI, NetRiver, WEB.	
Product dimension	177 (W)*20(H)*225(D)(mm).	
Environmental requirements	Working temperature	-10°C ~ 70°C.
	Storage temperature	-40°C ~ 80°C.
	Relative humidity	5%~95% no condensation.
Safety and EMC	Compliance with FCC, UL, CE, TUV, CSA standards.	
Power consumption	<30W.	

## Networking Applications

The products optical amplifier equipment is widely used in data room interconnection, metropolitan area network, access network and other networks. The device is connected in series on the service line to efficiently re-amplify, re-time and re-shape the signal, completely transparent to the service, and supports multiple rates from 100Mbps to 100Gbps.

### Application 1: Multichannel Amplification

Multichannel amplification is an optical amplifier device (EDFA) connected in series in service line, which can amplify multiple wavelength optical signals in a single core optical fiber uniformly.

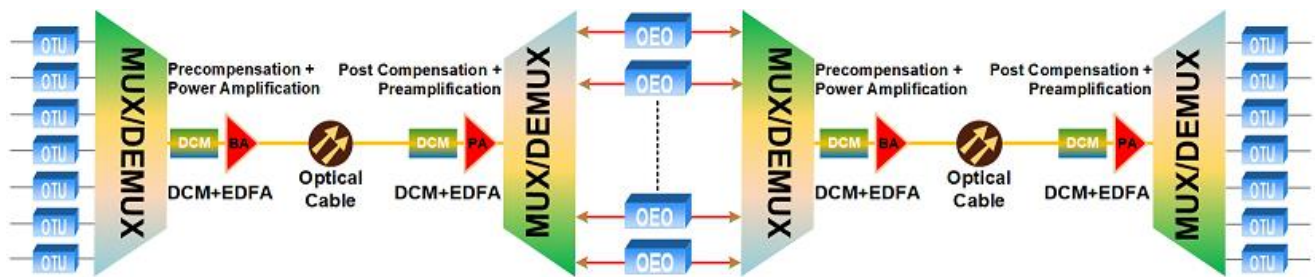


Figure 1: Multichannel Amplification Application

### Application 2: Single Channel Amplification

Single channel amplification (SCA) is a relay amplifier (OEO) connected in series in the link, which is widely used to amplify single channel optical signals in optical fiber networks.

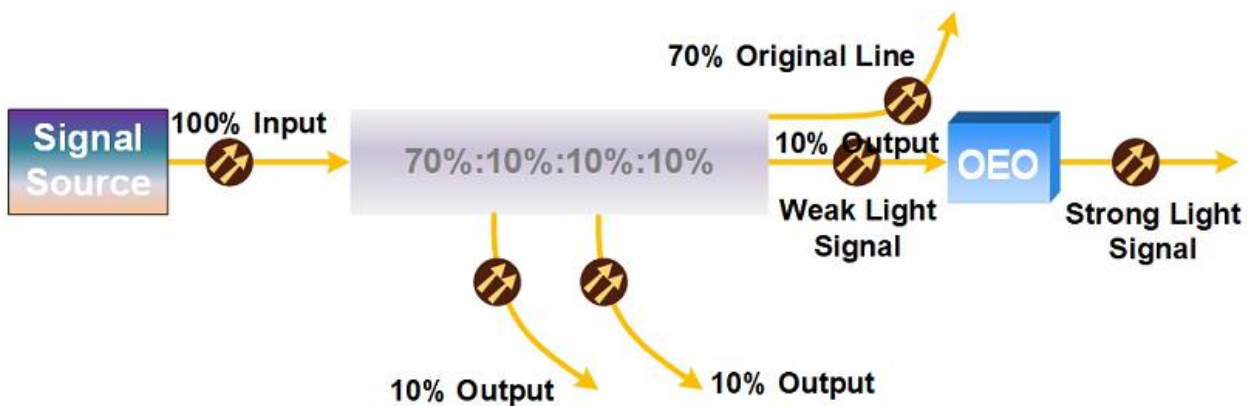


Figure 2: OEO Amplification Application