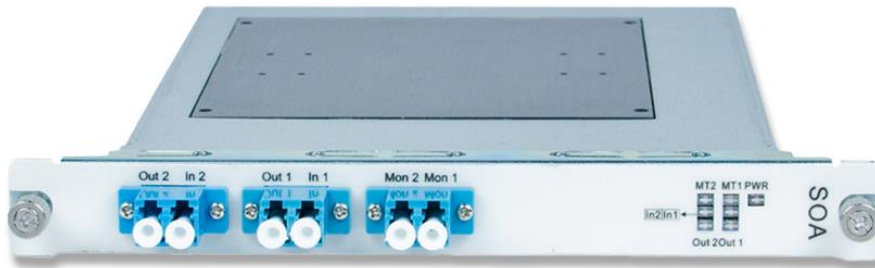


SOA Semiconductor Optical Amplifier

CWDM/DWDM System



Specification

SOA amplifier card is a semiconductor optical amplifier module to solve the problem of O-band optical signal amplification. It is compatible with service signals of different rates such as 100G/40G/10G. Its gain bandwidth ranges from 1230nm to 1360nm. The single card can simultaneously amplify four service signals at the same time, and can adopted to various application scenarios such as an information security system or a data transmission system.

Functions and features

- Supporting O-band optical amplification.
- Supporting 100G/40G/10G speed.
- Supporting maximum saturated and output power + 10dB, and the minimum input power - 20dB.
- 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).

Parametres

System Parameter	Technical Index	
Wavelength range	1230nm~1360nm.	
Input power range	-20dBm~+3dBm.	
Output power range	+10dBm.	
Single-channel gain	<12dB~20dB.	
Noise figure	7.5dB~8dB.	
Gain flatness	2.0dB.	
Uniformity	1.0dB.	
Constancy	0.5dB.	
Polarization dependent loss(PDL)	<0.1ps.	
Bias current	300mA.	
Polarization dependent gain	2.0dB.	
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	<24W.	

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.

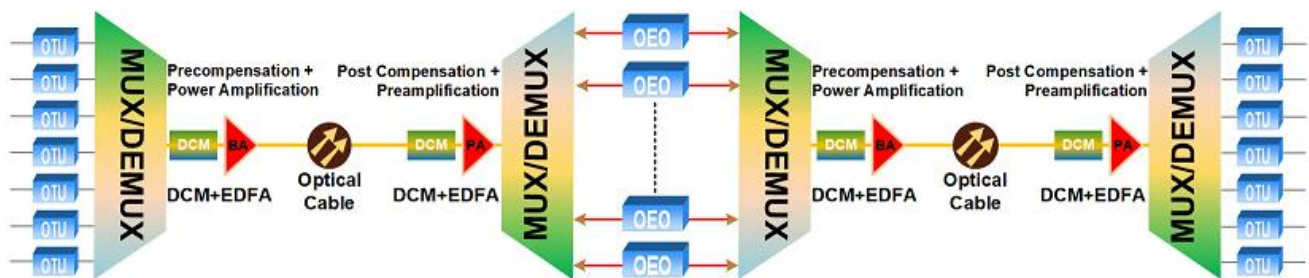


Figure 1: Multichannel Amplification Application

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.

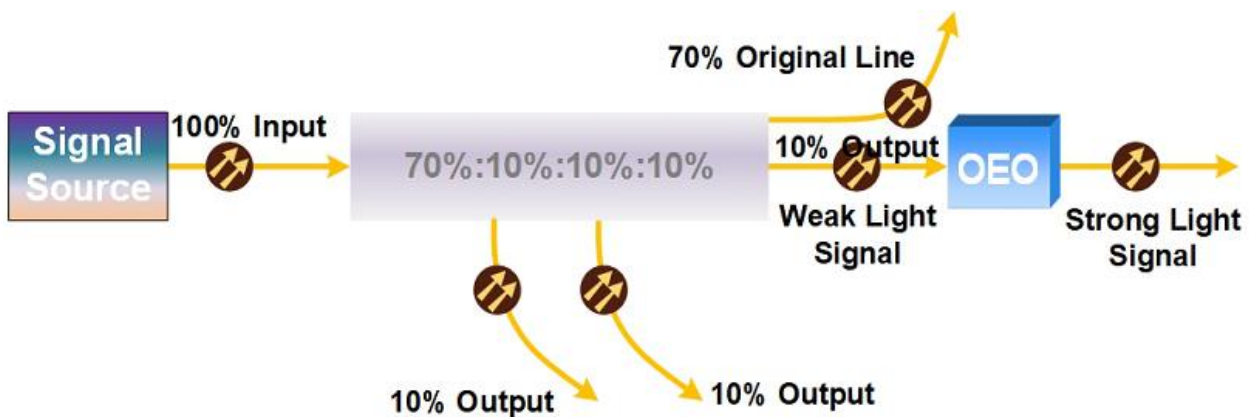


Figure 2: OEO Amplification Application