

SOA



Semiconductor Optical Amplifier

The Optilab SOA is a semiconductor optical amplifier with high fiber-to-fiber gain, designed to be used in general applications to increase optical launch power to compensate for loss of other optical devices. SOA can be ordered with Single Mode (SM) or Polarization Maintaining (PM) fiber input/output. Optilab SOA has 4 different operational wavelengths: 1310 nm, 1480 nm, 1550 nm, 1600 nm. 3 different housing versions: module, benchtop, rackmount are available.

The module version is an ideal building block for system integrators, especially in optical communication networks and CATV applications. It requires only a single +5V power supply with low power consumption.

The Benchtop unit incorporates a user-friendly front panel housing with a LCD monitor display, key switch, power adjust control knob and optical connectors. RS232 computer interface is also equipped on the rear panel.

The Rackmount unit is a 1 U 19" design for integration with network equipment. Contact Optilab for more information.

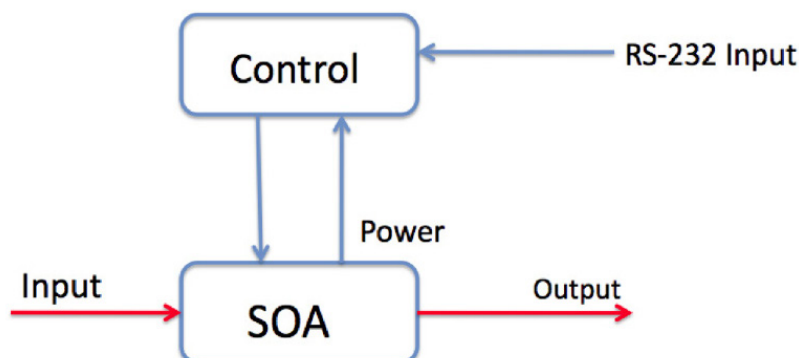
Features

- 1310 nm, 1480 nm, 1550 nm and 1600 nm wavelength selectable
- High fiber-to-fiber gain of 20 dB
- Up to 16 dBm output
- 1 MHz with 10 ns pulse width (optional)
- PM Panda fiber input/output (optional)

Applications

- Booster and in-line amplification
- Optical network
- General purpose test and measurement
- Fiber sensing

Functional Diagram



Semiconductor Optical Amplifier | SOA

OPTIONS

SOA-xxxx-y-z

Operation Wavelength

1310 nm

xxxx 1480 nm

1550 nm

1600 nm

y S: Single Mode
P: Polarization Maintaining

z Housing
M: Module
B: Benchtop
R: Rackmount

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

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Optilab Advantage

- > Innovation
- > Performance
- > Quality
- > Customization
- > Warranty

Optical Specifications	
Operation Wavelength	1310 ±30 nm, SOA-1310 1480 ±30 nm, SOA-1480 1550 ±30 nm, SOA-1550 1600 ±30 nm, SOA-1600
Saturated Output Power @-3dB input	+16 dBm
Fiber-to-fiber Gain	Up to 20 dB @ small signal input
Noise Figure	7 dB typ.
Gain Ripple	0.3 dB typ.
Input Optical Return Loss	-55 dB typ.
Input / Output Isolation	30 dB min. (w/ Isolator option)
Polarization Dependent Gain (PDG)	0.5 dB max
Polarization Extinction Ratio (PM type)	20 dB typ.
Power Stability	±0.1 dB over 8 hours
Output Current Control	10% to 100% operating current
Mechanical Specifications	
Operating Temperature	10° C to +50° C
Storage Temperature	-10° C to +70° C
Operating Humidity	0% to 85% Relative Humidity
Fiber Type (Standard)	SMF-28 Input, SMF-28 Output
Fiber Type (PM) Version	PANDA PM Input, PANDA PM Output
Controls/Monitoring	Input/Output Monitor, Current Control via RS-232
Alarms	Overheat Warning
Power Supply	5 V DC (Module) 88 – 240 V, 43 – 63 Hz AC (Benchtop) 88 – 240 V, 43 – 63 Hz AC (Rackmount)
Dimensions	3.94" x 4.72" x 0.71" (Module) 16.5" x 12.5" x 5.25" (Benchtop) 19" x 14" x 1.75" (Rackmount)