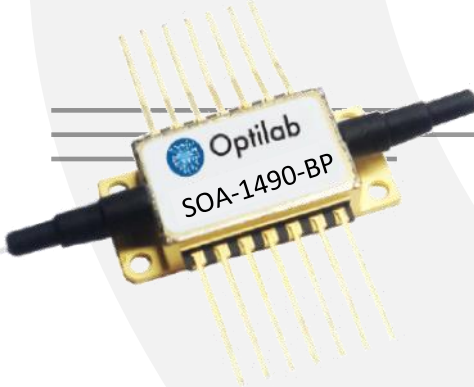


SOA-1490-BP



DEVICE

1490 nm Semiconductor Optical Amplifier, Butterfly Package

OVERVIEW

The Optilab SOA-1490-BP 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, or as a broadband ASE source. For increased utility, the SOA-1490-BP can be ordered with either Single Mode (SM) or Polarization Maintaining (PM) fiber input and output ports. The Optilab SOA-1490-BP has an operational wavelength between 1450 nm and 1530 nm, with a peak gain of a typical 20 dB within that region. The 14-pin butterfly packaging is MSA compliant and laser-welded hermetically sealed, with a thermistor and thermo-electric cooler (TEC) for ensured reliability, stability and performance.

FEATURES

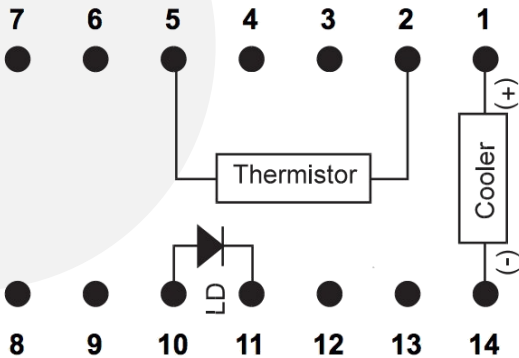
- 1490nm-1530nm operational wavelength
- High-fiber-to-fiber gain of 20 dB typ.
- Up to 14 dBm output
- Built in TEC
- 14 pin butterfly, hermetically sealed package
- PM Panda fiber input/output (optional)

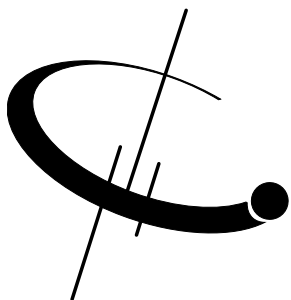
USE IN

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

PIN-OUT DIAGRAM

- | | |
|--------------|-------------------|
| 1 TEC (+) | 8 NC |
| 2 Thermistor | 9 NC |
| 3 NC | 10 LD Anode (+) |
| 4 NC | 11 LD Cathode (-) |
| 5 Thermistor | 12 NC |
| 6 NC | 13 NC |
| 7 NC | 14 TEC (-) |





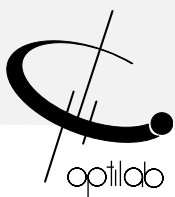
SOA-1490-BP

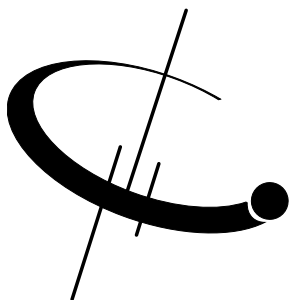
OPERATING SPECIFICATIONS

Operational Wavelength	1450 nm – 1530 nm
Peak Gain	19 dB min., 20 dB typ.
Gain Ripple	± 1 dB max.
Polarization Dependent Gain (PDG)	± 1 dB max.
Saturation Output Power	14 dBm typ.
Input Power	-25 ~ +5 dBm
Forward Voltage	2 V typ.
Operating Bias Current	350 mA type
Thermistor Resistance	10 k Ω typ. @ 25°C
Connectors	FC/APC, others optional

ABSOLUTE MAXIMUM RATINGS

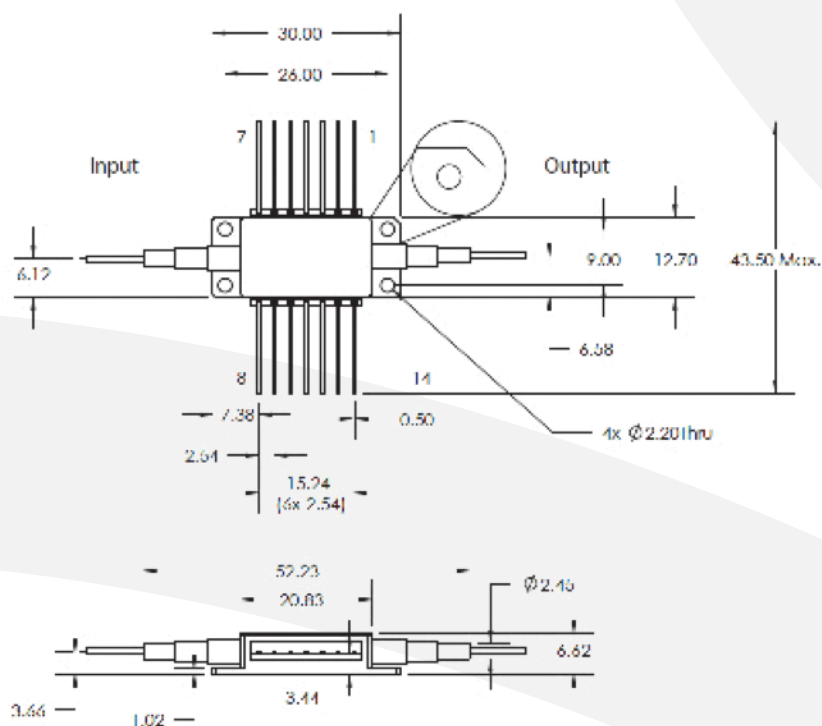
Operating Temperature (Case)	-10°C to +70°C, TQ version available
Storage Temperature	-40°C to +85°C
Operating Humidity	0% to 85% Relative Humidity
Operating Bias Current	400 mA
Optical Amplifier Reverse Bias	2 V
Thermistor Current	10k Ω NTC
TEC Current	1.8 A
TEC Voltage	3.4 V



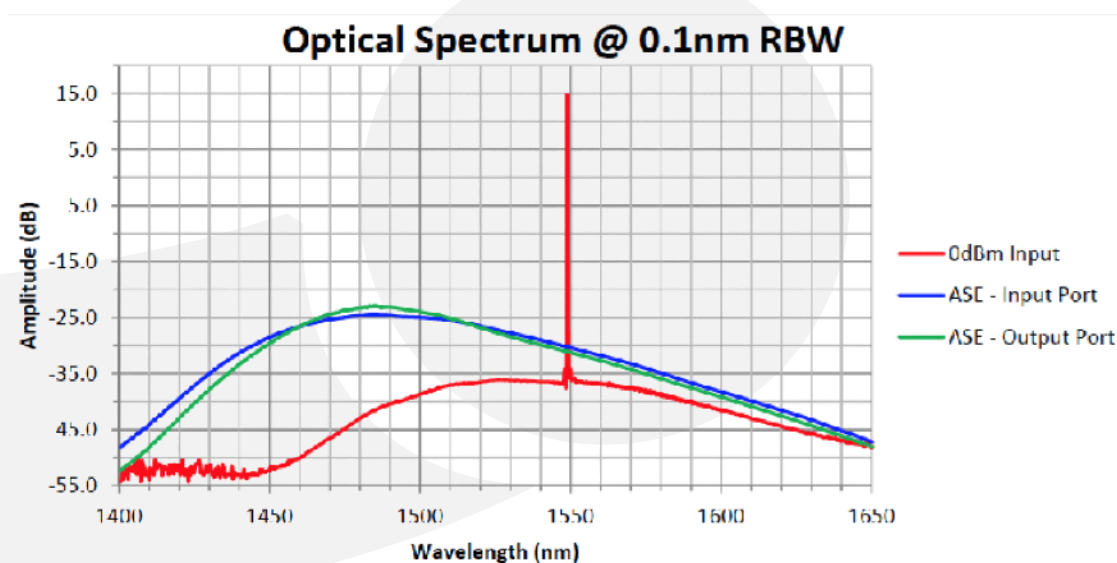


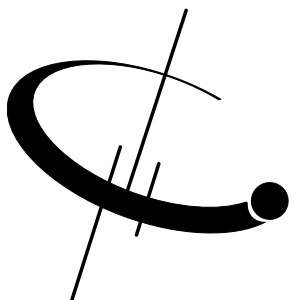
SOA-1490-BP

MECHANICAL DRAWING



DETAILED SPECTRUM INFORMATION

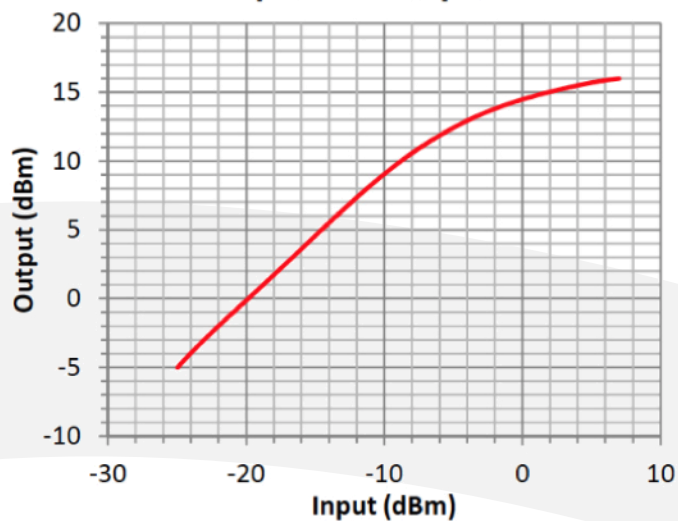




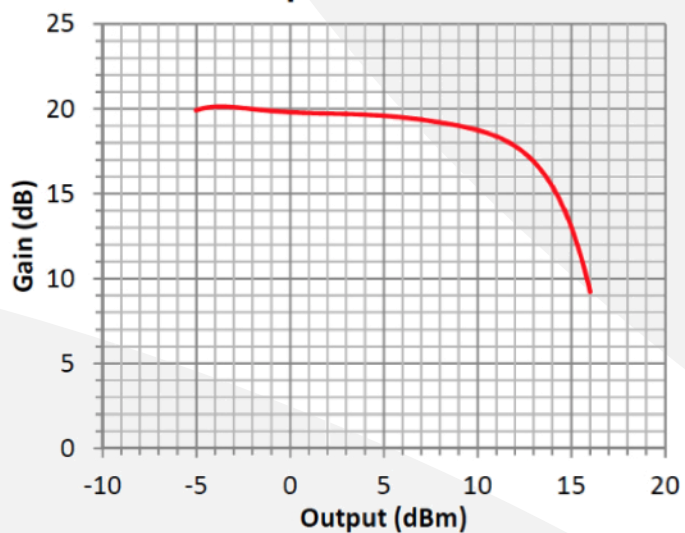
SOA-1490-BP

DETAILED SPECTRUM INFORMATION

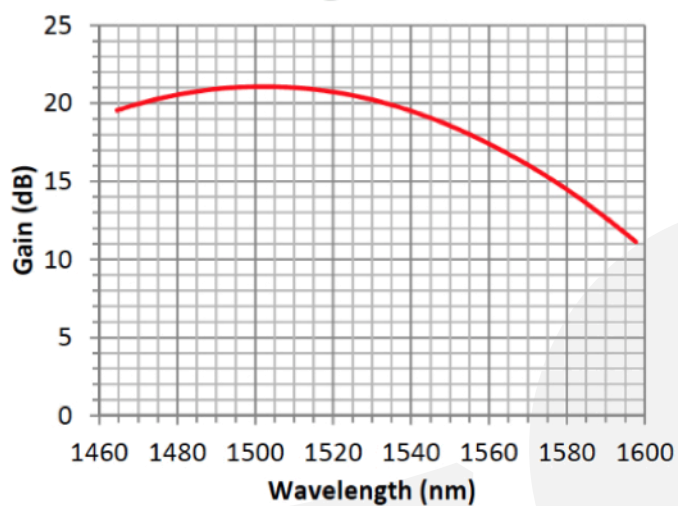
Input vs. Output



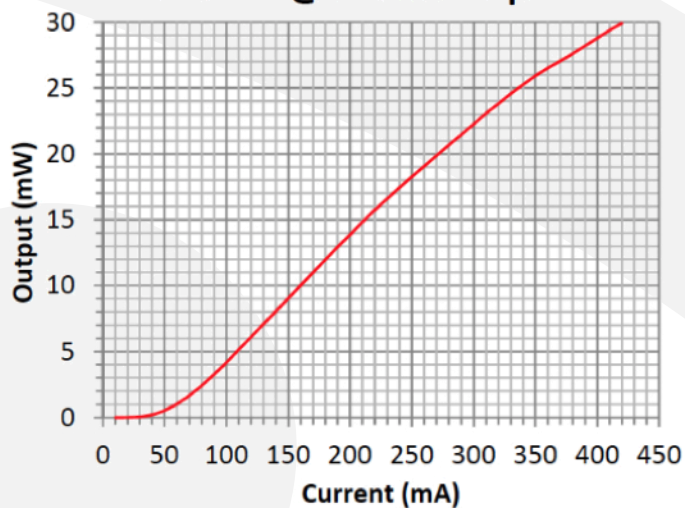
Input vs. Gain

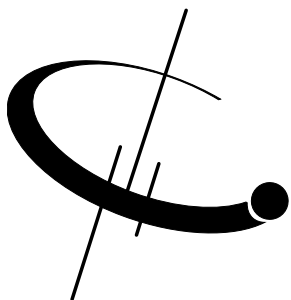


Wavelength vs. Gain



LI Curve @ 0.0dBm Input

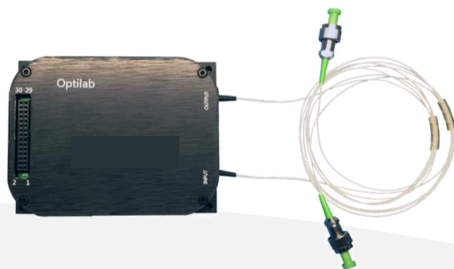




SOA-1490-BP

RELATED MODULE

- **SOA-1490-M**



The Optilab SOA-1490-M is a semiconductor optical amplifier with high fiber-to-fiber gain for OEM integration in MSA housing.

