1050 nm Polarization-Dependent BOAs

Thorlabs offers two varieties of 1050 nm Booster Optical Amplifiers (BOAs): the BOA1137P utilizes polarization-maintaining PM980 fiber (see page 1029), while the BOA1137S uses single mode HI1060 fiber (see page 1022).

These BOAs consist of a highly efficient GaAs/InGaAs Quantum Well (QW) layer structure, designed for amplifying polarized optical signals in the 1050 nm band. They are also ideal as a gain medium for implementing wide-bandwidth tunable lasers.

Offered in a standard 14-pin butterfly package, these BOAs have fiber pigtails terminated with FC/APC connectors. An integrated thermistor allows these BOAs to be temperature controlled, thus stabilizing the gain and the spectrum.

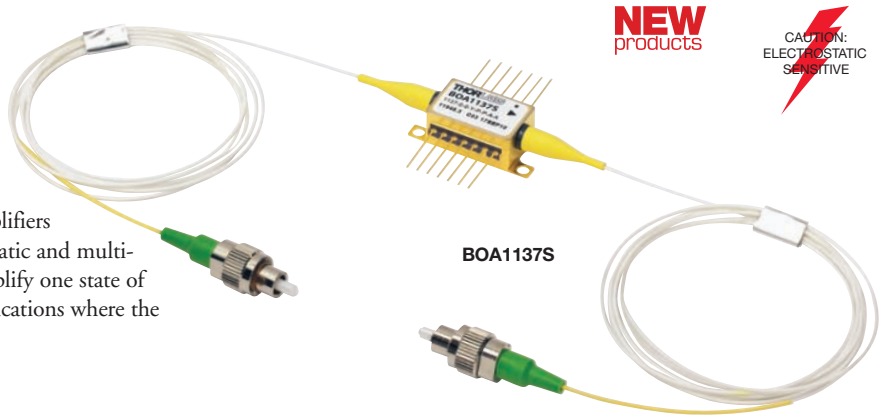
BOAs are single-pass, traveling-wave amplifiers that perform well with both monochromatic and multi-wavelength signals. Since BOAs only amplify one state of polarization, they are best suited for applications where the input polarization of the light is known.

BOA - Polarization-Dependent Optical Amplifier

- Polarization-Dependent Amplification
- High Saturation Power (9 dBm)
- High Gain (21 dB)
- Available with Either PM or SM Fiber Pigtails (1.5 m)
- FC/APC Connectors
- Typical Applications: Boosting Laser Transmitters, Widely Tunable Lasers, 1064 nm Optical Preamplifier

NEW products

CAUTION: ELECTROSTATIC SENSITIVE

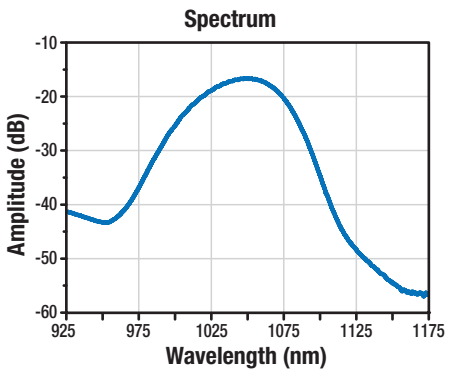


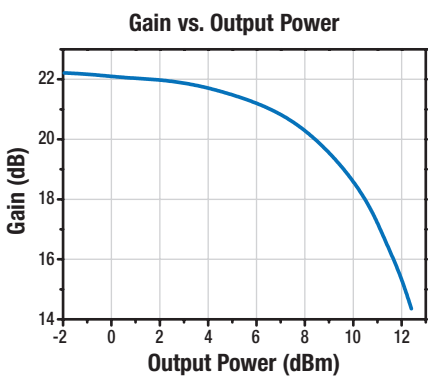
BOA1137S

Operating Specifications*

ITEM #	BOA1137S / BOA1137P		
PARAMETER	MIN	TYPICAL	MAX
Operating Current	–	–	300 mA
Center Wavelength	1030 nm	1050 nm	1070 nm
Optical 3 dB Bandwidth @ I_{op}	40 nm	50 nm	–
Saturation Output Power (@ -3 dB)**	6 dBm	9 dBm	–
Small Signal Gain (@ Pin = -20 dBm)**	17 dB	21 dB	–
Gain Ripple (RMS) @ I_{op}	–	–	0.5 dB
Noise Figure	–	11 dB	14 dB
Forward Voltage @ I_{op}	–	1.8 V	2.5 V
TEC Current (Typical/Max @ T_{Case} = 25/70 °C)	–	0.25 A	1.5 A
TEC Voltage (Typical/Max @ T_{Case} = 25/70 °C)	–	0.35 V	4.0 V
Thermistor Resistance	–	10 kΩ	–

* The Operating Specifications are a consistent set of values, which will yield the specified performance.
**I_{op} = 300 mA; λ = 1054.7 nm





Absolute Maximum Ratings*

ITEM #	BOA1137S / BOA1137P	
PARAMETER	MIN	MAX
Operating Current	–	360 mA
Optical Output Power (CW)	–	15 mW
Optical 3 dB Bandwidth	10 °C	30 °C
Saturation Output Power (@ -3 dB)	0 °C	70 °C

* Please note that exceeding these Absolute Maximum Ratings may cause permanent damage to the device. Operation at or above the absolute maximum values is not advised.

ITEM #	$	£	€	RMB	DESCRIPTION
BOA1137S	$ 2,500.00	£ 1,800.00	€ 2.175,00	¥ 19,925.00	1050 nm BOA, 50 nm BW, Butterfly Pkg, SM Fiber, FC/APC
BOA1137P	$ 2,650.00	£ 1,908.00	€ 2.305,50	¥ 21,120.50	1050 nm BOA, 50 nm BW, Butterfly Pkg, PM Fiber, FC/APC