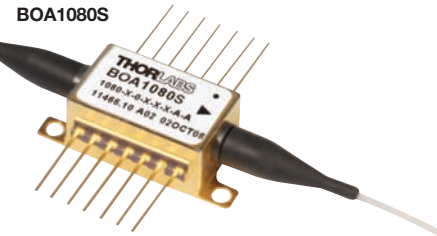


For current pricing,
please see our website.

1600 nm (L-Band) Polarization-Dependent BOAs

BOA – Polarization-Dependent Optical Amplifier

- High Saturation Power (Up to 15 dBm)
- High Gain Levels (Up to 26 dB)
- Available as SM or PM Fiber-Pigtailed Butterfly Package
- 1.5 m Fiber-Pigtailed FC/APC Connectors
- Typical Applications Include Amplification of Lasers and Transmitter Signals and Swept-Source Tunable Lasers



For support of applications in the 1570 nm to 1650 nm wavelength range, Thorlabs has two wavelength variations of L-band polarization-dependent optical amplifiers

(BOAs): the BOA1080 Series and the BOA1082 Series. Polarization-sensitive BOAs only amplify one state of polarization so they are best suited for applications where

the input polarization of the light is known. Our advanced epitaxial wafer growth and opto-electronic packaging techniques enable a high output saturation power, low noise figure, and large gain across a broad spectral bandwidth.

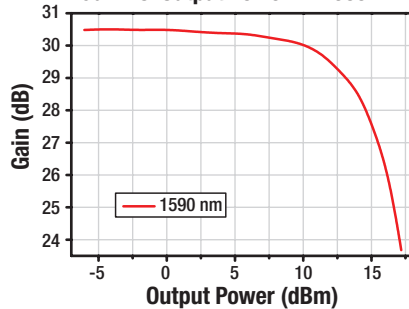
Booster Optical Amplifiers (BOAs), a polarization-dependent variant of Semiconductor Optical Amplifiers (SOAs), directly amplify optical signals using the properties of semiconductors. Thorlabs' BOAs are designed as single pass, traveling-wave optical amplifiers that perform well with both monochromatic and multi-wavelength signals. The BOA structure consists of a highly efficient InP/InGaAsP Multiple Quantum Well (MQW) layer structure grown on an InP wafer and processed into a proven reliable ridge waveguide. The device is packaged in an industry-standard 14-pin butterfly package with either SM or PM fiber pigtailed that are terminated with FC/APC connectors. The BOAs can be customized upon request to have isolators on the input, output, or both. Please contact Tech Support for help in customizing a device for your application.

ITEM #	BOA1080S/P			BOA1082S/P		
	MIN	TYPICAL	MAX	MIN	TYPICAL	MAX
Operating Current	—	600 mA	750 mA	—	600 mA	750 mA
Center Wavelength	1570 nm	1590 nm	1610 nm	1600 nm	1625 nm	1650 nm
Optical 3 dB Bandwidth	80 nm	90 nm	—	70 nm	80 nm	—
Saturation Output Power (@ -3 dB)	12 dBm	15 dBm	—	10 dBm	13 dBm	—
Small Signal Gain (@ $P_{in} = -20$ dBm, Typical λ_c)	23 dB	26 dB	—	14 dB	18 dB	—
Gain Ripple (RMS) @ I_{op}	—	0.05 dB	0.2 dB	—	0.05 dB	0.3 dB
Noise Figure	—	7 dB	9 dB	—	7 dB	9 dB
Forward Voltage	—	1.5 V	2 V	—	1.5 V	2.0 V
TEC Current*	—	0.12 A	1.5 A	—	0.12 A	1.5 A
TEC Voltage*	—	0.25 V	4 V	—	0.25 V	4 V
Thermistor Resistance*	—	10 k Ω	—	—	10 k Ω	—

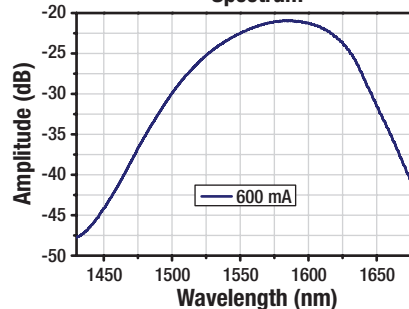
*TEC Operation (Typical/Max @ $T_{Case} = 25/70$ °C)

Observed Gain and Output Power Performance, BOA1080 Series

Gain vs. Output Power: $I = 600$ mA

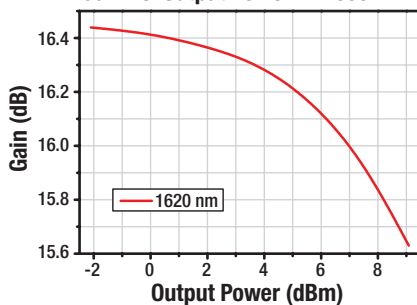


Spectrum

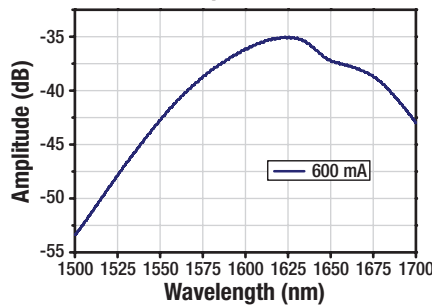


Observed Gain and Output Power Performance, BOA1082 Series

Gain vs. Output Power: $I = 600$ mA

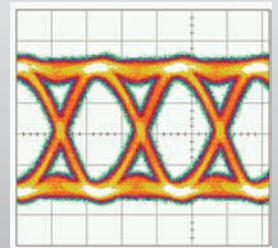


Spectrum



Have you seen our...

10G & 40G Optical Modulators



See
page
1424

ITEM #	\$	£	€	RMB	DESCRIPTION
BOA1080S	\$ 1,950.00	£ 1,404.00	€ 1,696.50	¥ 15,541.50	1590 nm L-Band BOA, 90 nm BW, Butterfly Pkg, SM Fiber, FC/APC Connectors
BOA1080P	\$ 2,215.00	£ 1,594.80	€ 1,927.10	¥ 17,653.55	1590 nm L-Band BOA, 90 nm BW, Butterfly Pkg, PM Fiber, FC/APC Connectors
BOA1082S	\$ 2,250.00	£ 1,620.00	€ 1,957.50	¥ 17,932.50	1625 nm L-Band BOA, 80 nm BW, Butterfly Pkg, SM Fiber, FC/APC Connectors
BOA1082P	\$ 2,515.00	£ 1,810.80	€ 2,188.10	¥ 20,044.55	1625 nm L-Band BOA, 80 nm BW, Butterfly Pkg, PM Fiber, FC/APC Connectors