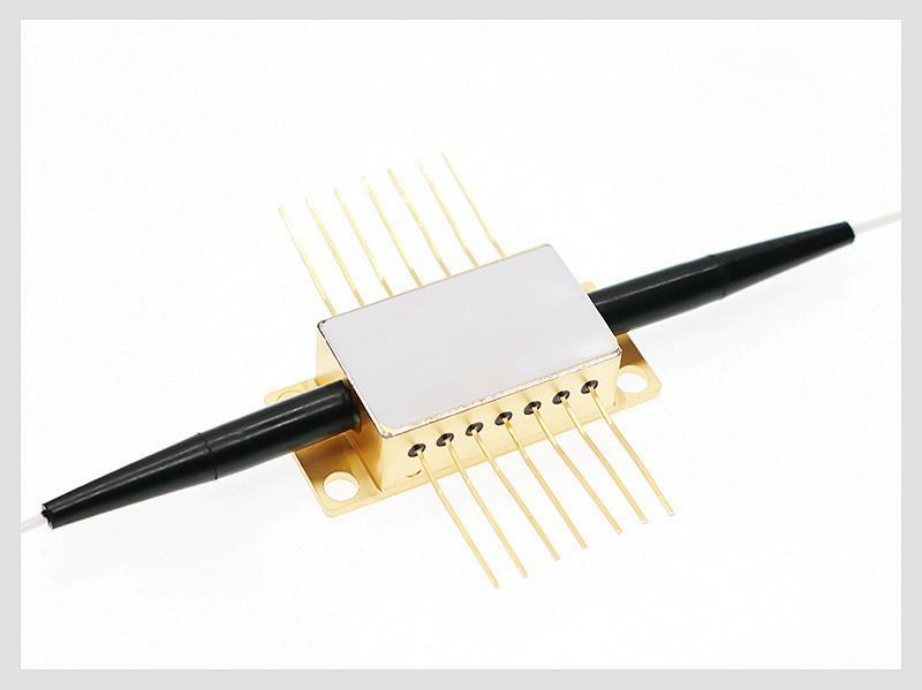
L-band SOA nonlinear semiconductor optical amplifier 1610nm 13dBm



Product Description

The L-band SOA nonlinear semiconductor optical amplifier is a polarization-insensitive optical amplifier, featuring advanced epitaxial wafer growth and optoelectronic packaging technology. It provides high output saturation power, low noise figure, and large gain over a wide spectral bandwidth.

Part Number

PL-SOA-A-A81-W1610-PAPA

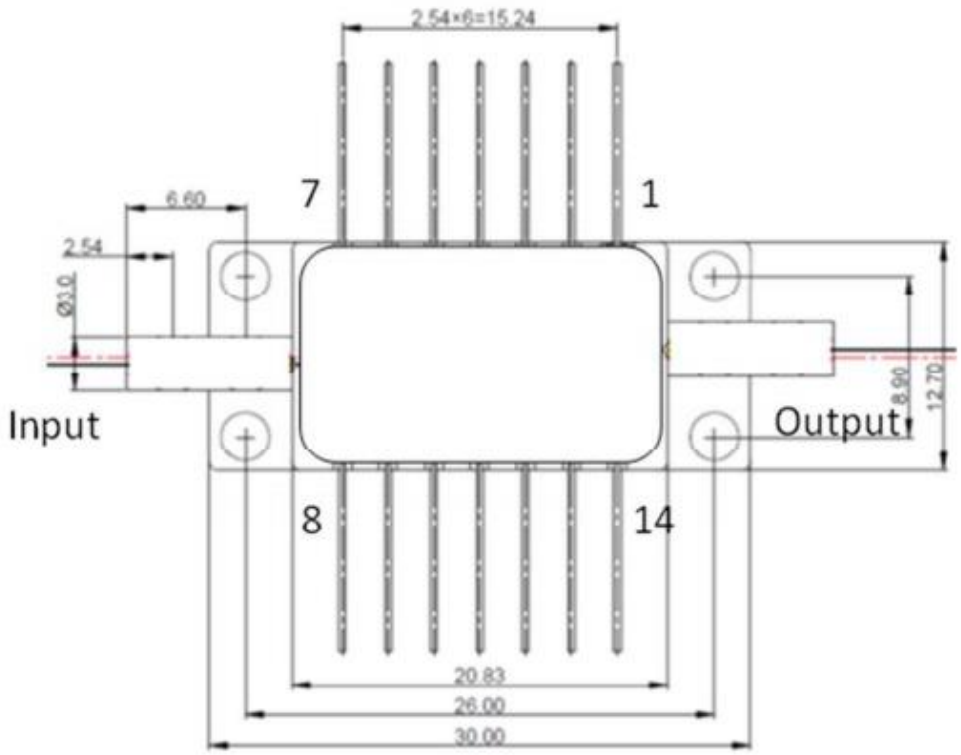
Product features

Wideband light、 High output power、 Low polarization sensitivity、 Multiple quantum wells or bulk structure

● Application area

Pump light amplifier、 Telecommunications and data communication、 Loss compensation

Dimensional Drawing



Parameters

Electrical/Optical Characteristics (Tsub = 25°C, CW)

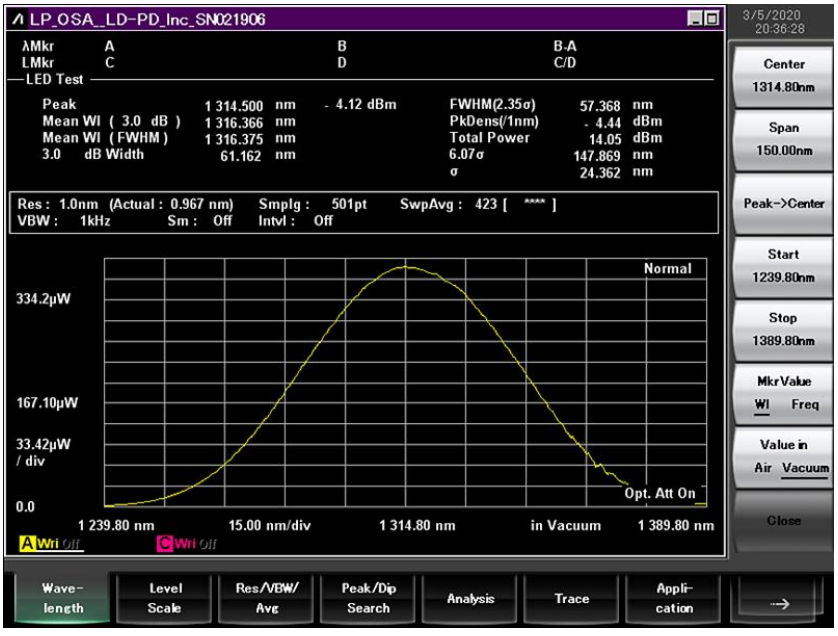
Parameter	Symbol	PL-SOA-A-A81-W1610-PAPA		
		Min.	Typ.	Max.
Operating Current	IOP	-	120 mA	150 mA
Forward Voltage	VF	-	1.2V	2.0V
Center Wavelength	λ C	1600nm	1610nm	1620nm
Signal Gain (@ Pin = -20 dBm)	G	15dB	-	-
3dB Bandwidth	BW	40nm	-	-
ASE Ripple (RMS)	δ G	-	-	0.5dB

Saturated Output Power (@ -3 dB)	PSAT	7dBm	-	-
Polarization Dependent Gain	PDG	-	-	1.5dB
Noise Figure	NF	-	-	7dB
Thermal Resistance (@ 25℃)	RTH	9.5KΩ	10KΩ	10.5KΩ
TEC Voltage	VTEC			2.3V
TEC Current	ITEC			0.9A

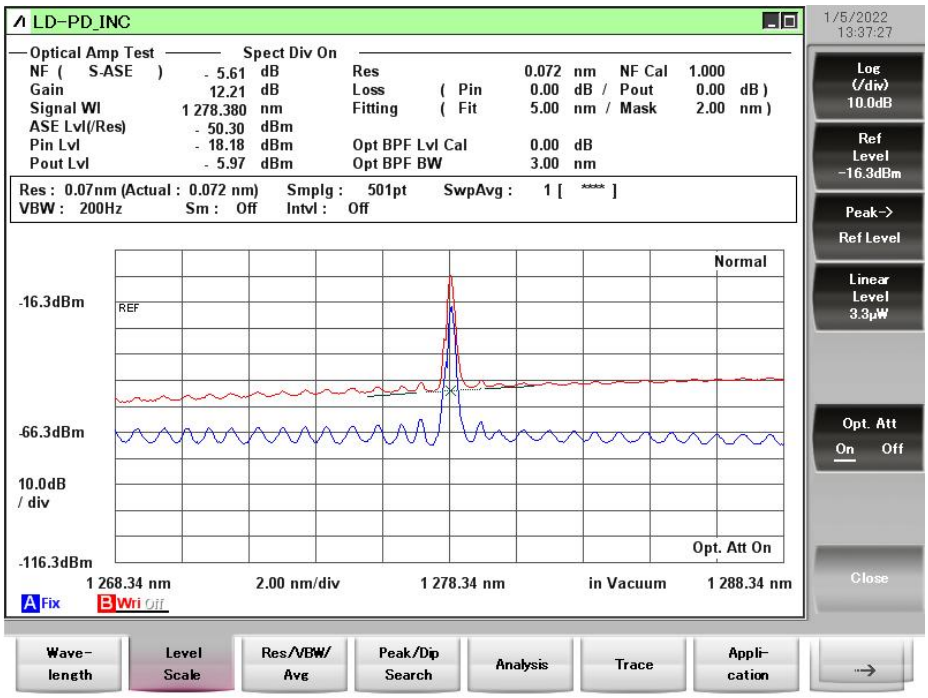
Maximum value parameters

Parameter	Symbol	PL-SOA-A-A81-W1610-PAPA	
		Min.	Typ.
Maximum Operating Current (CW)	IOP max		200mA
Reverse Voltage (VR)	VR		2V
Chip Operating Temperature (CW)	TSOA	25℃	30℃
Case Temperature (CW)	TC	0℃	70℃
TEC Voltage	VTEC	-	4.0V
TEC Current	ITEC	-	1.8A
Storage Temperature	TSTG	-40℃	85℃
Storage Humidity		5%RH	85%RH

ASE Spectrum

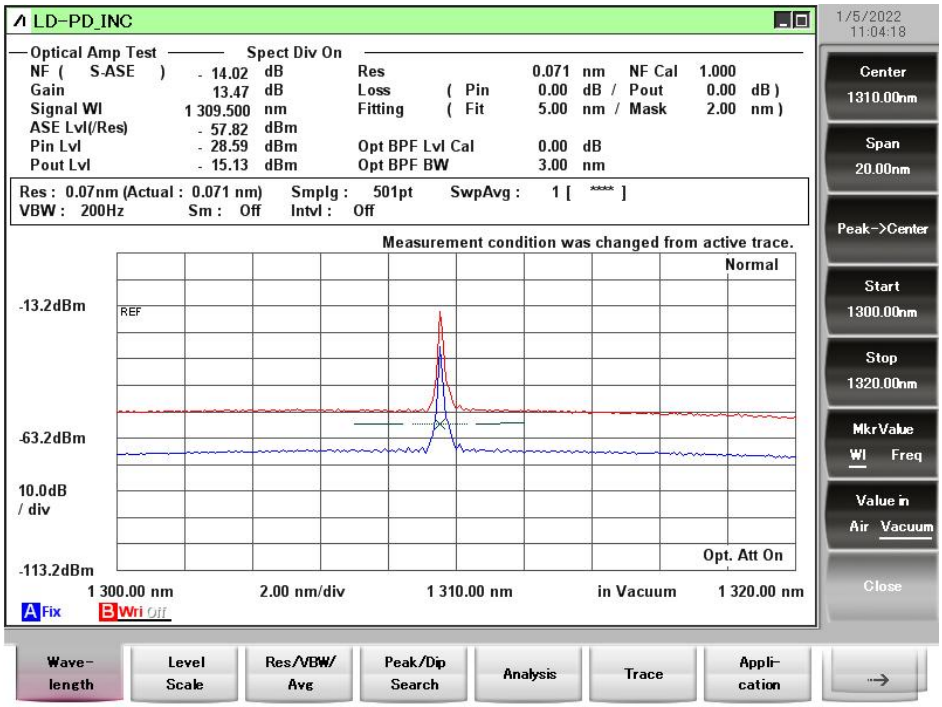


SOA amplifier spectrum (Pin=0dBm, I=200mA)

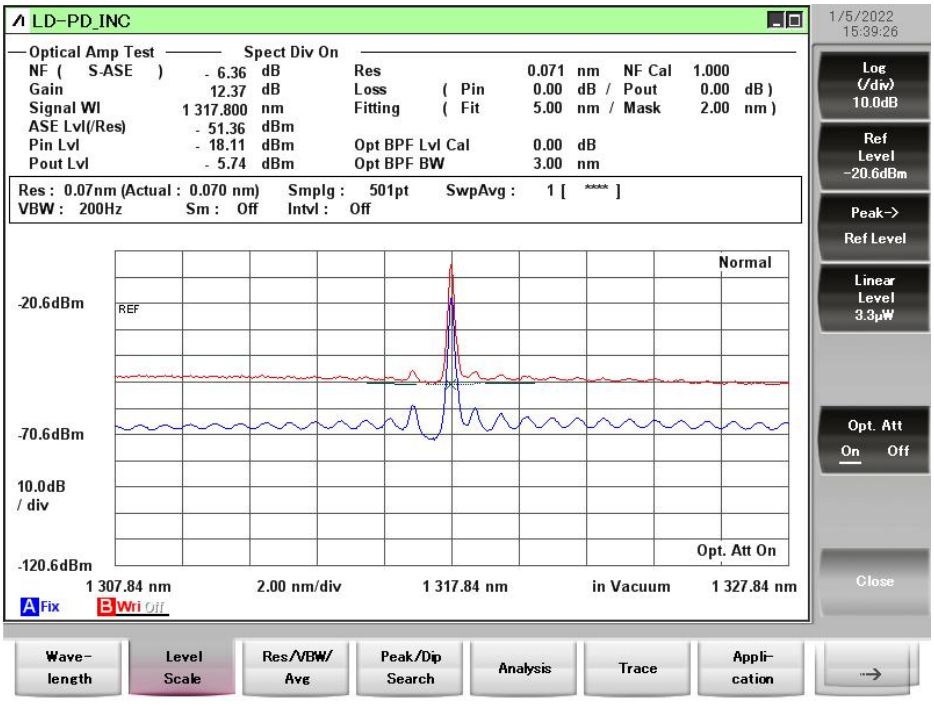


1278 nm (Pin = 0 dBm, I = 200mA)

1294 nm (Pin = 0 dBm, I = 200mA)

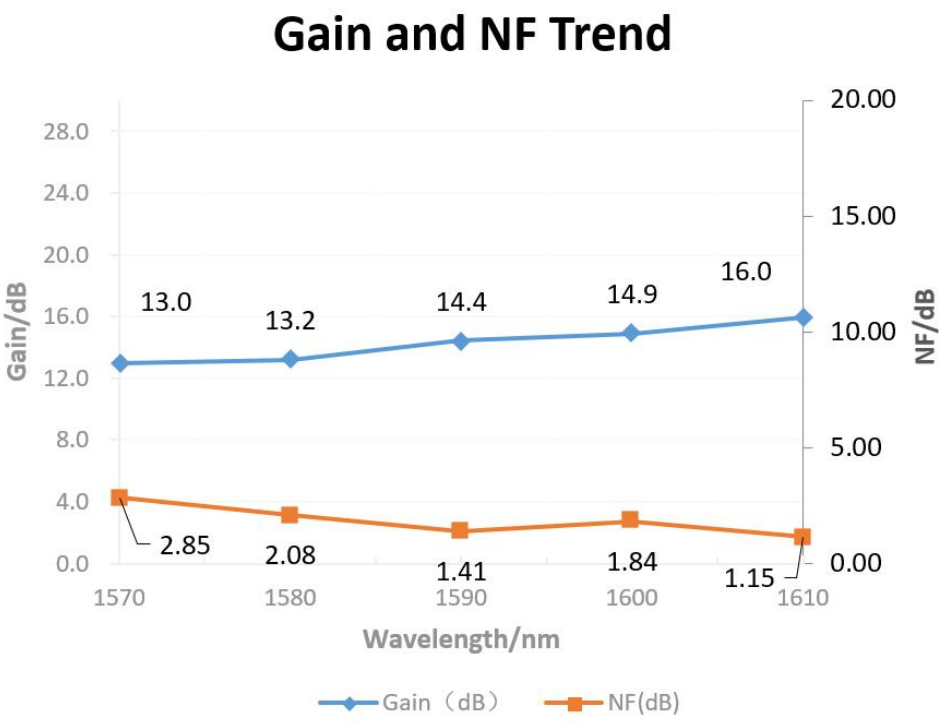


1310 nm (Pin = 0 dBm, I = 200mA)

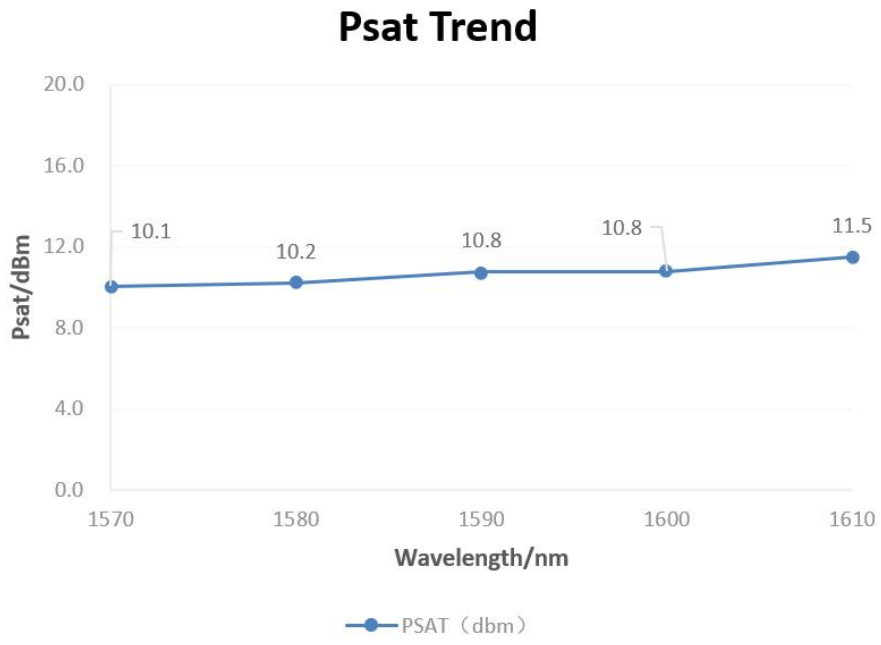


1317 nm (Pin = 0 dBm, I = 200mA)

Gain and NF trend



Saturated output power curve



Dimensions and Pin Definition

Part	Description
Package Type	BTF
Fiber:	SMF-28
MFD	10μm
Cladding Diameter	125μm
Coating Diameter	245μm
Jacket	900μm loose tube
Fiber Pigtail Length	1m
Fiber Bending Radius	>40mm
Connector	FC/APC
Dimensions	See figure

Pin No.	Configuration	Pin No.	Configuration
1	TEC (+)	8	NC
2	Thermistor	9	NC
3	NC	10	SOA Anode
4	NC	11	SOA Cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	TEC (-)

Ordering info

PL-SOA-☆-A8▽-W□□□□-XX

☆ ： Output Power

A: 13dbm B: 20dbm

▽: Bandwidth

1: 60-70nm

2: 30-40nm

□□□□：Wavelength

680: 680nm 850: 850nm

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1550: 1550nm 1650: 1650nm

XX: Fiber and Connector Type

SASA=(SMF-28E+ FC/APC)+(SMF-28E+ FC/APC)

SPSP=(SMF-28E+ FC/PC)+(SMF-28E+ FC/PC)

PAPA=(PM Fiber+ FC/APC)+(PM Fiber+ FC/APC)

PPPP=(PM Fiber+ FC/PC)+(PM Fiber+ FC/PC)

PAPA=(PM Fiber+ FC/APC)+(PM Fiber+ FC/APC)