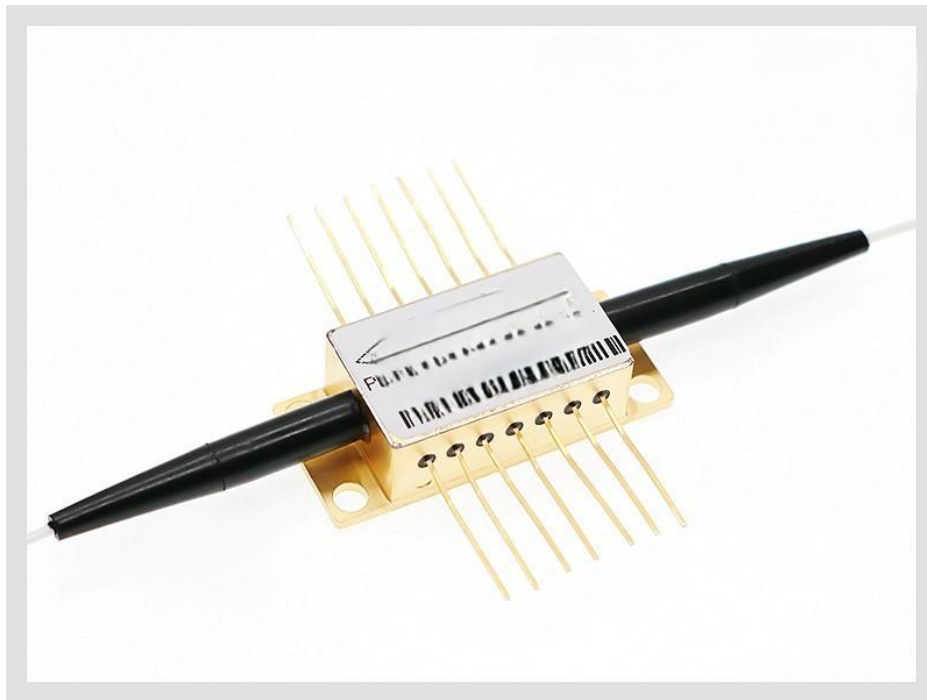


O-band SOA nonlinear semiconductor optical amplifier 1310nm 7dBm(5mW)



● Product Description

The SOA is a polarization insensitive optical amplifier that features advanced epitaxial wafer growth and optoelectronic packaging technology to achieve high output saturated power, low noise figure, and large gain over a wide spectral bandwidth.



● Product features

Broadband light、 High output power、 Low polarization sensitivity、
 Multiple quantum well or bulk structure

● Part Number

MP-SOA-1310-15db-20-SA

● Application area

Booster optical amplifier、 telecommunications and data communications、
 loss compensation

● Core parameters

Wavelength	Bandwidth	Power
1310nm	40nm	7dBm

● General Parameters

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

Parameter	Symbol	MP-SOA-1310-15db-20-SA		
		Min.	Typ.	Max.
Operating Current	IOP	-	120mA	150mA
Forward Voltage	VF	-	1.2V	2.0V
Center Wavelength	λ_C	1300nm	1310nm	1320nm

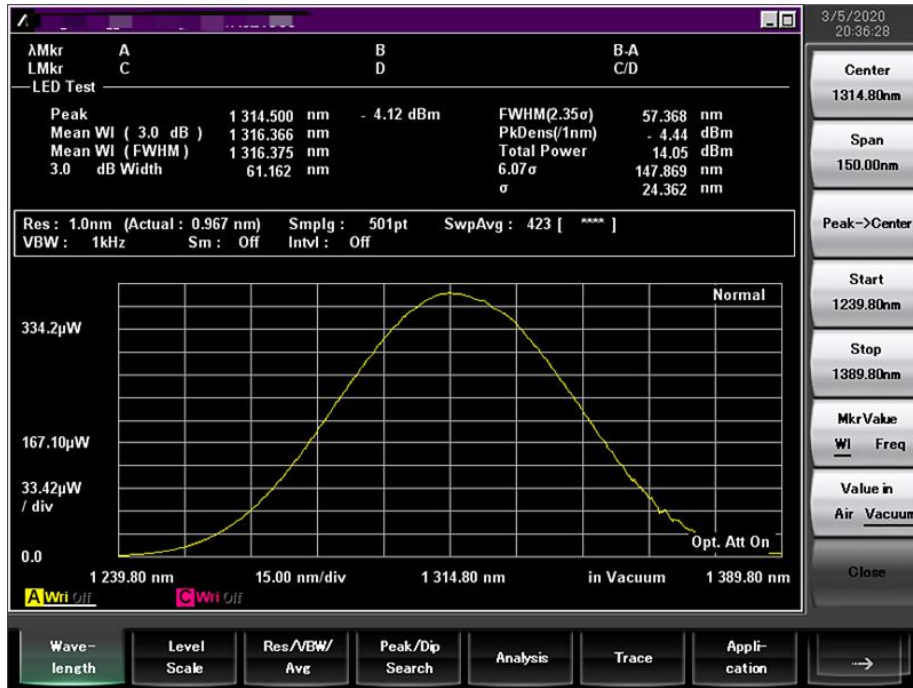


Signal Gain (@ Pin = -20 dBm)	G	15dB	-	-
3dB Bandwidth	BW	40nm	-	-
ASE Ripple (RMS)	δG	-	-	0.5dB
Saturated Output Power (@ -3 dB)	PSAT	7dBm	-	-
Polarization Dependent Gain	PDG	-	-	1.5dB
Noise Figure	NF	-	-	7dB
Thermistor (@ 25°C)	RTH	9.5K Ω	10K Ω	10.5K Ω
TEC Voltage	VTEC			2.3V
TEC Current	ITEC			0.9A

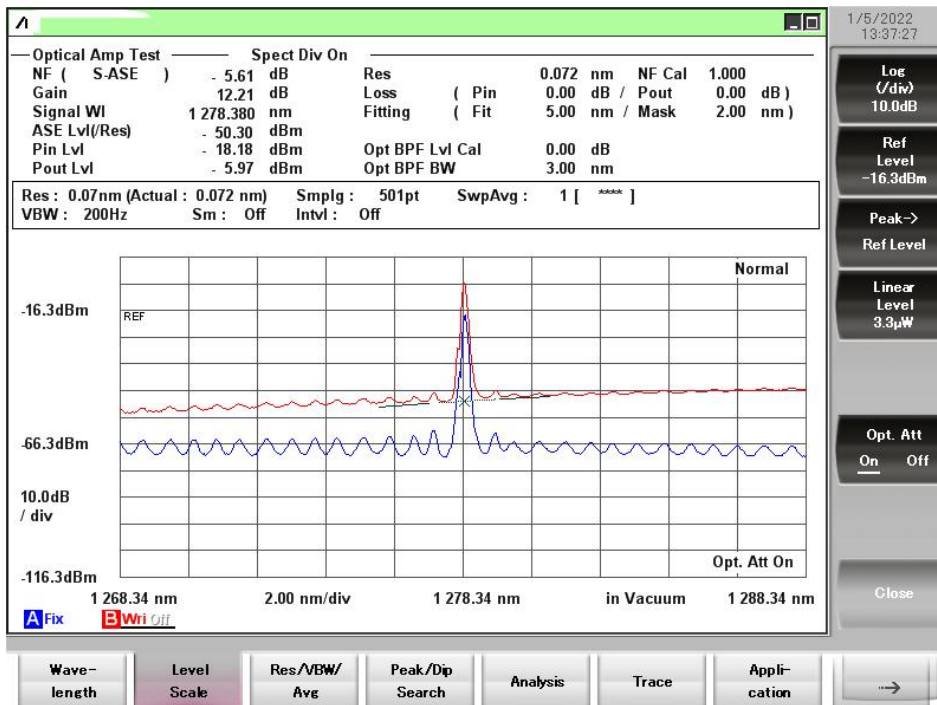
Maximum parameter:

Parameter	Symbol	MP-SOA-1310-15db-20-SA	
		Min.	Max.
Maximum operating current (CW)	IOPmax		200 mA
Reverse voltage	VR		2V
Chip operating temperature (CW)	TSOA	25°C	30°C
Case temperature (CW)	TC	0°C	70°C
TEC voltage	VTEC	-	4.0V
TEC current	ITEC	-	1.8A
Storage temperature	TSTG	-40°C	85°C
Storage humidity		5% RH	85% RH

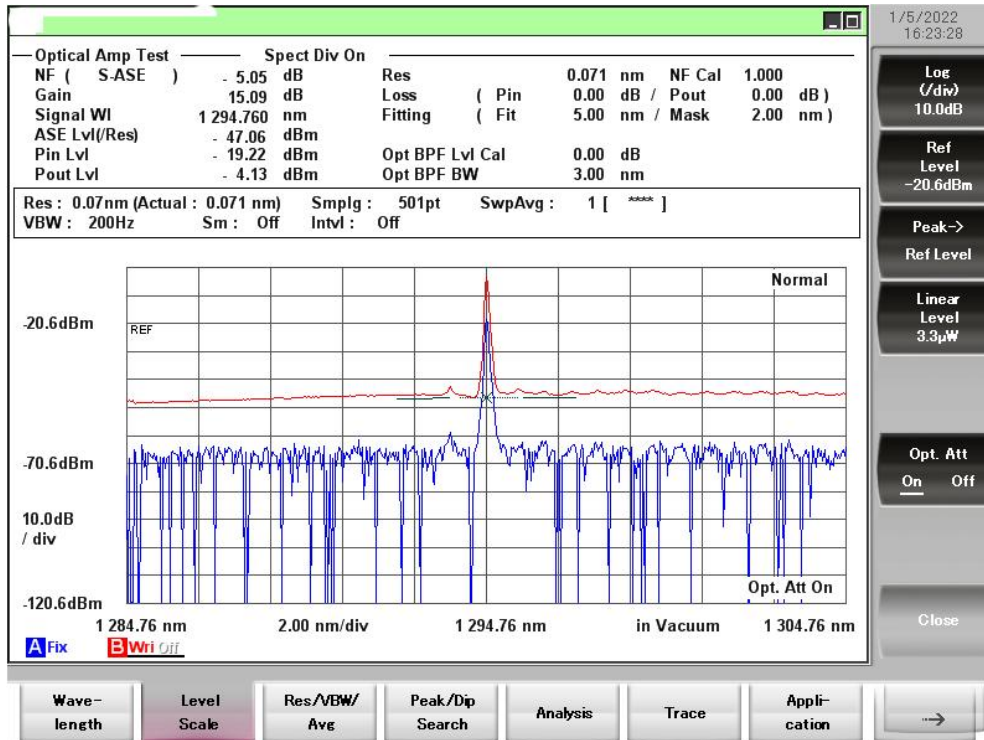
ASE spectrum:



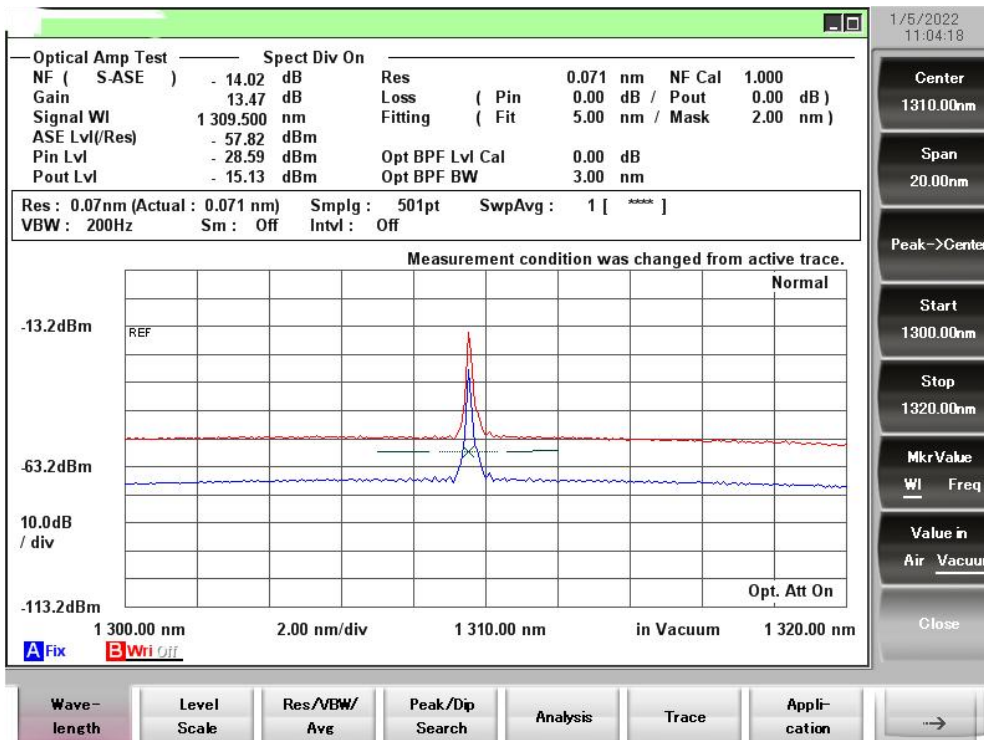
SOA amplifier spectrum (Pin=0dBm, I=200mA):



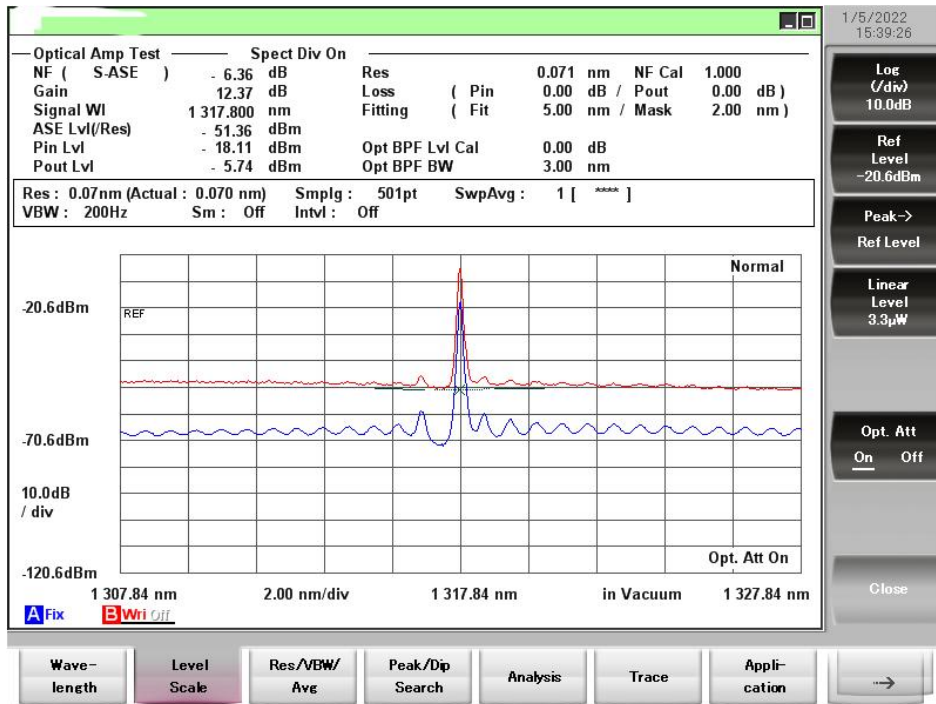
1278nm(Pin=0dBm,I=200mA)



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



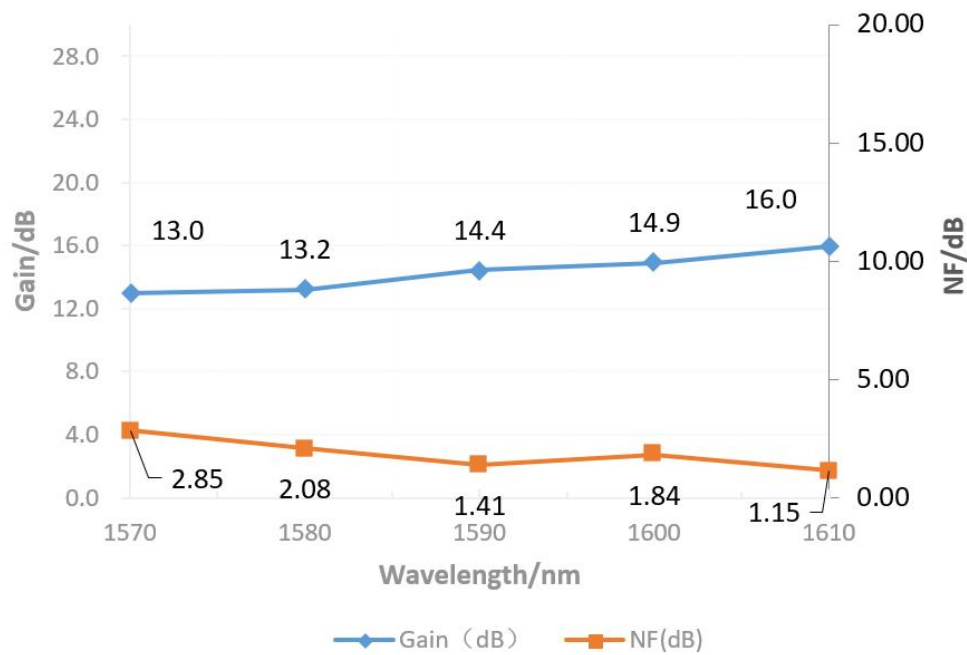
1310 nm (Pin = 0 dBm, I = 200mA)



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

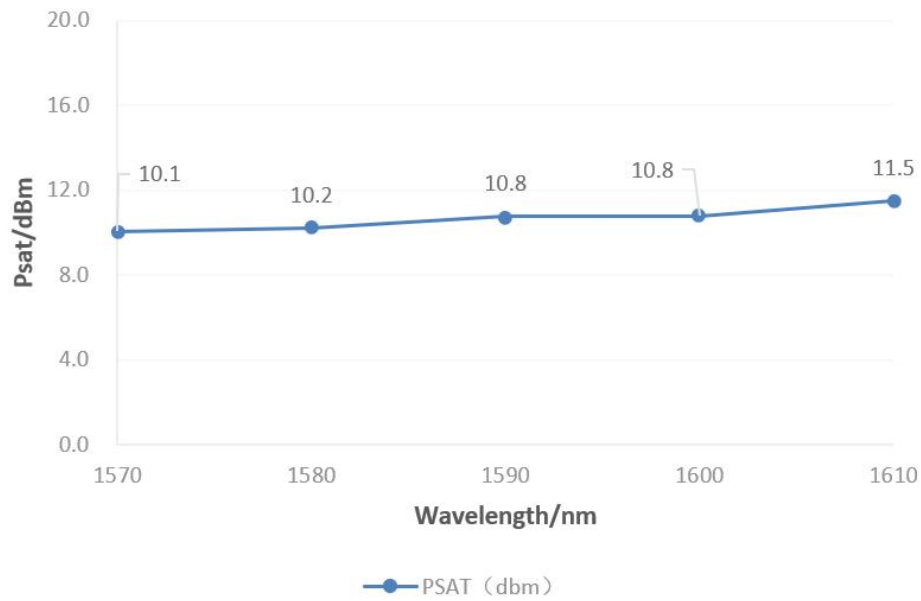
Gain and NF curves:

Gain and NF Trend

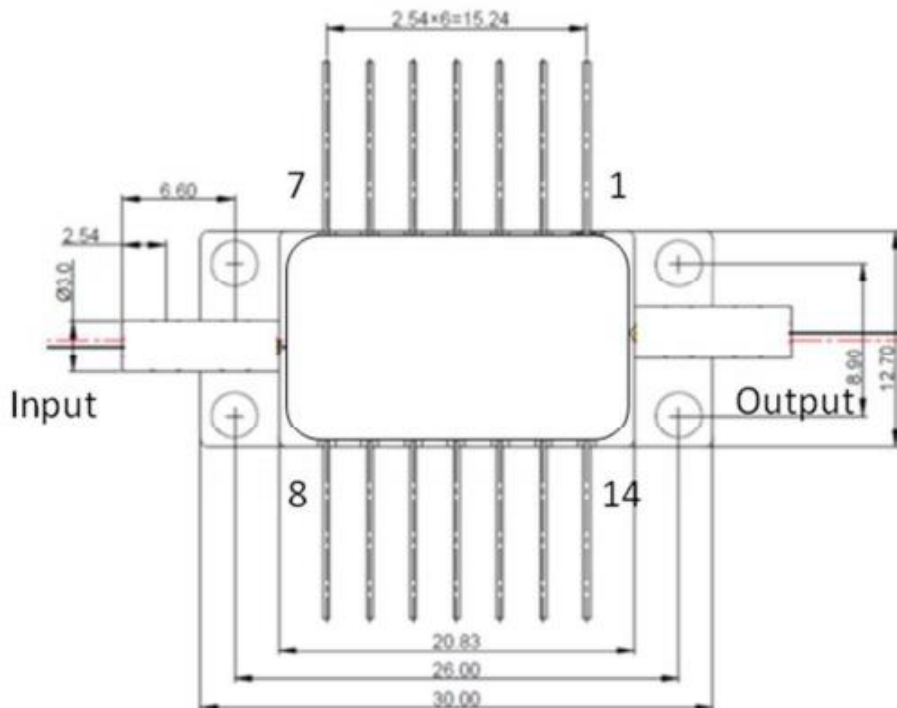


Saturated output power curve:

P_{sat} Trend



Dimensions and pinouts:





Part	Description
Package Type	BTF
Fiber:	SMF-28
MFD	10 μ m
Cladding Diameter	125 μ m
Coating Diameter	245 μ m
Jacket	900 μ m 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 (-)



Model Guide:

MP-SOA-☆-A8▽-W□□□□-XX

☆ : Output Power

A: 13dbm

B: 20dbm

▽: Bandwidth

1: 60-70nm

2: 30-40nm

□□□□: Wavelength

680: 680nm

850: 850nm

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)