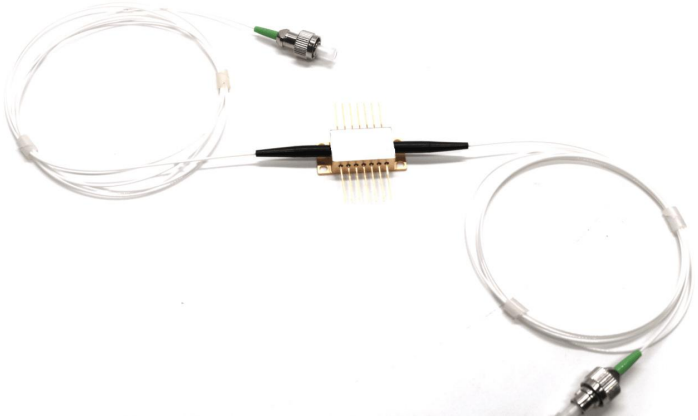
SOA nonlinear semiconductor optical amplifier (used as nanosecond ultrafast optical switch) 1550nm 14dBm (25mw)



Product Description

It is a polarization-insensitive optical amplifier with 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 optical、 High output power、 Low polarization sensitivity、

Multiple quantum well or bulk structures

Part Number

MP-SOA-1550-13db-34-SA-ns

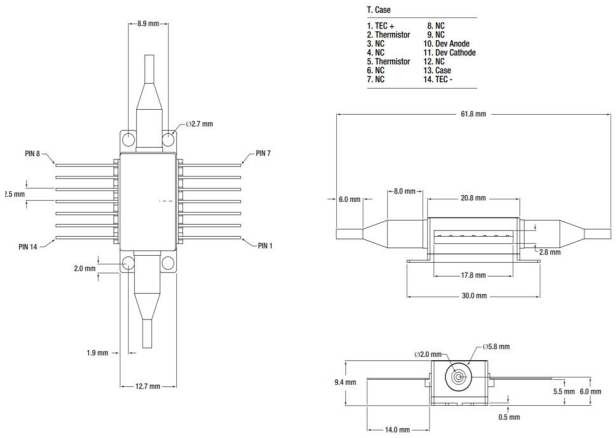
Application area

Boosting optical amplifiers 、 Telecommunications and data communications、 Loss compensation

Core parameters

Wavelength Range	Center Wavelength	Output Power
1528-1562nm	1550nm	14dBm

Dimension Drawing

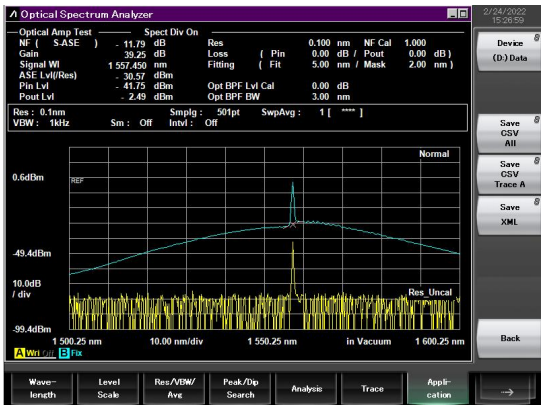


General Parameters

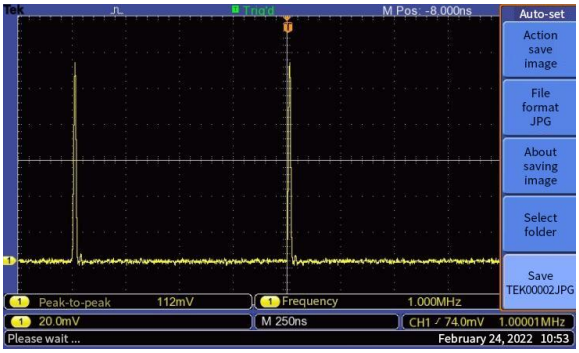
Electrical/Optical Characteristics (Tsub=25 ℃ , CW)

Parameter	symbol	MP-SOA-1550-13db-34-SA-ns		
		Min.	Typical	Max.
Operating Current	IOP	-	450 mA	500 mA
Operating Wavelength Range		1528 nm	-	1562 nm
Center Wavelength	λC	-	1550	-
Saturated Output Power (@ -3 dB)	PSAT	12 dBm	14 dBm	-
Small Signal Gain (Over C-Band @ Pin = -20 dBm)	G	10 dB	13 dB	-
Gain Flatness (Over C-Band @ Pin = -20 dBm)	ΔG	-	5 dB	7 dB
Gain Ripple (p-p) @ IOP, λC	δG	-	0.1 dB	0.5 dB
Polarization Dependent Gain	PDG	-	1.0 dB	1.8 dB
Noise Figure	NF	-	8 dB	9.5 dB
Forward Voltage	VF	-	1.6 V	1.8 V
Chip Length	-	-	1.5 mm	-
Waveguide Refractive Index	-	-	3.2	-
TEC Operation (Typical/Maximum @ TCASE = 25/70°C)				
TEC Current	ITEC	-	0.23 A	1.5 A
TEC Voltage	VTEC	-	0.5 V	4.0 V
Thermistor	RTH	-	10 kΩ	-
Optical Switch Characteristics Rise Time	ps	-	1000	-
Optical Switch Characteristics Fall Time	ps	-	1000	-

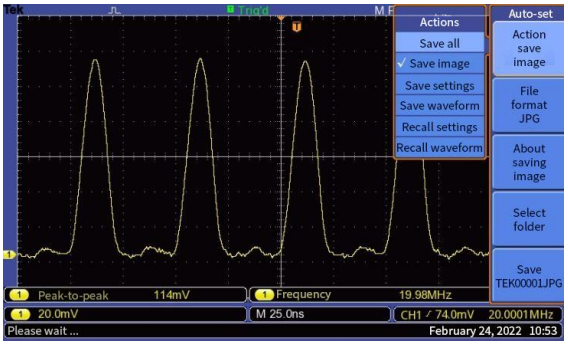
0.1mW seed light before and after amplification



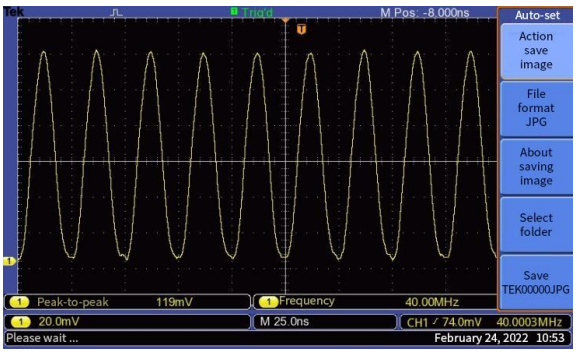
Typical switch response test



1MHZ RF modulation speed

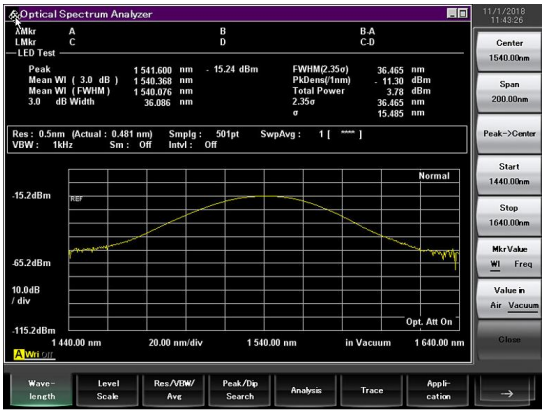


20MHZ RF modulation speed

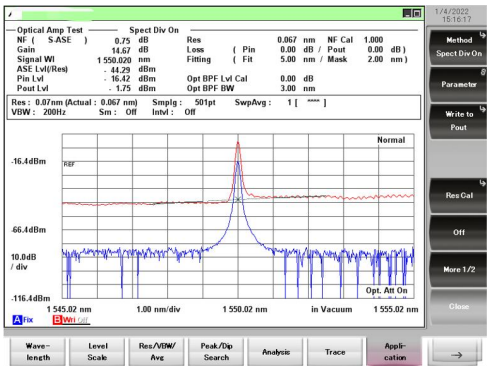


40MHZ RF modulation speed

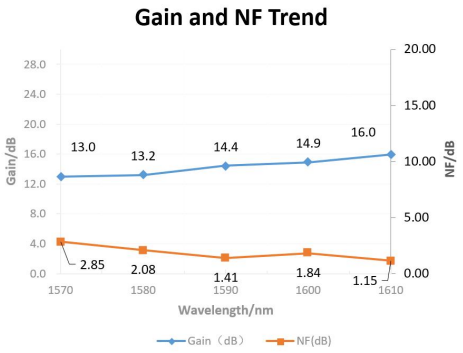
ASE spectrum



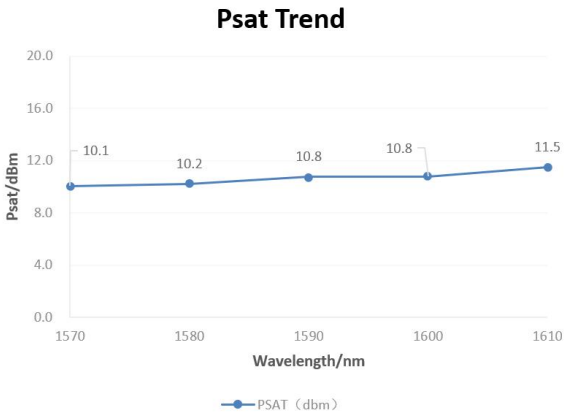
SOA amplifier spectrum (pin=0dBm, I=450mA)



Gain and NF Curves



Saturated output power curve



Ordering Information

MP-SOA-☆-A8▽-W□□□□-XX

☆ : Output Power

A: 5dbm

B: 10dbm

▽: Bandwidth

1: 60-70nm

2: 30-40nm

□□□□: Wavelength

680: 680nm

850: 850nm

*****

1550: 1550nm

1600: 1600nm

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)