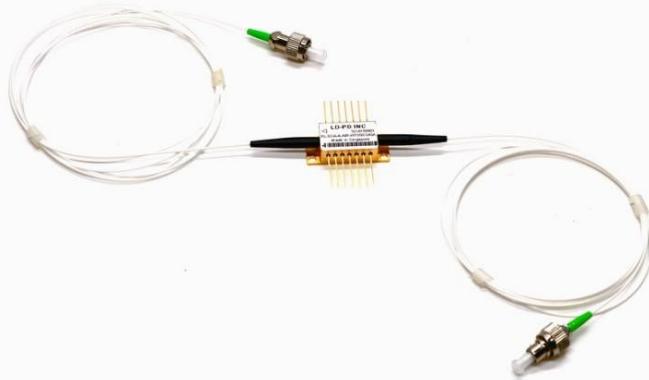


1550nm High Gain Semiconductor Optical Amplifier



Description:

The PL-SOA-C-A81-W1550-SASA 1550nm Semiconductor Optical Amplifier (SOA) is single-pass, traveling-wave amplifier that perform well with both monochromatic and multi-wavelength signals. The SOA consists of a highly efficient InP/InGaAsP Multiple Quantum Well (MQW) layer structure.

Features:

- Single mode input/output
- Low chip-to-fiber coupling loss
- CW or pulsed operation
- SM or PM Fiber ($\phi 0.9\text{mm}$)
- FC-APC connectors
- 14-pin butterfly package
- Built-in thermistor and TEC
- Low power consumption

Optional:

- Fiber transmission systems
- Fiber optic gyros
- Fiber optic sensors
- Optical coherence tomography
- Testing Light source

E/O Characteristics:

Electrical/Optical Characteristics (T_{sub}=25°C, CW bias unless stated otherwise)

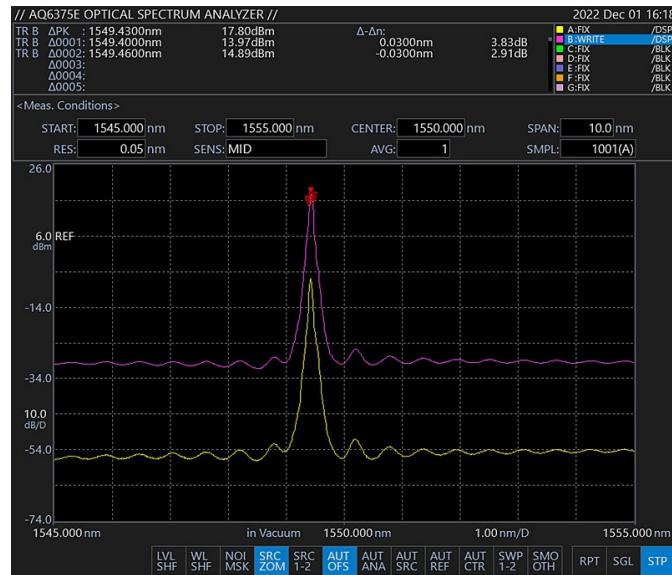
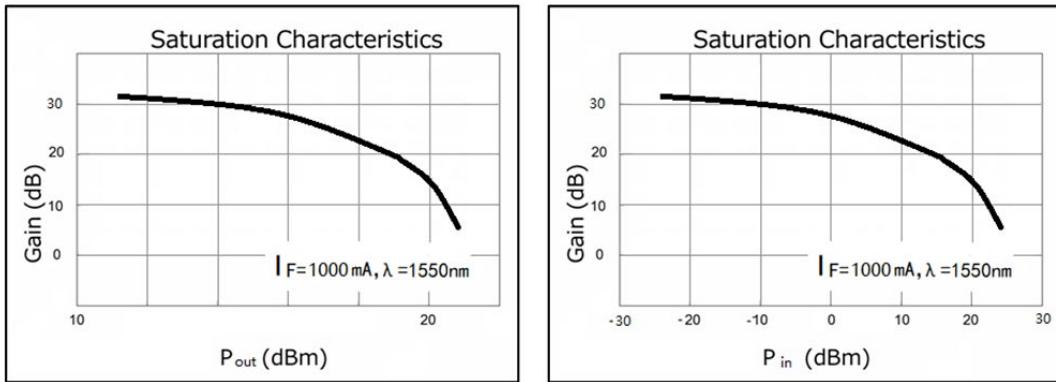
Item #	Symbol	PL-SOA-C-A81-W1550-SASA		
		Min	Typical	Max
Operating Current	I _{OP}	-	1000 mA	1500 mA
Operating Wavelength Range		1528 nm	-	1562 nm
Center Wavelength	λ _C	-	1550	-
Saturation Output Power _b (@ -3 dB)	P _{SAT}	20dBm	23dBm	-
Extinction Ratio(I _f =1000mA/I _f =0mA Pin=0dBm)	P _{ER}	30dB		35dB
Small Signal Gain (Over C-Band @ Pin = -20dBm)	G	30 dB	35 dB	-
Gain Flatness (Over C-Band @ Pin = -20 dBm)	ΔG	-	5 dB	7 dB
Gain Ripple (p-p) @ I _{OP} , λ _C	δG	-	0.1 dB	0.5 dB
Polarization Dependent Gain	P _{DG}	-	5.2 dB	6.3 dB
Noise Figure	NF	-	6 dB	9.5 dB
Forward Voltage	V _F	-	1.6 V	1.8 V
Chip Length	-	-	1.5 mm	-
Waveguide Refractive Index	-	-	3.2	-
TEC Operation (Typical/Max @ TCASE = 25/70°C)				
TEC Current	I _{TEC}	-	0.23 A	1.5 A
TEC Voltage	V _{TEC}	-	0.5 V	4.0 V
Thermistor Resistance	R _{TH}	-	10 kΩ	-

ASE Spectrum:

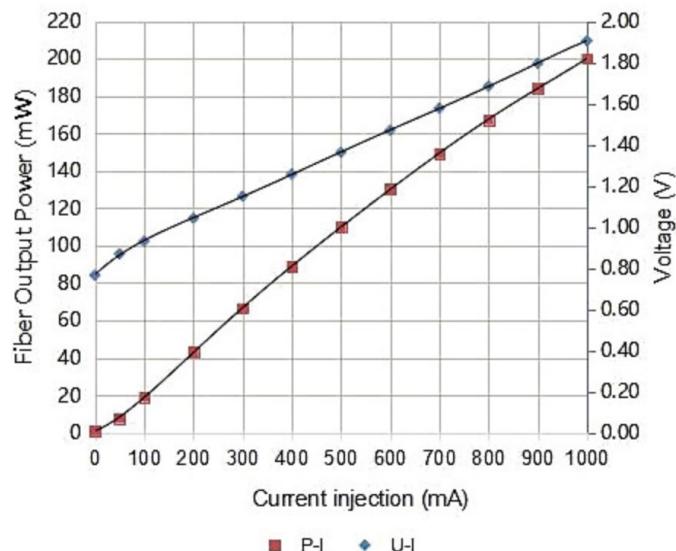


Headquarters: 288, Woolands Loop, #04-00, Singapore 738100

Gain with Output Signal Power:

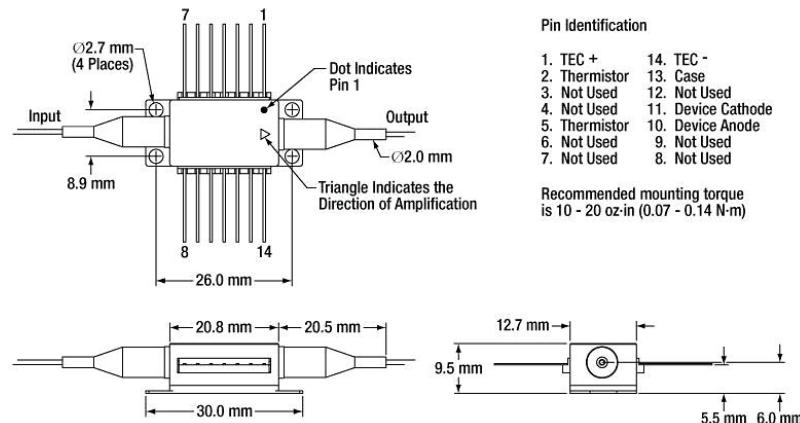


SOA Characteristic Graph(25deg,Pin=0dBm):



Headquarters: 288, Woolands Loop, #04-00, Singapore 738100

Dimensions and Pin definitions:



Ordering Info:

PL-SOA-☆-A8▽-W□□□-XX

☆ : Output Power

A: 10dbm

B: 15dbm

C: 20dBm

▽ : Bandwidth

1: 60-70nm

2: 30-40nm

□□□: Wavelength

780:680nm

850:850nm

1060:1060nm

1550:1550nm

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)