1550nm High Power PM Semiconductor Optical Amplifier

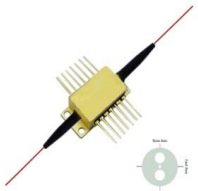
1550nm High PowerPM Semiconductor Optical Amplifier (SOA) is a optic active product which can boost the intensity of optical signal in a fiber optic communication system. The SOA built with angled multi-quantum-well chip to output stable amplified light, one single polarization light will be amplifiered, the TEC and Thermistor built in to control the device temperature. It features high optical gain, high saturation output power, it's widely used in Optical Line Amplifier, Optic Non-linear Application and Optoelectronic Integration field, the output signal power can be customized.

Application:

Optical Line Amplifier
Optic Non-linear Application
Optoelectronic Integration
WDM System

Features:

High Optical Gain
High Polarization Extinction Ratio
Isolator, TEC and Thermistor Built In
High Reliability



Absolute Maxmum Ratings:

Parameter	Symbol	Value	Unit
SOA Forward Current	If	1200	mA
SOA Forward Voltage	Vf	2.0	V
Operating Temperature	T	-10~+70	℃
Storage Temperature	T	-40~+85	℃
Solder Temperature	T	260	℃
Lead Solder Time		10	S

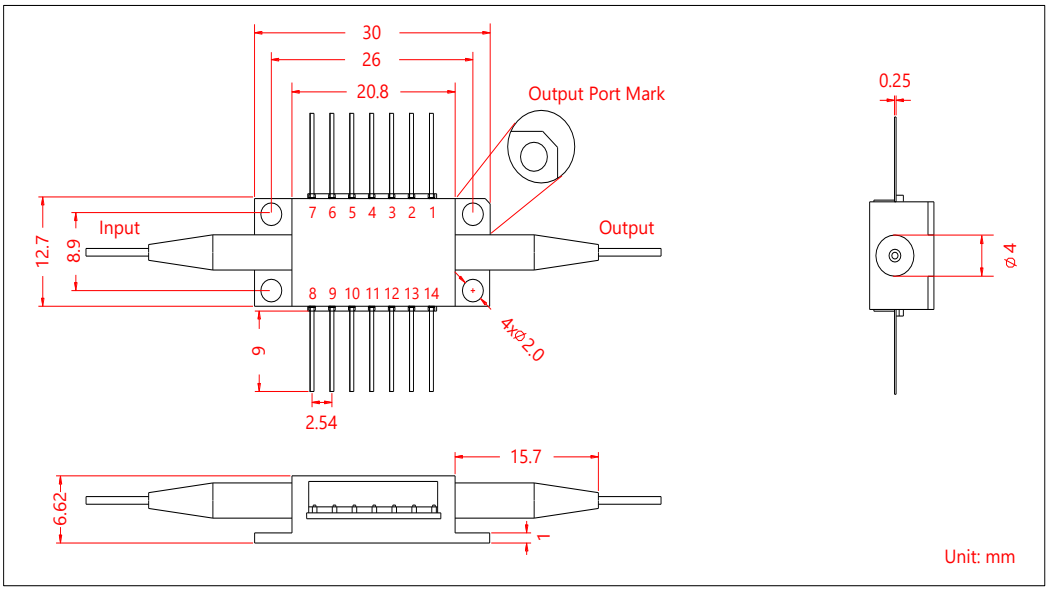
Notice: Above specifications should not be exceeded, or the device will be seriously damaged.

Optical and Electrical Specification:

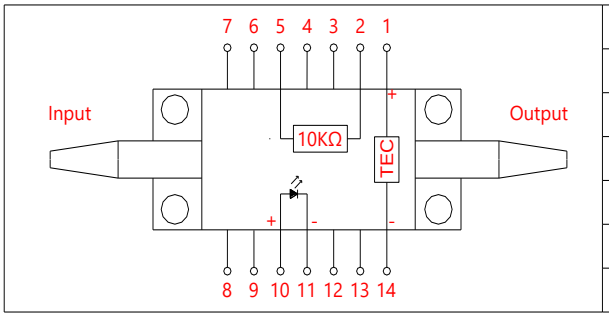
Parameter	Symbol	Min.	Tpy.	Max.	Unit	Test Condition
Center Wavelength	λc		1550		nm	
3dB Wavelength Bandwidth	BW	70			nm	
3dB Saturated Output Power		22	23	25	dBm	CW, If=900mA
Small Signal Gain	G			35	dB	CW, Pi=-20dBm
Gain Ripple	ΔG		4		dB	λc
Noise Figure			7.5		dB	
Polarization Extinction Ratio	ER	30		35	dB	If=900mA
Polarization Dependent Gain	PDG		4		dB	
SOA Operating Current	If		900	1200	mA	CW
TEC Current	Itec			2.0	A	-10~70°C
TEC Voltage	Vtec			3.6	V	
TEC Set Temperature	T	15		35	℃	
Thermistor Current	Ithe			5	mA	
Air Tightness		10^{-12}	10^{-11}	10^{-18}	$Pa.m^3/s$	T=25°C
Thermistor Resistance	Rthe	9.5	10	10.5	KΩ	T=25°C
Thermistor Temperature	T			100	℃	
Fiber Type	PM 1550 Panda Fiber					

Notice: Above specifications are tested at in room temperature at 23℃.
Slow axis is default aligned to the connector key.
Specifications may change without notice.

Drawing:



Pin Information:



1	TEC (+)	14	TEC (-)
2	Thermistor	13	Case Ground
3	NC	12	NC
4	NC	11	SOA (-)
5	Thermistor	10	SOA (+)
6	NC	9	NC
7	NC	8	NC

Ordering Information (Part Number):

PMSOA-WWWW-OO-J-LL-CC

WWWW	**OO**	**J**	**LL**	**CC**
Wavelength	**Output Power**	**Fiber Jacket**	**Fiber Length**	**Connector**
1550 - 1550nm	23 - 23dBm SS - Specify	B - 250um Bare Fiber L - 900um Loose Tube	02 - 0.2m 05 - 0.5m 10 - 1.0m 15 - 1.5m 20 - 2.0m SS - Specify	NE - None FA - FC/APC FU - FC/UPC LA - LC/APC LU - LC/UPC SA - SC/APC SU - SC/UPC SS - Specify

Notification:

1. The Semiconductor Optoelectronic products are particulary sensitive of ESD (electro-static discharge), it's recommended to use grounded anti-static wrist straps and grounded anti-static mats before handling the products.
2. Never plug or unplug the products under a living circuit, setting the current supply to zero before switching on or switching off the products.
3. Always take anti-static measures to storage the products when not in use.