1550nm Semiconductor Optical Amplifier (Switch Type)

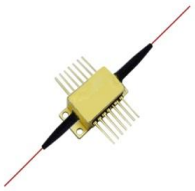
1550nm Semiconductor Optical Amplifier (SOA) Switch Type is a optic active product which is special designed for optical switch system with loss compensation. The SOA built with angled multi-quantum-well chip to output stable amplified light, the TEC and Thermistor built in to control the device temperature. It features high optical gain, high saturation output power, it's can be used for replace acousto-optic modulator to achieve the function of optical switch, or it can be applied in fiber grating demodulation system to acheive the function of broadband light source.

Application:

Optical Switch
Optic Non-linear Application
Optoelectronic Integration
Fiber Grating

Features:

High Optical Gain
High Extinction Ratio
TEC and Thermistor Built In
High Reliability



Absolute Maxmum Ratings:

Parameter	Symbol	Value	Unit
SOA Forward Current	If	650	mA
SOA Reverse Voltage	Vr	2.5	V
Operating Temperature	T	-20~+70	℃
Storage Temperature	T	-40~+85	℃
Solder Temperature	T	260	℃
Lead Solder Time		10	S

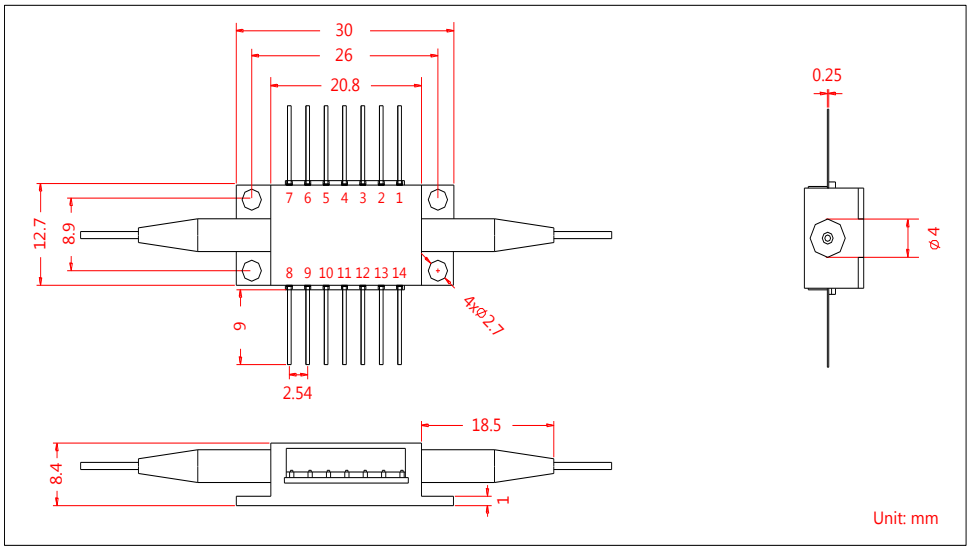
Notice: Above specifications should not be exceeded, or the device will be seriously damaged.

Optical and Electrical Specification:

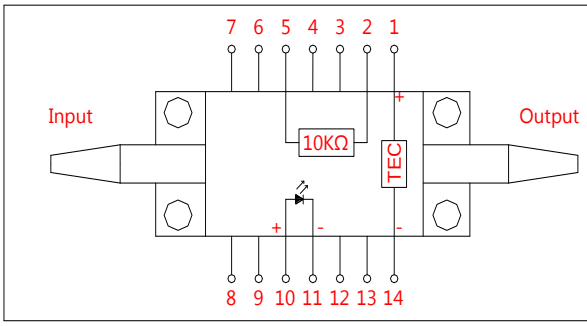
Parameter	Symbol	Min.	Tpy.	Max.	Unit	Test Condition
Center Wavelength	λc	1490	1550	1590	nm	
3dB Wavelength Bandwidth	BW		45		nm	
Saturated Output Power		8			dBm	CW, Iop=250mA
Small Signal Gain	G	13			dB	CW, Pi=-25dBm
Gain Ripple	ΔG		0.5	1.0	dB	λc
Noise Figure			8	9	dB	
Polarization dependent Gain	PDG		0.5	1	dB	
Extinction Ratio	ER	40	60		dB	
Switching Properties (Fall/Rise time)			1	2	ns	
Optical Isolation	ISO	30			dB	
SOA Operating Current	Iop		350	500	mA	CW
TEC Current	Itec		1.0	1.5	A	
TEC Voltage	Vtec		2.8	3.5	V	
TEC Set Temperature	T	15		35	℃	
Thermistor Current	Ithe	10		100	uA	
Thermistor Resistance	Rthe	9.5	10	10.5	KΩ	
Thermistor Temperature	T			100	℃	
Fiber Type	SM or PM Fiber					

Notice: Above specifications are tested at in room temperature at 23℃.
Specifications may change without notice.

Drawing:



Pin Information:



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

Ordering Information (Part Number):

SSOA-WWWW-I-FF-J-LL-CC

WWWW	I	FF	J	LL	CC
Wavelength	**Isolator**	**Fiber Type**	**Fiber Jacket**	**Fiber Length**	**Connector**
1550 - 1550nm	1 - With 0 - Without	SM - SMF-28e fiber PM - PM Panda fiber	B - 250um Bare Fiber L - 900um Loose Tube	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.