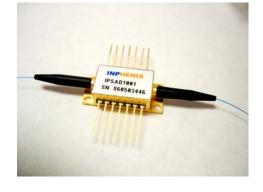
Semiconductor Optical Amplifier Device (Booster Type)

IPSAD1509 (1550nm)

Features

- Wide Optical Bandwidth
- High Output Power
- Low Polarization Sensitivity
- MQW or Bulk Structure



Applications

- Booster Amplifier
- Telecom and Datacom
- Loss Compensation

Device Specifications

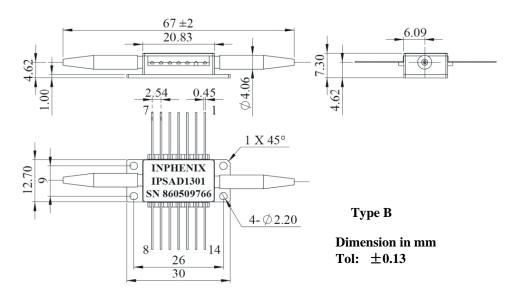
Parameter	Symbol	Specifications			Unit
rarameter		Min.	Тур.	Max.	Omt
Drive Current	I_{F}	-	500	-	mA
Operating Wavelength	$\lambda_{ m o}$	1510	1550	1590	nm
3dB Optical Bandwidth	$\Delta\lambda_{3 ext{dB}}$	-	60	-	nm
Small Signal Gain at @ - 25dBm Signal	G_{max}	-	25	-	dB
Gain Ripple with Respect to λ	ΔG	-	-	2	dB
Saturation Output Power	P_{sat}	10	12	-	dBm
Noise Figure	NF	-	-	9	dB
Polarization Dependent Gain	PDG	10	-	-	dB



Absolute Maximum Ratings

Parameter	Min.	Min. Max.		
Operating Temperature	- 20	70	°C	
Storage Temperature	- 40	85	°C	
SOA Forward Current	-	900	mA	
SOA Reverse Voltage	-	2.5	V	
TEC Drive Current	-	1.5	A	
TEC Drive Voltage	=	3.6	V	
Thermistor Resistance	10kΩ @ 25°C			
SOA Chip Temperature Setting	25°C			
Fiber Type	SMF/PMF/MMF ClearCurve Fiber			
Fiber Jacket	250µm tight buffer with/without 900µm loose			
	tube, or 900µm tight buffer			
Package	14-pin Butterfly Type B or C			

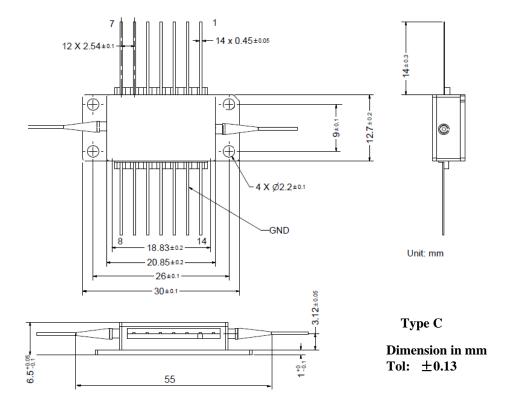
Package Dimensions



Pin Definition

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

Option: Pin 2 & Pin 5 for thermistor



Pin Definition

Pin	14-pin Butterfly
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2	NC
3	Thermistor *
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6	NC
7	NC
8	NC
9	NC
10	SOA(+)
11	SOA(-)
12	NC
13	Case
14	TEC(-)

Option: Pin 2 & Pin 5 for thermistor

Part Numbering System

	IPS	SADXXXX	\Box		
Model: IPSADXXXX: SOA	Device				
Package: 5: 14-pin Butterfly, T 6: 14-pin Butterfly, T	• •				
Fiber Type: 1: SM fiber 2: PM fiber	3: MM fiber 8: SM ClearC	Curve fiber*			
Jacket Type: 1: 900μm 2: 250μm					
Connector Type:					
0: No Connectors 3: FC/APC 4: FC/UPC 7: SC/APC					

Example: IPSAD1301-5110: 1310nm SOA in 14-pin Butterfly Package with $900\mu m$ SM Fiber with no Connectors.

* SM ClearCurve fiber is not available on IPSAD0801, IPSAD0901 and IPSAD0902 products.

Corporate Office

8: SC/UPC

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