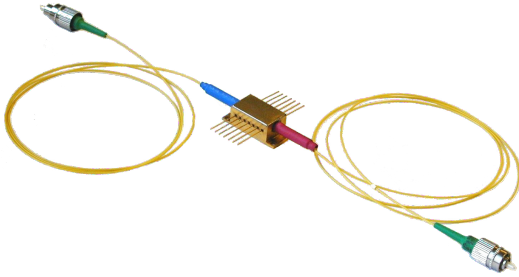


Semiconductor Optical Amplifier 1300nm



SOA-1300-14BF 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.

Key Features

- Single mode input/output
- Low chip-to-fiber coupling loss
- CW or pulsed operation
- SM or PM Fiber (ø0.9mm)
- FC-APC connectors
- 14-pin butterfly package
- Built-in thermistor and TEC
- Low power consumption

Optical and electrical characteristics: (T = 25°C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Fiber to fiber Gain	G	CW, I _F = 300mA	20	24	28	dB
Forward Current	I _F			300	350	mA
Forward Voltage	V _F				2.5	V
Center Wavelength	λ _c	CW, I _F = 300mA	1300	1305	1310	nm
Spectral Width	Δλ	CW, I _F = 300mA	30	35	40	nm
Saturation Power	P _S	CW, I _F = 300mA	8	9	10	dBm
Noise Figure	NF	CW, I _F = 300mA	7	8	9	dB
Gain Ripple	δG	CW, I _F = 300mA		1	2	dB
Polarization	PDG	CW, I _F = 300mA		10		dB
Dependent Gain						
Cooler Voltage	V _C	I _F =EOL, TC=70°C			2.7	V
Cooler Current	I _C	I _F =EOL, TC=70°C			1.4	A
Thermal Resistance	R _θ	T _{LD} =25°C, B=3900±100K	9.5	10.0	10.5	kΩ

Absolute Maximum Ratings

Item	Symbol	Rating	Unit
LD Forward Current	I_f	400	mA
LD Reverse Voltage	V_r	1.8	V
Operation Case Temperature	T_c	-20 to +70	°C
Storage Temperature	T_{stg}	-20 to +85	°C
Cooler Current	I_c	1.4	A

PACKAGING

No.	FUNCTION	No.	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	NC	10	LD anode
4	NC	11	LD cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler anode

