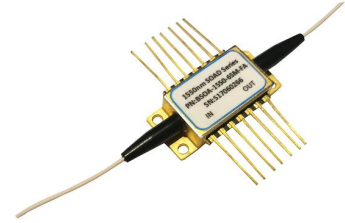


Semiconductor Optical Amplifier Devices

1. Features:

- Wide Optical Bandwidth;
- High saturation output power;
- Low polarization sensitivity;
- Built-in TEC and optical isolator;
- Low gain ripple and NF.

Reliability: Telcordia GR-468. RoHS



2. Applications:

- Loss compensation for fiber optical connection and switch;
- WDM fiber optical networks;
- 100G fiber optical data center.

3. Absolute Maximum Ratings:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Storage temperature	T _s	-	-40	-	85	°C
Operating case temperature	T _{op}	-	-20	-	70	°C
Forward Current	I _F	-	-	-	600	mA
SOA Reverse Voltage	V _R	-	-	-	2.5	V
TEC current	I _{TEC}	-	-	1.0	1.5	A
TEC voltage	V _{TEC}	-	-	2.8	3.5	V

4. Electro-Optical Characteristics(25°C laser temperature):

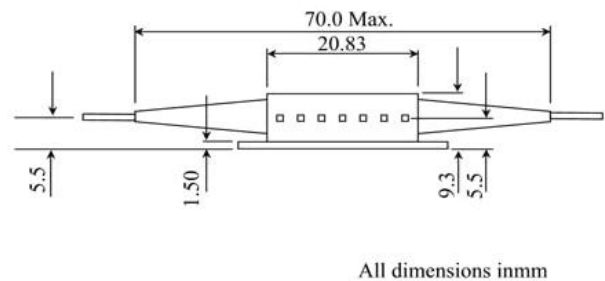
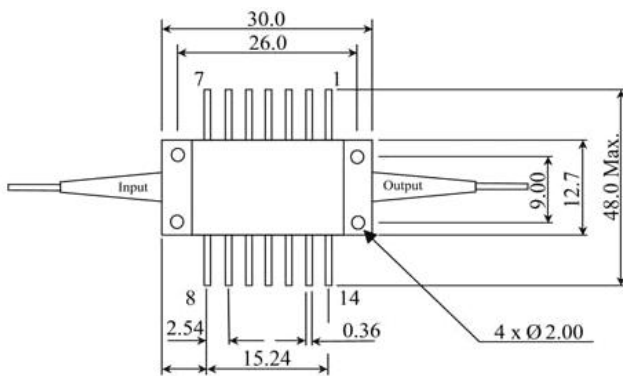
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Center wavelength	λ _c	TL=15~35°C CW	1510	1550	1570	nm
Operating current	I _{OP}	-	-	350	600	mA
3dB Optical bandwidth	Δλ _{3dB}	-	50	-	-	nm
3dB saturation output power	P _{sat}	CW	8	10	-	dBm
Small signal gain@λ _c (Over C-Band @ Pin = -25 dBm)	G _{max}	-	13	16	-	dB
Gain ripple with respect to λ	ΔG	-	-	0.5	1.0	dB
Noise figure	NF	-	-	10	-	dB
Polarization dependent Gain	PDG	-	-	2.0	3.0	dB
Optical isolation	I _{SO}	-	30	-	-	dB
TEC set temperature	T _s	-	15	-	35	°C
Thermistor current	I _{TC}	-	10	-	100	μA

Thermistor resistance	R_{TH}	TL = 25 °C	9.5	10	10.5	K Ω
Thermistor temperature	-	-	-	-	100	°C

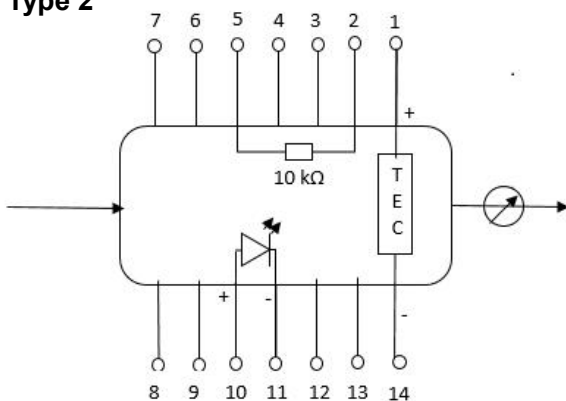
5. Optical Fiber Specifications:

Parameters	Description
Fiber type	SMF-28e
Pigtail type	900 μ m loose tube
Pigtail length	1.0 \pm 0.1m
Connector type	FC/APC

6. Package drawing (Mechanical Dimensions):



Type 2



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

7. Ordering Information:

BSOA	-XXXX	-XX	XX	-XX	X
Device type	Wavelength	Output power	Fiber type	Connector type	PIN-OUT
SOA Amplifier	1310: 1310nm 1550: 1550nm Other	08: 8dBm 10: 10dBm Customized	SM : Single mode PM : Polarization maintaining	FA : FC/APC SA : SC/APC Other	NULL: Type 2 Customized

E.g.:BSOA-1550-08SM-FA (Order information: 1550nm SOA amplifier with 8dBm output power, and SM fiber with FC/APC connector, PIN-OUT is Type 1).