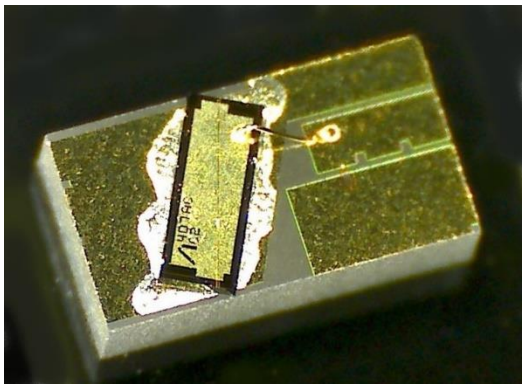
1.31 µm SOA (Chip Carrier Type) *AA3T115FYB*

The AA3T115FYB is 1.31 µm high gain and low polarization dependent gain SOA (Semiconductor Optical Amplifier) chip on carrier. The SOA chip is p-side up mounted on an AlN sub-mount of the size of 1.1 × 2.0 mm.

FEATURES

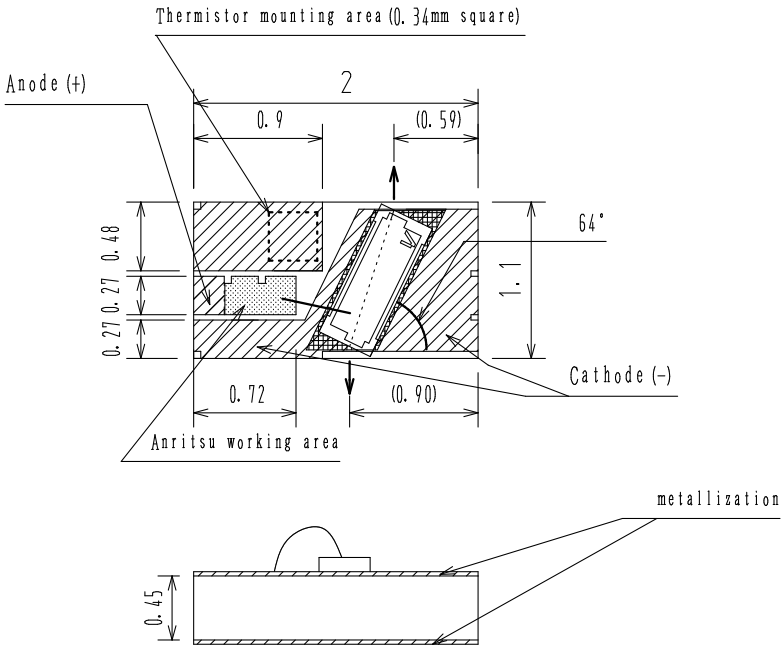
- Gain : 17 dB
- Polarization Dependent Gain (PDG) : 1.0 dB (typ.)
- Low Power Consumption : 0.18 W
- Operating Temperature : 45°C

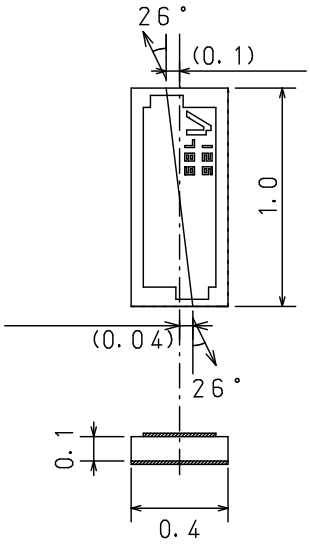


APPLICATIONS

- Optical transceiver
- Preamplifier

DIMENSIONS (Unit: mm)





(Enlarged view of the SOA chip)

ABSOLUTE MAXIMUM RATINGS (T_{sub}=25°C)

Item	Symbol	Rating	Unit
SOA Forward Current	I_F	350	mA
SOA Reverse Voltage	V_R	2	V
Storage Temperature *1	T_{stg}	-40 to +85	°C
Process/Soldering Temp. vs Time 300°C 200°C 120°C	-	 < 20 < 2 < 100	 s hour hour
ESD (Human Body Model)	ESD	500	V

*Excess over the absolute maximum ratings may lead to damage.
*1 No condensation

OPTICAL AND ELECTRICAL SPECIFICATIONS (T_{sub}=45°C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Gain	G	I_F=120 mA, λ_{in}=1310 nm, P_{in}=-25 dBm	16	17	22	dB
Polarization Dependent Gain	PDG	I_F=120 mA, λ_{in}=1310 nm, P_{in}=-25 dBm	-1.5	1	1.5	dB
Saturation Power	P_S	I_F=120 mA, -3 dB, λ_{in}=1310 nm	7	8	10	dBm
Noise Figure	NF	I_F=120 mA, λ_{in}=1310 nm, P_{in}=-25 dBm	6.5	7.5	8.5	dB
Beam Divergence Angle Lateral (Parallel)	θ_t	I_F=120 mA, FAHM	-	22	-	deg.
Beam Divergence Angle Transverse (Perpendicular)	θ_p	I_F=120 mA, FAHM	-	31	-	deg.
Optical output	P_{ASE}	I_F=120 mA	0.5	0.6	1.0	mW
Forward Voltage	V_F	I_F=120 mA	1.0	1.2	1.5	V

* The measured data may be different with these specifications depending on the measurement settings. The shipment inspection items include “Gain”, “Polarization Dependent Gain”, “Saturation Power”, “Noise Figure”, “ASE output” and “Forward Voltage”; “Beam Divergence Angle” is not inspected.

* Hermetic sealing is recommended for long term reliability.

CAUTION : Handle the fiber of the enclosed device(s) with extreme care ; glass fiber is subject to breakage if mishandled and permanent damage to the device may result. Do not pull the device by the fiber or protective sleeve.
Do not coil the fiber into a loop of than 5 mm in radius.

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