

1.31 μm SOA (Chip Carrier Type) AA3T115FYB

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 $\times$ 2.0 mm.

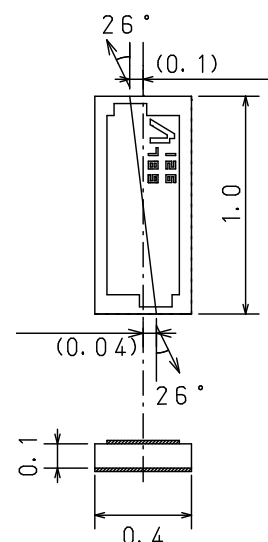
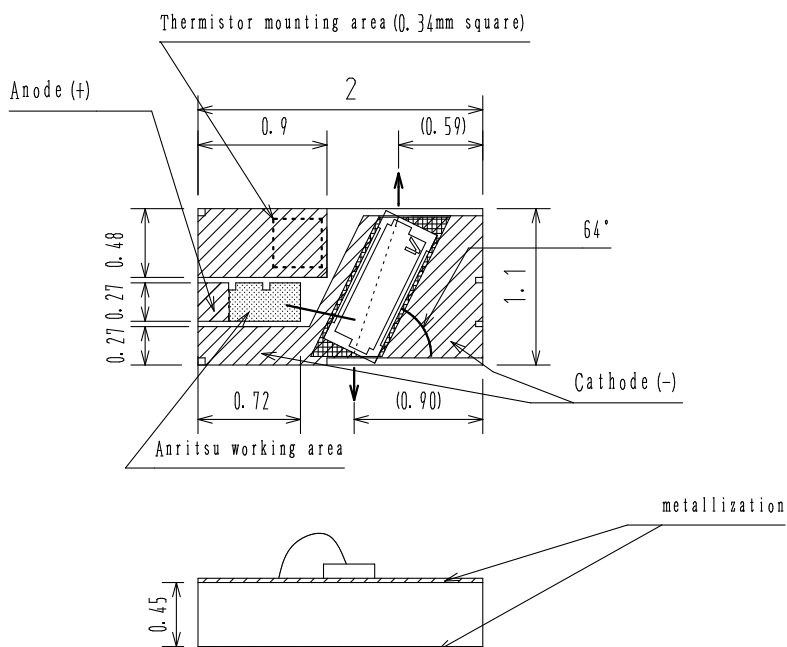
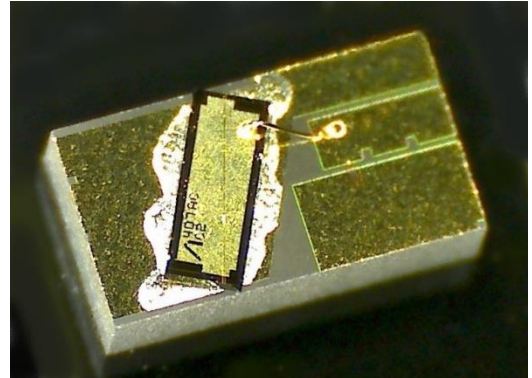
FEATURES

- 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



(Enlarged view of the SOA chip)

(Unit : mm)

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Ratings	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	—	20	s
200°C		2	hour
120°C		100	hour
ESD (Human Body Model)	ESD	500	V

*Excess over the absolute maximum ratings may cause device failure.

*1 No condensation

OPTICAL AND ELECTRICAL CHARACTERISTICS (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, λ _{in} = 1310 nm -3 dB	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, T _{sub} = 25°C	–	22	–	deg.
Beam Divergence Angle Transverse (Perpendicular)	θ _p	I _F = 120 mA, FAHM, T _{sub} = 25°C	–	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 30 mm in radius.



ANRITSU CORPORATION

SENSING & DEVICES COMPANY SALES DEPT.

<https://www.anritsu.com/sensing-devices>

Tel +81 46 296 6783 Fax +81 46 225 8390
5-1-1 Onna, Atsugi-shi, Kanagawa
243-8555 Japan



Contact URL

<https://www.anritsu.com/en-gb/sensing-devices/contact-us>

Please read "Notes on Handling Optical Devices" before use.

<https://www.anritsu.com/sensing-devices/guide/optdevices-handling>



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