

1.3 μ m SOA Module AA3F215CA

AA3F215CA is 1.3 μ m high gain and low polarization dependent gain SOA (Semiconductor Optical Amplifier) module with optical isolator and thermo-electric cooler (TEC).

FEATURES

- Gain : ≥ 15 dB
- Polarization Dependent Gain (PDG) : ≤ 1.5 dB
- Built-in optical isolator (input side)
- Low power consumption : 1.0W typ.($T_C=75^\circ\text{C}$)

APPLICATIONS

- 100GBASE-ER4 CFP/CFP2 transceiver
- Pre-amplifier

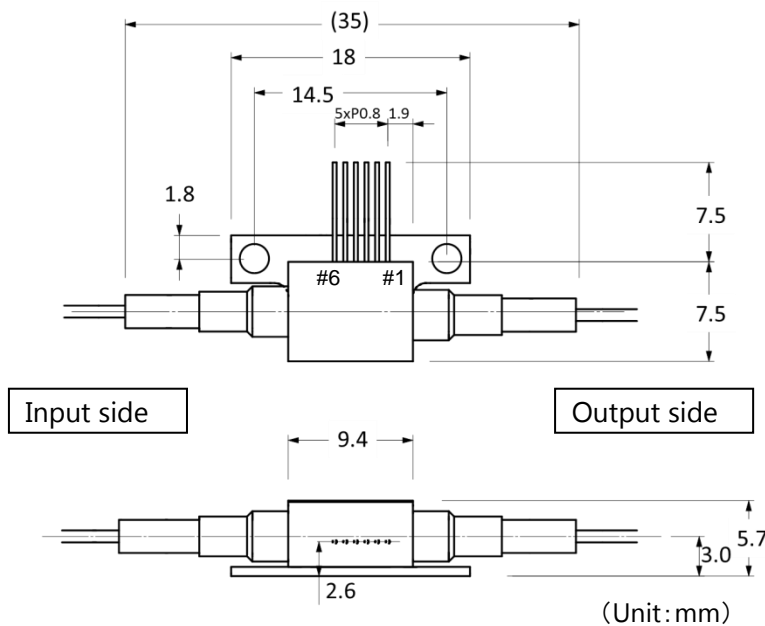


ABSOLUTE MAXIMUM RATINGS ($T_{SOA}=25^\circ\text{C}$)

Item	Symbol	Rating	Unit
SOA Forward Current	I_F	150	mA
SOA Reverse Voltage	V_R	2	V
Operating Case Temperature	T_C	-5 to +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +85	$^\circ\text{C}$
Cooler Current	I_C	1.0	A
Cooler Voltage	V_C	2.5	V

*Excess over the absolute maximum ratings may lead to damage.

DIMENSIONS



PIN CONFIGURATION

No.	Functions
1	Cooler cathode
2	Cooler anode
3	Thermistor
4	Thermistor
5	SOA cathode
6	SOA anode

Fiber Characteristics	
Fiber type	SMF
Diameter of Fiber	$\Phi 0.25$
Minimum Fiber bend radius	7.5mm
Fiber length (both sides)	1,000mm
Connectors (both sides)	LC Connector

OPTICAL AND ELECTRICAL CHARACTERISTICS

(T_{SOA}=25°C, T_C=25°C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Optical Gain	G	I _F =120mA, *1, *2, *3	15			dB
Polarization Dependent Gain	PDG	I _F =120mA, *1, *2, *3			1.5	dB
Forward Current	I _F		100		150	mA
Forward Voltage	V _F	I _F =120mA			2.0	V
Wavelength Range	λ	I _F =120mA	1294		1311	nm
Saturation Power	P _S	I _F =120mA, *4		7		dBm
Noise Figure	NF	I _F =120mA, *1, *2, *3, *5		7		dB
Cooler Current	I _C	G=(BOL), T _C =75°C			0.6	A
Cooler Voltage	V _C	G=(BOL), T _C =75°C			2.2	V
Thermistor Resistance	R _{th}	T _{SOA} =25°C, B=3435±105K	9.5	10	10.5	kΩ

*1: Optical input signal condition: Continuous Wave(CW)

*2: Optical input signals are 4 ranges of wavelength listed below. Characteristics are measured for each wavelength range.

Wavelength range of optical input signals are as follows

λ 0 : 1294.5~1296.6nm λ 2 : 1303.5~1305.7nm

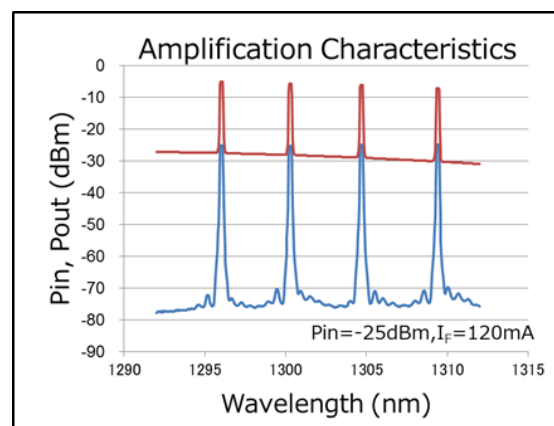
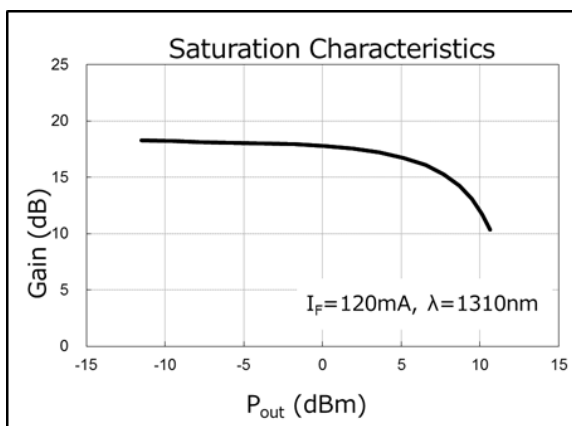
λ 1 : 1299.0~1301.1nm λ 3 : 1308.0~1310.2nm

*3: Optical Input signal Power (P_{in}) = -25dBm

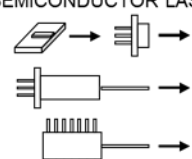
*4: Saturation power is measured by using single wavelength(λ=1310nm).

*5: Without polarization adjustment.

TYPICAL CHARACTERISTICS




SEMICONDUCTOR LASER



AVOID EXPOSURE
Invisible laser radiation is emitted from this aperture

Caution – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
This Product Complies with 21 CFR 1040.10 and 1040.11
Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan



INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM

OUTPUT POWER 15mW
WAVELENGTH 1.10 to 1.59 μm
CLASS III b LASER PRODUCT



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

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 less than 7.5mm in diameter.



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