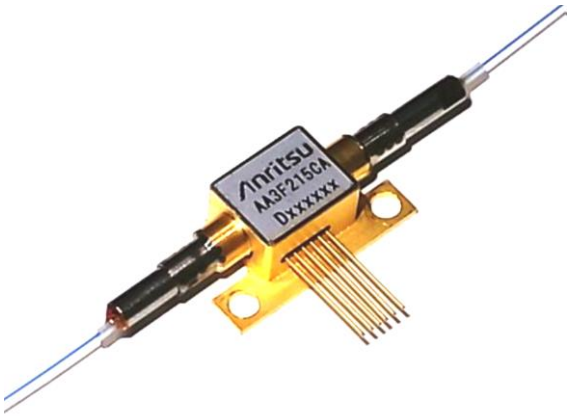
1.3µm SOA Module *AA3F215CA*

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

■FEATURES

- ·Gain : ≧15dB
- ·Polarization Dependent Gain (PDG) : ≦1.5dB
- ·Built-in optical isolator (input side)
- ·Low power consumption : 1.0W typ.(T_C=75℃)



■APPLICATIONS

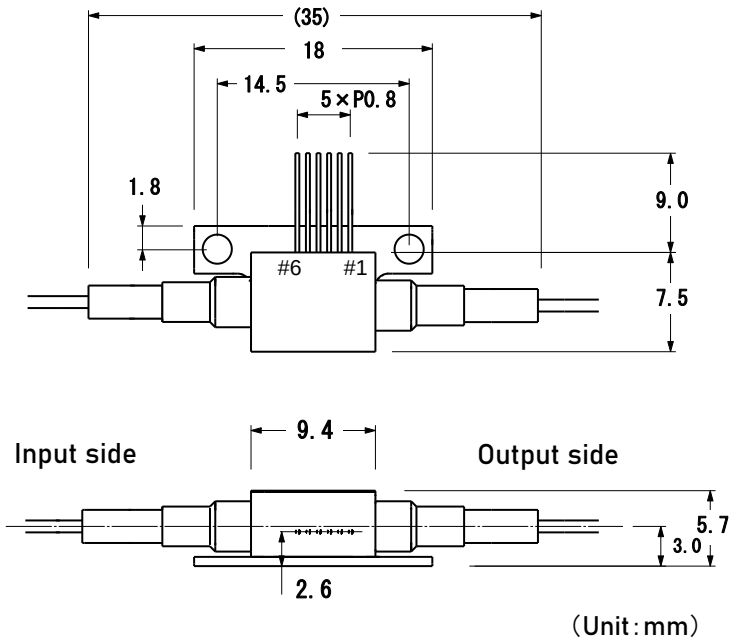
- ·100GBASE-ER4 CFP/CFP2 transceiver
- ·Preamplifier

■ABSOLUTE MAXIMUM RATINGS (T_{SOA}=25℃)

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	℃
Storage Temperature	T_{stg}	-40 to +85	℃
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



(Unit : mm)

■PIN CONFIGURATION

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

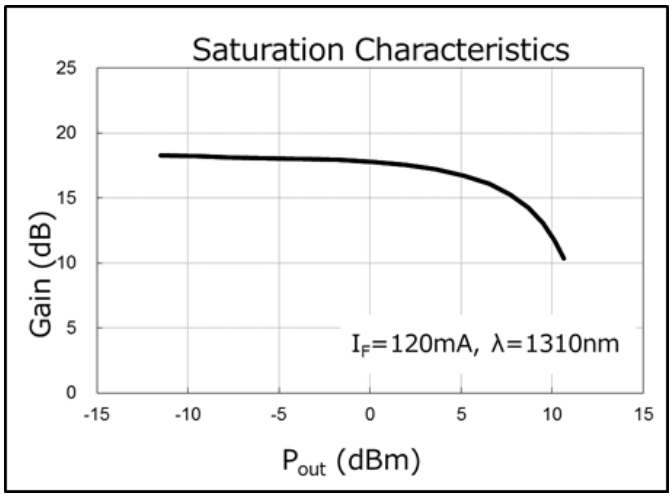
Fiber Characteristics	
Fiber type	SMF
Diameter of Fiber	0.25 mm
Minimum Fiber bend radius	5.0 mm
Fiber length (both sides)	1,000 mm
Connectors (both sides)	LC Connector

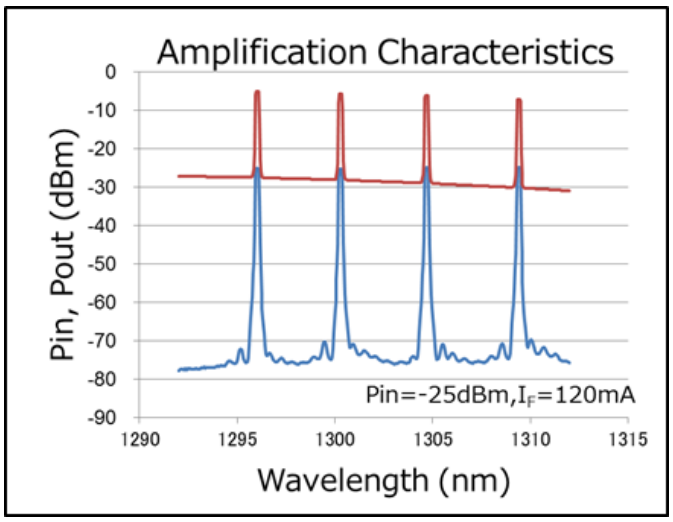
■OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{SOA}=25℃, T_C=25℃)

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	I_F=120mA, T_C=75℃			0.6	A
Cooler Voltage	V_C	I_F=120mA, T_C=75℃			2.2	V
Thermistor Resistance	R_{th}	T_{SOA}=25℃, B=3435±105K	9.5	10	10.5	kΩ

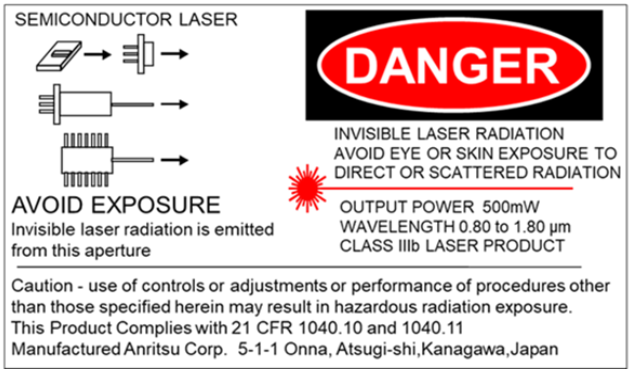
*1: Optical input signal condition: Continuous Wave(CW)
*2: Optical input signals are 4 ranges of wavelength listed below. Characteristics are measured for each wavelength range.
Wavelength range of optical input signals are as follows:
λ 0 : 1294.5～1296.6nm λ 2 : 1303.5～1305.7nm
λ 1 : 1299.0～1301.1nm λ 3 : 1308.0～1310.2nm
*3: Optical Input signal Power （Pin） ＝ -25dBm
*4: Saturation power is measured by using single wavelength(λ=1310nm).
*5. Without polarization adjustment.

■TYPICAL CHARACTERISTICS





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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ANRITSU CORPORATION
DEVICES SALES DEPARTMENT

ANRITSU DEVICES CO., LTD.
OVERSEAS MARKETING DEPT.

Tel +81 46 296 6783 fax +81 46 225 8390
5-1-1 Onna,Atsugi-shi,Kanagawa
243-0032 Japan

URL:https://www.anritsu.com/anritsu-devices