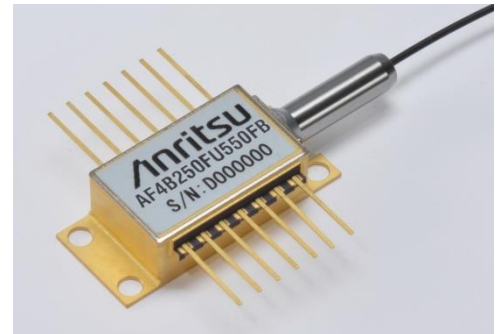


1.4 μ m FBG LD MODULE *AF4B2 SERIES type GD*

The AF4B2 SERIES type GD is the pumping laser module of 1.4 μ m band developed for the optical fiber Raman amplifier.

FEATURES

- Optical output power : 300mW to 500mW
- Wavelength range : $\lambda_T=1420$ to 1485nm
- Polarization maintaining fiber (PMF, $\Phi 0.25$ mm UV-coating)
- 14pin butterfly package, Monitor-PD, Built-in Cooler
- LD operating temperature: 35°C



APPLICATION

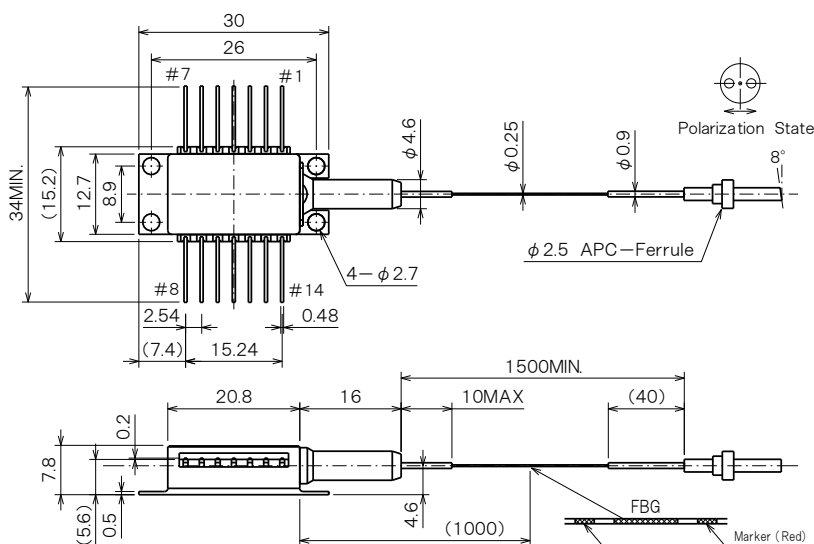
- Raman amplifier

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
LD Forward current	I_F	2200	mA
LD Reverse voltage	V_R	2	V
PD Forward current	I_{FD}	10	μ A
PD Reverse voltage	V_{RD}	20	V
Operating case temperature	T_C	-5 to +70	°C
Storage temperature	T_{stg}	-40 to +85	°C
Cooler current	I_C	5.8	A

* Exceeding the absolute maximum ratings may cause a failure.

DIMENSIONS (unit : mm)

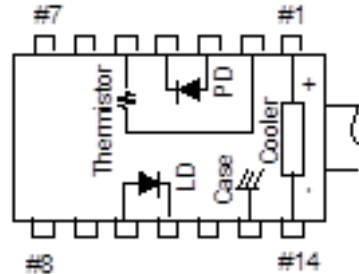


(Note) The polarization direction of the LD is parallel to the slow axis of the PMF.

PIN CONFIGURATION

No.	FUNCTION	No	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	PD anode	10	LD anode
4	PD cathode	11	LD cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler cathode

TOP VIEW



OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{FBG}=25°C, T_{LD}=35°C, T_C=25°C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Threshold current	I _{th}				180	mA
Center wavelength	λ _C	at rating output power RMS (-20dB)	λ _T - 1.0	λ _T	λ _T + 1.0	nm
Spectrum width	Δλ	at rating output power, -10dB			3.5	nm
Monitor current	I _m	at rating output power, V _{RD} =5V	100		2000	μA
PD dark current	I _d	V _{RD} =5V			0.1	μA
Tracking error	ΔP _f	I _m =const., T _c = -5 to 70°C	-0.5		0.5	dB
Thermistor resistance	R _{th}	T _{LD} =35°C, B=3900±100K	6.0	6.5	7.0	kΩ
Polarization extinction ration	X _p	at rating output power	17			dB

OPTICAL OUTPUT, COOLER CHARACTERISTICS AND POWER CONSUMPTION ($T_{LD}=35^{\circ}\text{C}$)

Center Wavelength	Rating Output Power	LD Current	Forward Voltage		Cooler Current	Cooler Voltage	Power Consumption
			V_F				
λ_T [nm]	P_f [mW]	I_F BOL [A]	BOL [V]	EOL [V]	I_C EOL [A]	V_C EOL [V]	Ptotal EOL [W]
1420 ~ 1485	300	1100	2.0	2.2	1.52	1.94	5.2
	320	1200	2.0	2.2	1.61	2.01	5.7
	340	1300	2.0	2.2	1.69	2.09	6.2
	350	1330	2.0	2.2	1.72	2.11	6.5
	360	1350	2.0	2.2	1.75	2.17	6.7
	380	1400	2.0	2.2	1.80	2.21	7.1
	400	1450	2.0	2.2	1.85	2.30	7.5
	420	1550	2.2	2.45	1.95	2.36	8.0
	450	1650	2.2	2.45	2.01	2.40	8.7
	500	1750	2.2	2.45	2.05	2.45	9.2

(Note) $I_{F_EOL}=I_{F_BOL} \times 1.15$, maximum value

SPECIFICATION OF PIGTAIL FIBER

Item	Min.	Typ.	Max.	Unit
Cut-off wavelength	1300		1400	nm
Mode field diameter @1550nm	10.0	10.5	11.0	μm
Clad diameter	124	125	126	μm
UV coating diameter	230	245	260	μm
Temperature characteristic of FBG wavelength		0.01	0.02	nm/ $^{\circ}\text{C}$
Bending radius	30			mm

ORDERING INFORMATION

Model number : A F 4 B 2 F U 0 F B

(Reference)

◆Center wavelength

20: 1420nm

75: 1475nm

◆Optical output power

32: 320mW

50: 500mW



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.

SEMICONDUCTOR LASER

DANGER

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION

AVOID EXPOSURE
Invisible laser radiation is emitted from this aperture

OUTPUT POWER 800mW
WAVELENGTH 0.80 to 1.80 μm
CLASS IV LASER PRODUCT

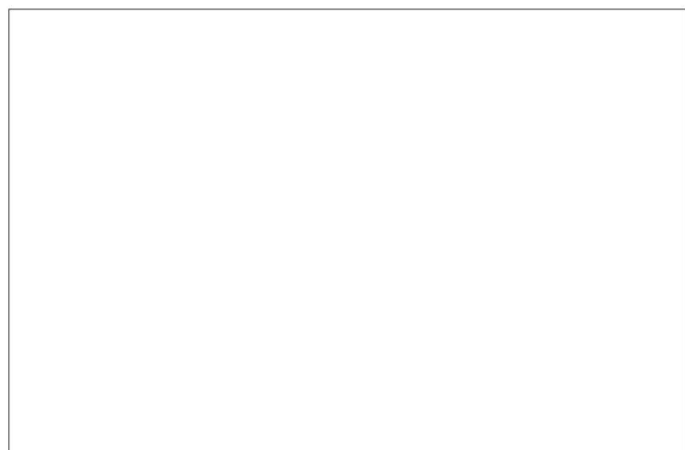
Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. This Product Complies with 21 CFR 1040.10 and 1040.11
Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan

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