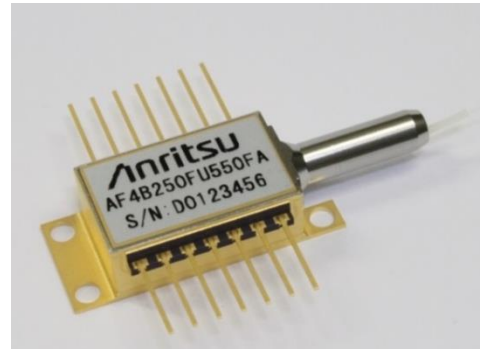


## 1.4 $\mu$ m FBG LD MODULE AF4B2 SERIES type GD

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

### FEATURES

- Optical output power : 300mW~500mW
- Wavelength range :  $\lambda_T=1420\sim1485$  nm
- Polarization maintaining fiber (PMF,  $\phi 0.25$ mm UV-coating)
- 14pin butterfly package, Monitor-PD,  
Built-in TEC (Thermo-electric cooler)
- LD operating temperature: 35°C



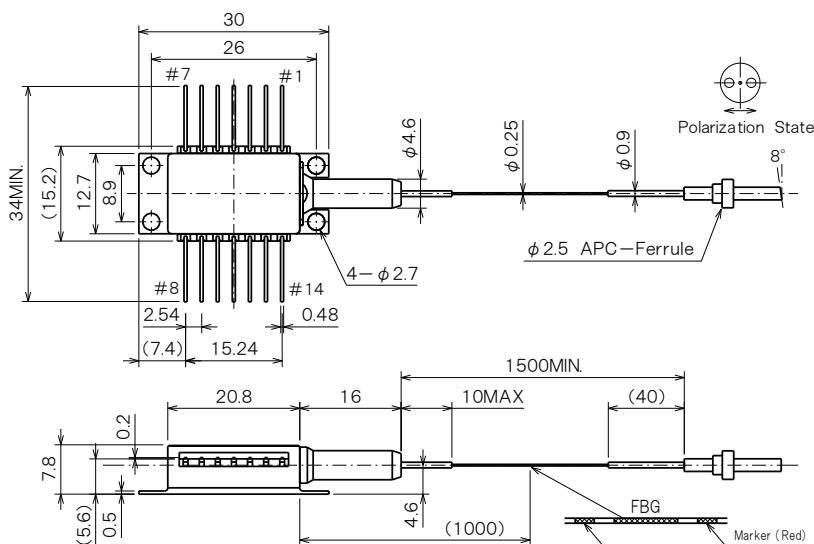
### APPLICATION

- 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	$\mu$ A
PD Reverse voltage	$V_{RD}$	20	V
Operating case temperature	$T_C$	-5 ~ +75	°C
Storage temperature	$T_{stg}$	-40 ~ +85	°C
Cooler current	$I_C$	5.8	A

### DIMENSIONS

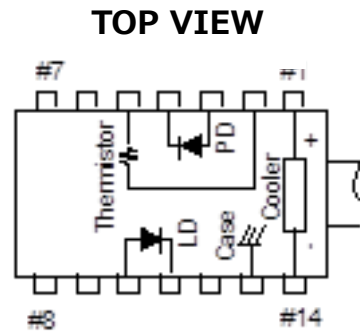


(Note) The polarization direction of the LD is parallel to the slow axis of the PMF. The connector key does not match the slow axis of the PMF.

(unit : mm)

## 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



## OPTICAL AND ELECTRICAL CHARACTERISTICS (T<sub>LD</sub>=35°C, T<sub>C</sub>=25°C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Threshold current	I <sub>th</sub>				180	mA
Center wavelength	λ <sub>C</sub>	at rating output power	λ <sub>T</sub> - 1.0	λ <sub>T</sub>	λ <sub>T</sub> + 1.0	nm
Spectrum width	Δλ	at rating output power, RMS (-20dB)			3.5	nm
Monitor current	I <sub>m</sub>	at rating output power, V <sub>RD</sub> =5V	100		2000	μA
PD dark current	I <sub>d</sub>	V <sub>RD</sub> =5V			0.1	μA
Tracking error	ΔP <sub>f</sub>	I <sub>m</sub> =const., T <sub>c</sub> = -5~75°C	-0.5		0.5	dB
Thermistor resistance	R <sub>th</sub>	T <sub>LD</sub> =35°C, B=3900± 100K	6.0	6.5	7.0	kΩ
Polarization extinction ration	X <sub>p</sub>	at rating output power	17			dB

## 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
FBG recoating part diameter			350	μm
FBG recoating part length			50	mm
Temperature characteristic of FBG wavelength		0.01	0.02	nm/°C
Bending radius	30			mm

## ORDERING INFORMATION

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

(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

OUTPUT POWER 500mW  
WAVELENGTH 0.80 to 1.80 μm  
CLASS IIIb LASER PRODUCT

**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

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