

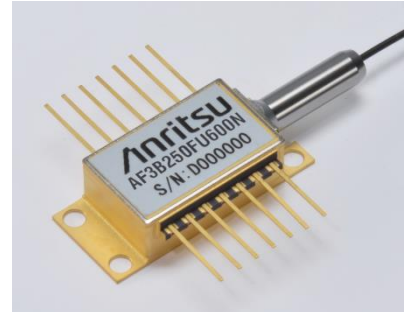
# 1.3 $\mu$ m FBG LD MODULE

# AF3B250FU600N

The AF3B250FU600N is 1.3 $\mu$ m band laser diode module with fiber Bragg grating designed for high-order Raman fiber amplification. The laser is packaged in a 14-pin butterfly package with monitor photodiode and thermo-electric cooler.

## FEATURES

- Optical output: 500 mW
- Center wavelength: 1360.0 nm
- PMF output (UV coating fiber:  $\phi$ 0.25 mm)
- 14-pin butterfly package
- Internal monitor PD and TEC



## APPLICATION

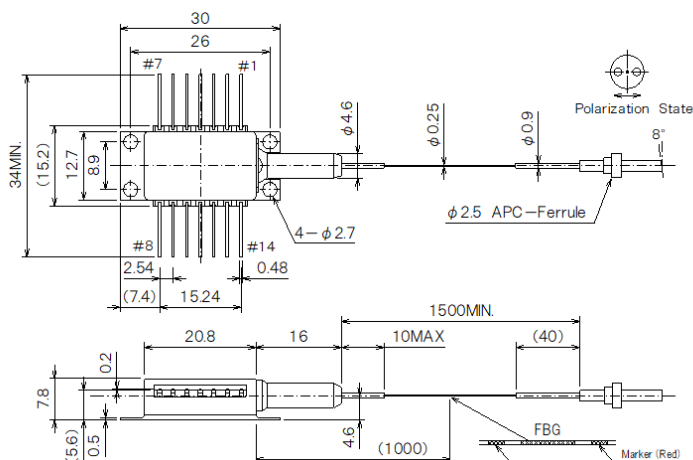
- High-order Raman fiber amplification

## ABSOLUTE MAXIMUM RATING

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
Operation case temperature	$T_C$	-20 to +70	$^{\circ}$ C
Storage temperature	$T_{stg}$	-40 to +85	$^{\circ}$ C
Cooler current	$I_C$	5.8	A

\* Exceeding the absolute maximum ratings may cause a failure.

## DIMENSIONS



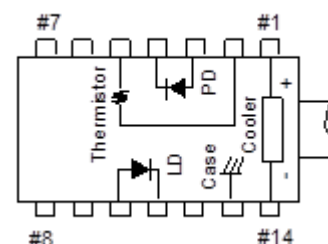
(unit : mm)

(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<sub>LD</sub>=25°C, T<sub>C</sub>=25°C)

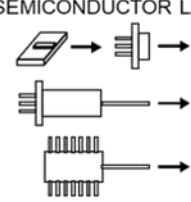
Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Threshold current	I <sub>th</sub>	BOL			180	mA
Forward Current	I <sub>F</sub>	P <sub>f</sub> = 500 mW, BOL			1800	mA
Forward Voltage	V <sub>F</sub>	P <sub>f</sub> = 500 mW, BOL			2.2	V
Center wavelength	λ <sub>c</sub>	P <sub>f</sub> = 500 mW, RMS -20 dB	1358.5	1360.0	1361.5	nm
Spectrum width	Δλ	P <sub>f</sub> = 500 mW, -10 dB			3.5	nm
Monitor current	I <sub>m</sub>	P <sub>f</sub> = 500 mW, 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> = -20 to 70°C	-0.5		0.5	dB
Cooler voltage	V <sub>C</sub>	I <sub>F</sub> =*EOL, T <sub>C</sub> =70°C		3.3	4.0	V
Cooler current	I <sub>C</sub>	I <sub>F</sub> =*EOL, T <sub>C</sub> =70°C		2.8	3.5	A
Thermistor resistance	R <sub>th</sub>	T <sub>LD</sub> =25°C, B=3900±100K	9.5	10	10.5	kΩ
Polarization extinction ratio	X <sub>p</sub>	P <sub>f</sub> = 500 mW	17			dB


(Note) \* EOL = BOL x 1.2




**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





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



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

**AVOID EXPOSURE**  
Invisible laser radiation is emitted from this aperture

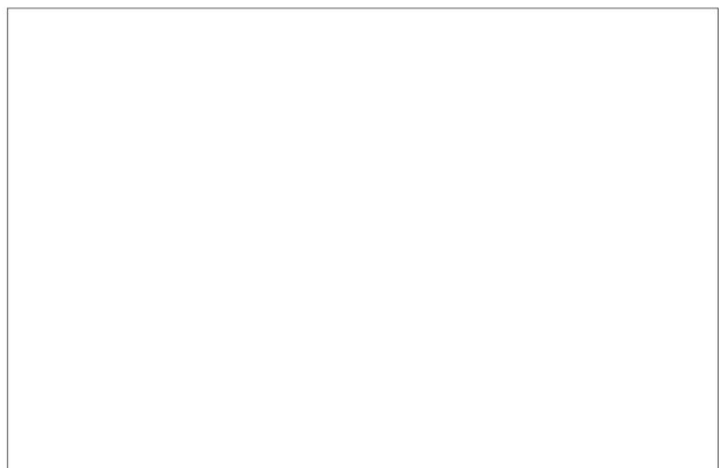
Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.  
This Product Complies with 21 CFR 1040.10 and 1040.11  
Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan

**ANRITSU CORPORATION**  
**SENSING & DEVICES COMPANY**  
**OVERSEAS SALES DEPT**

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

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

Please contact following local office for the quotation and order.  
Anritsu Corporation reserves the right to change the content of the catalog at any time without notice.



This product and its manuals may require an Export License / Approval by the Government of the product's country of origin for re-export from your country. Before re-exporting the product or manuals, please contact us to confirm whether they are export-controlled items or not. When you dispose of export-controlled items, the products / manuals need to be broken / shredded so as not to be unlawfully used for military purpose.