

1.4 μ m FBG LD MODULE

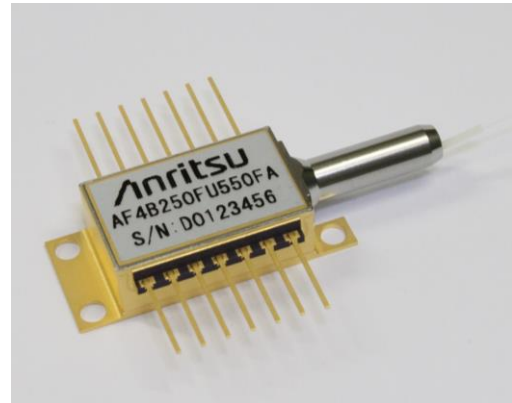
AF4B250FUxxxFA

Optical fiber output power 500mW

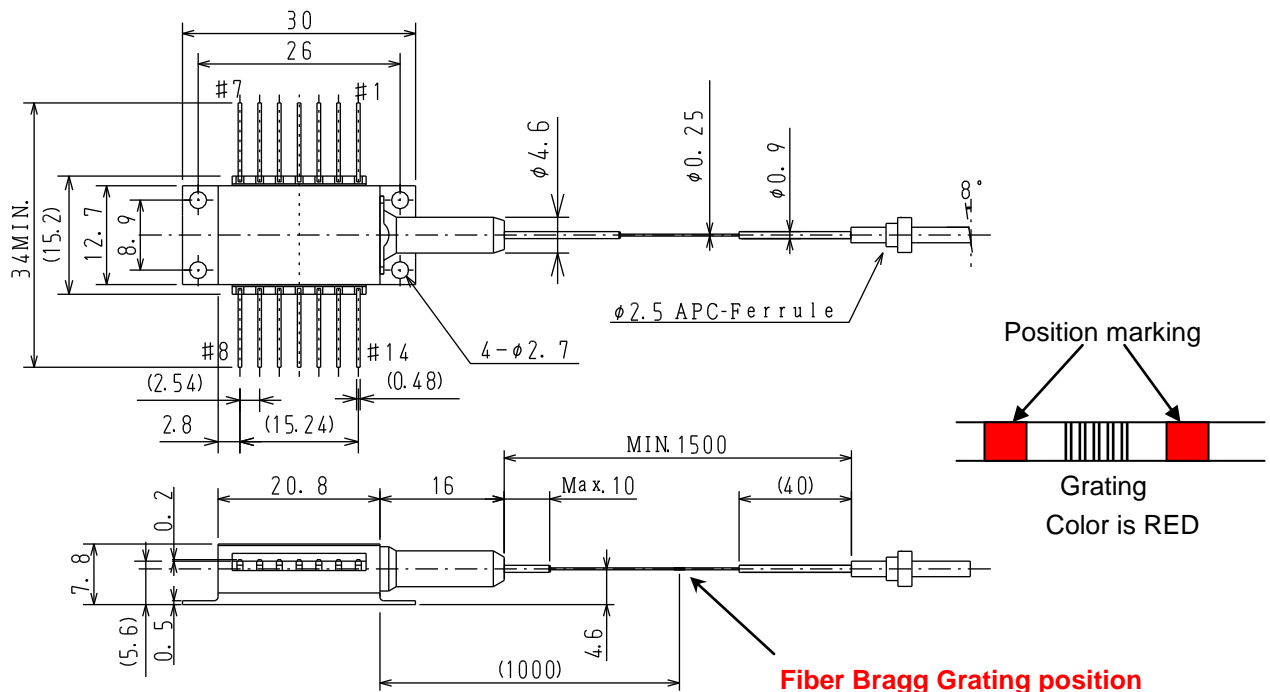
The AF4B250FUxxxFA is designed for Raman amplifier. The wavelength is stabilized with FBG. The laser is installed in a new 14-pin butterfly package with monitor photodiode (PD) and thermo-electric cooler (TEC).

■ FEATURES

- ◆ Optical output: 500mW ($I_F \leq 1750\text{mA}$)
- ◆ Range of Wavelength : $1420\text{nm} \leq \lambda < 1485\text{nm}$
eg. xxx = 750 $\lambda = 1475.0\text{ nm}$
(0.5nm spacing is available)
- ◆ Fiber: PMF output (UV coating fiber: $\phi 0.25\text{mm}$)
- ◆ 14pin butterfly package
- ◆ Internal monitor PD and TEC
- ◆ LD operation temperature = 35 deg.C



■ DIMENSIONS



(Unit: mm)

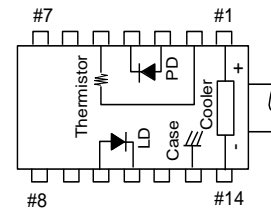
(Note) Polarization state of LD is aligned parallel to the slow axis.

■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
LD Forward Current	IF	2200	mA
LD Reverse Voltage	VR	2	V
PD Forward Current	IFD	10	mA
PD Reverse Voltage	VRD	20	V
Operating Case temperature	Tc	-5 to +75	deg.C
Storage Temperature	Tstg	-40 to +85	deg.C
Cooler Current	IC	5.8	A

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

■ TOP VIEW



■ 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

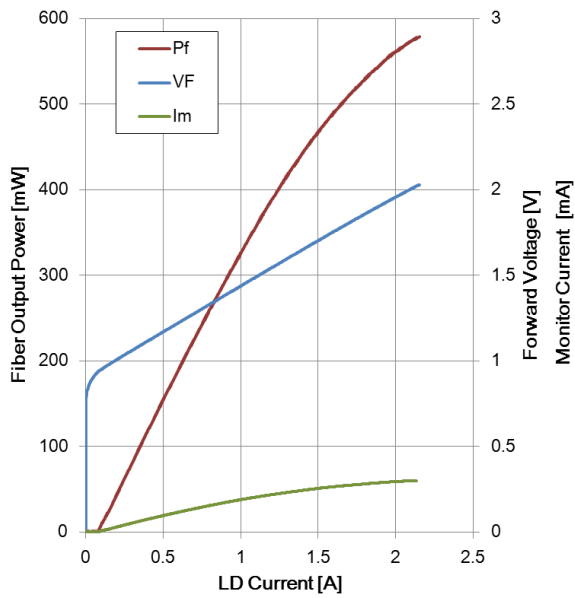
($T_{LD}=35\text{deg.C}$, $T_C=25\text{deg.C}$, P_f range=50mW to P_{max}, unless noted otherwise)

Item	Symbol	Test condition		AF4B250FUxxxFA	Unit
Output power	Pf	-	Min.	500	mW
Forward Voltage	Vf	at Output Power	Max.	2.2	V
Threshold Current	I _{th}	-	Max.	180	mA
Forward Current (BOL)	IF	at Output Power	Max.	1750	mA
Center Wavelength	λ_c	at Output Power RMS (-20dB)	Min.	$\lambda - 1$	nm
			Typ.	λ	
			Max.	$\lambda + 1$	
Spectral width	$\Delta\lambda$	at Output Power -10dB	Max.	3.5	nm
Monitor Current	I _m	at Output Power	Min.	100	μA
			Typ.	—	
			Max.	2000	
PD Dark Current	I _d	VRD=5V	Max.	0.1	μA
Tracking Error	ΔPf	I _m =const, T _c = -5~75deg.C	Max.	0.5	dB
Cooler Voltage	VC	IF=*EOL, T _c =75deg.C	Typ.		V
			Max.	2.75	
Cooler Current	IC	IF=*EOL, T _c =75deg.C	Typ.		A
			Max.	2.25	
Total Power Consumption	W _{total}	IF=*EOL, T _c =75deg.C	Max.	10.0	W
Thermistor Resistance	R _{th}	TLD=35deg.C	Min.	6.0	K Ω
			Typ.	6.5	
			Max.	7.0	
Forward Voltage	X _p	at Output Power	Min.	17	dB

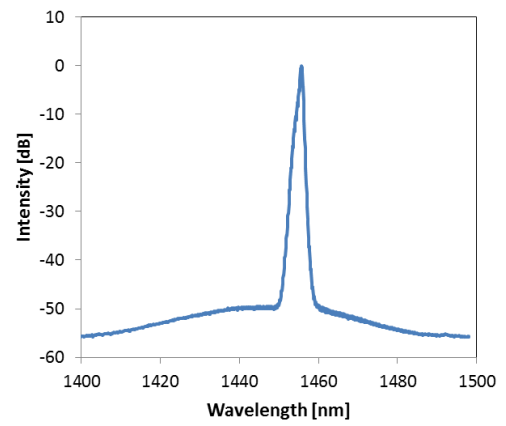
*EOL=BOL \times 1.15

■ TYPICAL CHARACTERISTICS [AF4B250FU550FA]

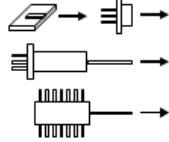
◆ Fiber Output Power / Monitor Current / Forward Voltage – Forward Current



◆ Emission Spectrum



SEMICONDUCTOR LASER



AVOID EXPOSURE

Invisible laser radiation is emitted from this aperture



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



OUTPUT POWER 800mW
WAVELENGTH 0.80 to 1.80 μ m
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

Anritsu

envision: ensure

Specifications are subject to change without notice.

• United States

Anritsu Company

1155 East Collins Blvd., Suite 100, Richardson,
TX 75081, U.S.A.
Toll Free: 1-800-267-4878
Phone: +1-972-644-1777
Fax: +1-972-671-1877

• Canada

Anritsu Electronics Ltd.

700 Silver Seven Road, Suite 120, Kanata,
Ontario K2V 1C3, Canada
Phone: +1-613-591-2003
Fax: +1-613-591-1006

• Brazil

Anritsu Eletrônica Ltda.

Praça Amadeu Amaral, 27 - 1 Andar
01327-010 - Bela Vista - São Paulo - SP - Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

• Mexico

Anritsu Company, S.A. de C.V.

Av. Ejército Nacional No. 579 Piso 9, Col. Granada
11520 México, D.F., México
Phone: +52-55-1101-2370
Fax: +52-55-5254-3147

• United Kingdom

Anritsu EMEA Ltd.

200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200
Fax: +44-1582-731303

• France

Anritsu S.A.

12 avenue du Québec, Bâtiment Iris 1 - Silic 612,
91140 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

• Germany

Anritsu GmbH

Nemetschek Haus, Konrad-Zuse-Platz 1
81829 München, Germany
Phone: +49-89-442308-0
Fax: +49-89-442308-55

• Italy

Anritsu S.r.l.

Via Elio Vittorini 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

• Sweden

Anritsu AB

Kistagången 20B, 164 40 KISTA, Sweden
Phone: +46-8-534-707-00
Fax: +46-8-534-707-30

• Finland

Anritsu AB

Teknobulevardi 3-5, FI-01530 VANTAA, Finland
Phone: +358-20-741-8100
Fax: +358-20-741-8111

• Denmark

Anritsu A/S

Kay Fiskers Plads 9, 2300 Copenhagen S, Denmark
Phone: +45-7211-2200
Fax: +45-7211-2210

• Russia

Anritsu EMEA Ltd.

Representation Office in Russia

Tverskaya str. 16/2, bld. 1, 7th floor.
Moscow, 125009, Russia
Phone: +7-495-363-1694
Fax: +7-495-935-8962

• Spain

Anritsu EMEA Ltd.

Representation Office in Spain

Edificio Cuzco IV, Po. de la Castellana, 141, Pta. 8
28046, Madrid, Spain
Phone: +34-915-726-761
Fax: +34-915-726-621

• United Arab Emirates

Anritsu EMEA Ltd.

Dubai Liaison Office

P O Box 500413 - Dubai Internet City
Al Thuraya Building, Tower 1, Suit 701, 7th Floor
Dubai, United Arab Emirates
Phone: +971-4-3670352
Fax: +971-4-3688460

• India

Anritsu India Private Limited

2nd & 3rd Floor, #837/1, Binnamangla 1st Stage,
Indiranagar, 100ft Road, Bangalore - 560038, India
Phone: +91-80-4058-1300
Fax: +91-80-4058-1301

• Singapore

Anritsu Pte. Ltd.

11 Chang Charn Road, #04-01, Shriro House
Singapore 159640
Phone: +65-6282-2400
Fax: +65-6282-2533

• P.R. China (Shanghai)

Anritsu (China) Co., Ltd.

Room 2701-2705, Tower A,
New Caohejing International Business Center
No. 391 Gui Ping Road Shanghai, 200233, P.R. China
Phone: +86-21-6237-0898
Fax: +86-21-6237-0899

• P.R. China (Hong Kong)

Anritsu Company Ltd.

Unit 1006-7, 10/F., Greenfield Tower, Concordia Plaza,
No. 1 Science Museum Road, Tsim Sha Tsui East,
Kowloon, Hong Kong, P.R. China
Phone: +852-2301-4980
Fax: +852-2301-3545

• Japan

Anritsu Corporation

8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016 Japan
Phone: +81-46-296-1221
Fax: +81-46-296-1238

• Korea

Anritsu Corporation, Ltd.

5FL, 235 Pangyoeyeok-ro, Bundang-gu, Seongnam-si,
Gyeonggi-do, 463-400 Korea
Phone: +82-31-696-7750
Fax: +82-31-696-7751

• Australia

Anritsu Pty. Ltd.

Unit 21/270 Ferntree Gully Road, Notting Hill,
Victoria 3168, Australia
Phone: +61-3-9558-8177
Fax: +61-3-9558-8255

• Taiwan

Anritsu Company Inc.

7F, No. 316, Sec. 1, NeiHu Rd., Taipei 114, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817