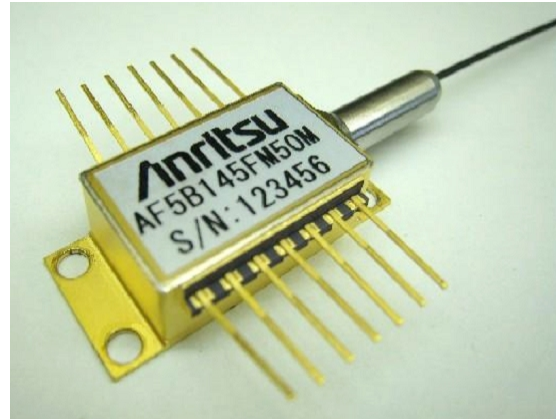


1.55 μ m LD Module AF5B145FM50M Optical Output Power 450mW

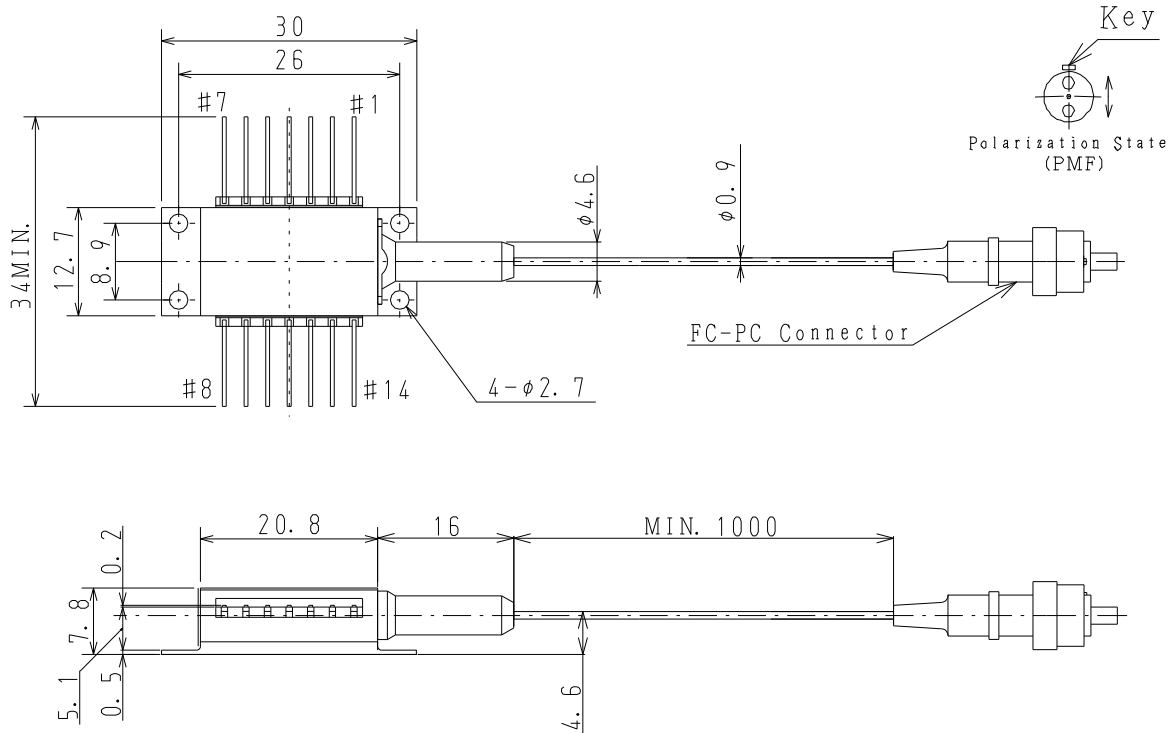
The AF5B145FM50M is 1.55 μ m laser diode modules designed for optical measurement and communication. The laser is packaged in a 14-pin standard butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

FEATURES

- ◆ Optical output : 450mW ($I_F \leq 1800\text{mA}$)
- ◆ Wavelength : $1550 \pm 20\text{nm}$
- ◆ Fiber : Flame-retardant PMF ($\phi 0.9\text{mm}$)
- ◆ FC-PC connector
- ◆ 14pin butterfly package
- ◆ Built-in optical isolator
- ◆ Internal monitor PD and TEC
- ◆ Low power consumption



DIMENSIONS



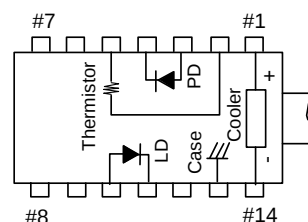
(Unit : mm)

note: Polarization state of LD is aligned parallel to the slow axis.

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



ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	unit
LD Forward Current	IF	2200	mA
LD Reverse Voltage	VR	2	V
Forward Current	IFD	10	mA
PD Reverse Voltage	VRD	20	V
Operating Case Temperature	Tc	-20 to +70	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.

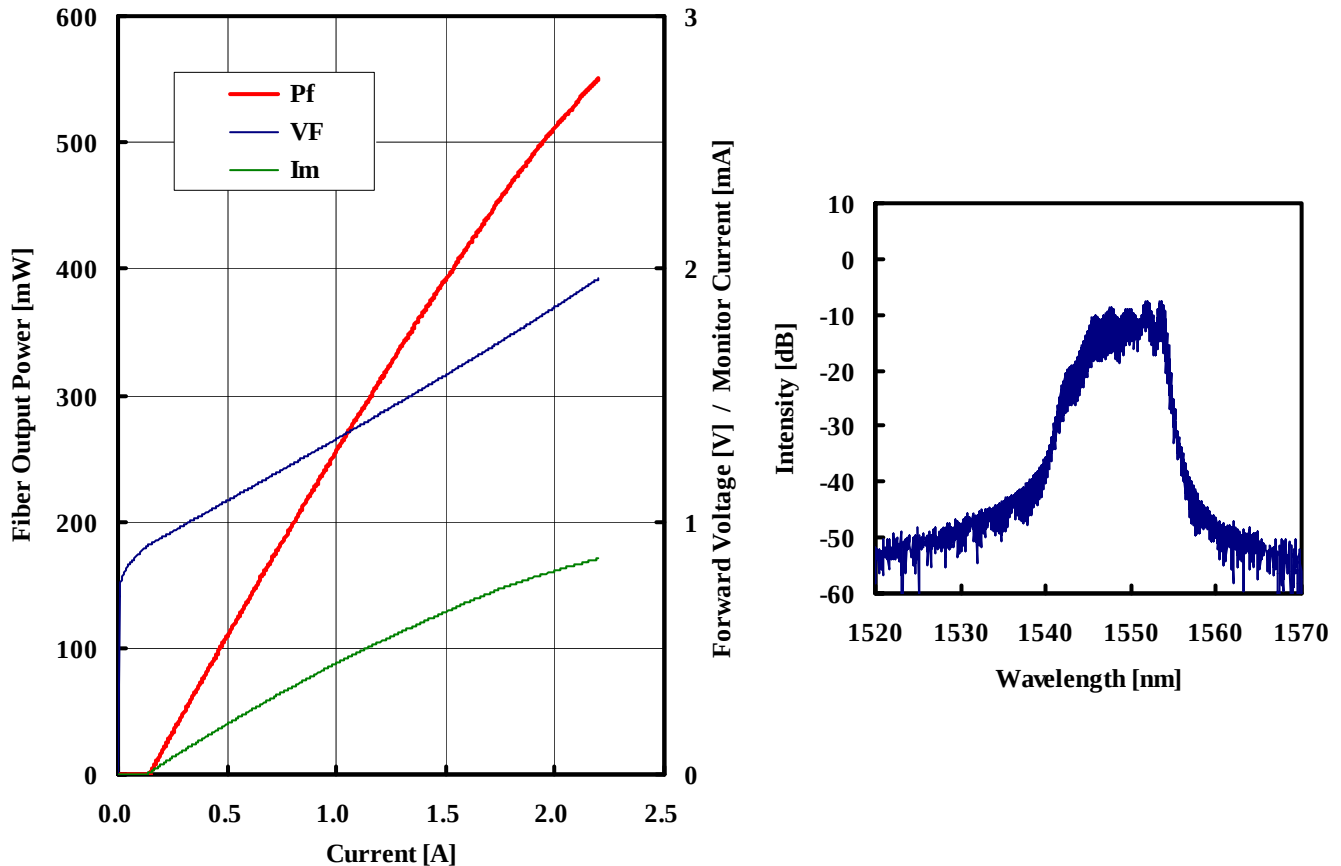
OPTICAL AND ELECTRICAL CHARACTERISTICS (TLD=25deg.C, Tc=25deg.C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Output Power	Pf				450	mW
Forward Voltage	VF	Pf = 450mW			2.2	V
Threshold Current	Ith				180	mA
Forward Current (BOL)	IF	Pf = 450mW			1800	mA
Center Wavelength	λ_c	Pf = 450mW, RMS(-20dB)	1530	1550	1570	nm
Spectral Width	$\Delta \lambda$	Pf = 450mW, RMS(-20dB)		5	10	nm
Monitor Current	Im	Pf = 450mW, VRD = 5V	100		2000	μ A
PD Dark Current	Id	VRD = 5V			0.1	μ A
Tracking Error	ΔPF	Im = const, Tc = -20 to 70deg.C			0.5	dB
Cooler Voltage	Vc	IF = EOL*, Tc = 70deg.C			4.0	V
Cooler Current	Ic	IF = EOL*, Tc = 70deg.C			3.5	A
Thermal Resistance	RTH	TLD = 25deg.C, B= 3900 $\pm$ 100K	9.5	10.0	10.5	K Ω
Optical Isolation	Ro	TLD = 25deg.C		30		dB
Extinction Ratio	XP	Pf = 450mW	17			dB

(note) EOL=BOL x 1.2

■ TYPICAL CHARACTERISTICS

◆ Fiber output power / Monitor Current / Voltage-Forward current characteristics / Emission spectrum



Anritsu Corporation reserves the right to change the design or specification of the product at any time without notice.

ANRITSU CORP.

<http://www.anritsu.co.jp/>

SEMICONDUCTOR LASER

AVOID EXPOSURE
Invisible laser radiation is emitted from this aperture

DANGER

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

OUTPUT POWER: 600mW
WAVELENGTH: 1.50 to 1.70 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 Corporation

5-1-1 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan
Phone: +81-46-223-1111
Fax: +81-46-296-1264

● U.S.A.

Anritsu Company
1155 East Collins Blvd., Richardson, TX 75081, U.S.A.
Toll Free: 1-800-ANRITSU (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.
Praca Amadeu Amaral, 27 - 1 Andar
01327-010-Paraisópolis, São Paulo-Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

● U.K.

Anritsu EMEA Ltd.
200 Capability Green, Luton, Bedfordshire LU1 3LU, U.K.
Phone: +44-1582-433280
Fax: +44-1582-731303

● Germany

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

● France

Anritsu S.A.
9, Avenue du Québec Z.A. de Courtabœuf 91951 Les
Ulis Cedex, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

● Italy

Anritsu S.p.A.
Via Elio Vittorini, 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

● Sweden

Anritsu AB
Borgeljordsgatan 13, 164 40 KISTA, Sweden
Phone: +46-853470700
Fax: +46-853470730

● Finland

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

● Denmark

Anritsu A/S
Kirkebjerg Allé 80 DK-2605 Brøndby, Denmark
Phone: +45-72112200
Fax: +45-72112210

● Singapore

Anritsu Pte Ltd.
10, Hoe Chiang Road, #07-01/02, Keppel Towers,
Singapore 089315
Phone: +65-62828-2400
Fax: +65-6282-2533

● P.R. China (Hong Kong)

Anritsu Company Ltd.
Suite 923, 9/F, Chinachem Golden Plaza, 77 Mody Road,
Tsimshatsui East, Kowloon, Hong Kong, P.R. China
Phone: +852-2301-4980
Fax: +852-2301-3545

● P.R. China (Beijing)

Anritsu Company Ltd.
Beijing Representative Office
Room 1515, Beijing Fortune Building,
No. 5, Dong-San-Huan Bei Road,
Chao-Yang District, Beijing 10004, P.R. China
Phone: +86-10-6590-9230
Fax: +86-10-6590-9235

● Korea

Anritsu Corporation, Ltd.
8F Hyunju Building, 832-41, Yeoksam dong,
Kangnam-ku, Seoul, 135-080, Korea
Phone: +82-2-553-6603
Fax: +82-2-553-6604

● 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

● India

Anritsu Corporation
India Liaison Office
Unit No. S-3, Second Floor, Esteem Red Cross Bhavan,
No. 26, Race Course Road, Bangalore 560 001, India
Phone: +91-80-30844707
Fax: +91-80-22356648