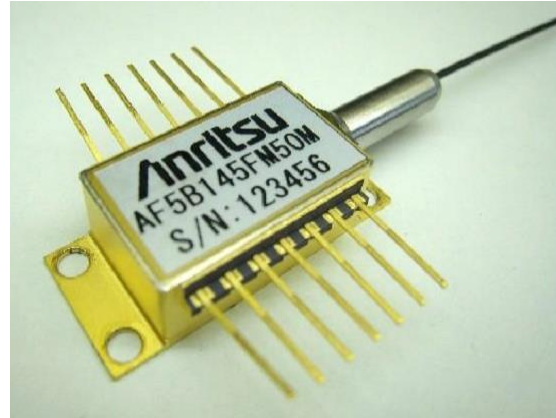


1.55 μ m LD Module *AF5B145FM50M* *Optical Output Power 450mW*

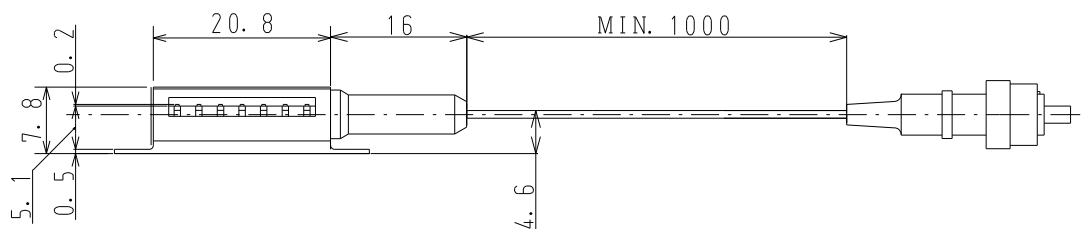
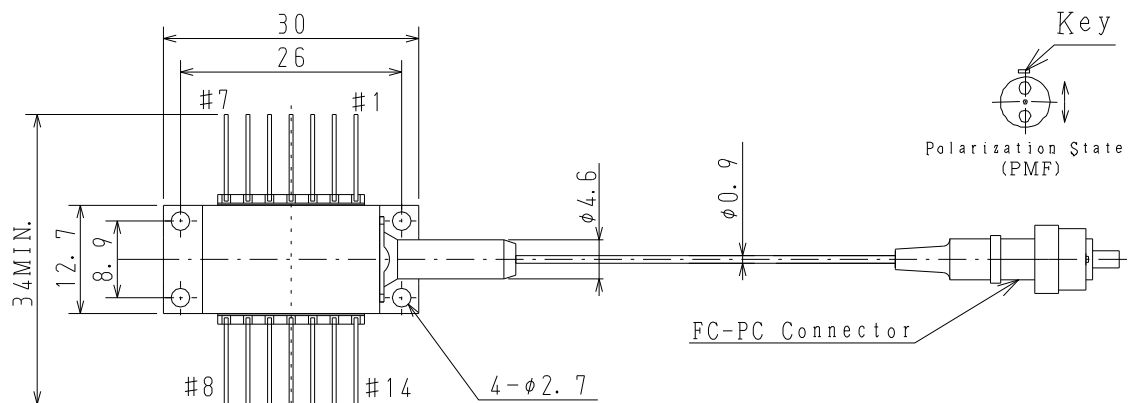
The AF5B145FM50M is 1.55 μ m laser diode module designed for optical measurement and communication. The laser is packaged in a 14-pin standard butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

■ FEATURES

- ◆ Optical output : 450mW ($I_F \leq 1800\text{mA}$)
- ◆ Wavelength : 1550 \pm 20nm
- ◆ 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

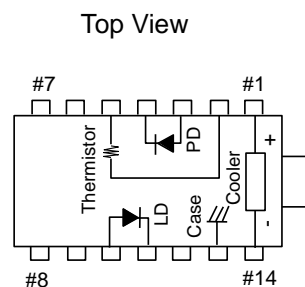


(Unit : mm)

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



■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	°C
Storage Temperature	Tstg	-40 to +85	°C
Cooler Current	IC	5.8	A

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

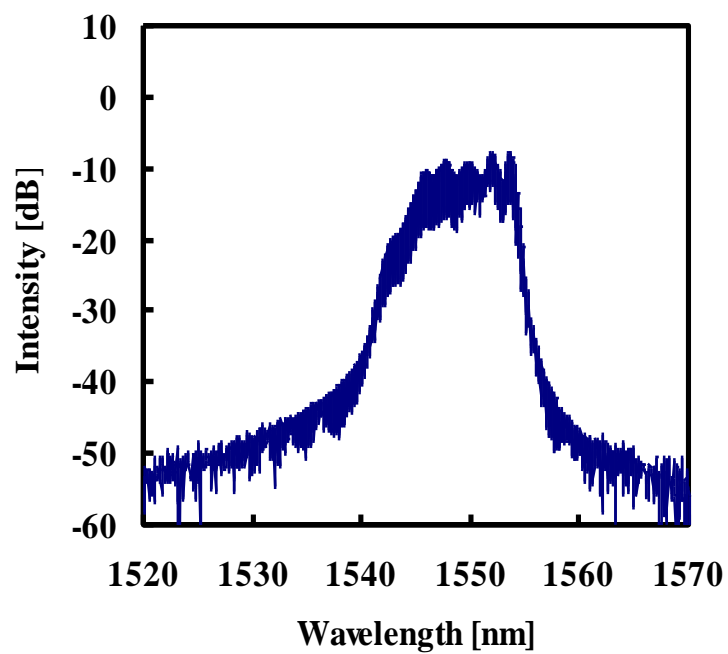
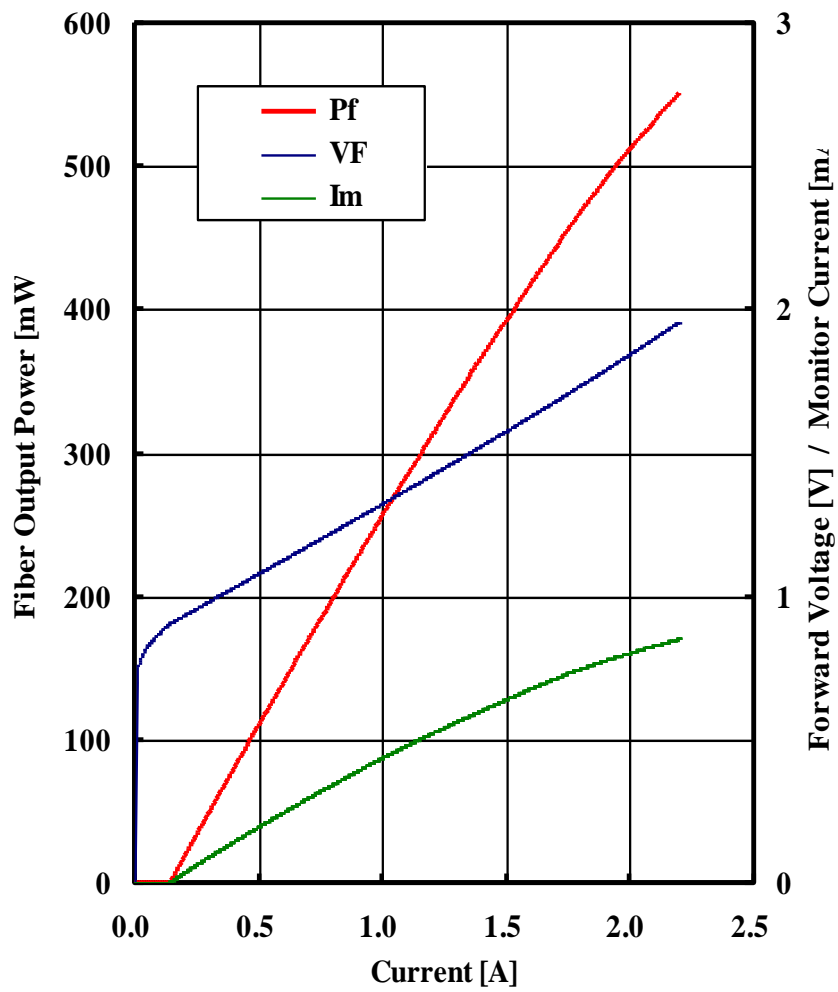
■OPTICAL AND ELECTRICAL CHARACTERISTICS (T_{LD}=25deg.C, T_C=25deg.C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Output Power	Pf				450	mW
Forward Voltage	V _F	P _f = 450mW			2.2	V
Threshold Current	I _{th}				180	mA
Forward Current (BOL)	I _F	P _f = 450mW			1800	mA
Center Wavelength	λ _c	P _f = 450mW, RMS(-20dB)	1530	1550	1570	nm
Spectral Width	Δλ	P _f = 450mW, RMS(-20dB)		5	10	nm
Monitor Current	I _m	P _f = 450mW, V _{RD} = 5V	100		2000	μA
PD Dark Current	I _d	V _{RD} = 5V			0.1	μA
Tracking Error	ΔPF	I _m = const, T _C = -20 to 70deg.C			0.5	dB
Cooler Voltage	V _C	I _F = EOL ^{*1} , T _C = 70deg.C			4.0	V
Cooler Current	I _C	I _F = EOL, T _C = 70deg.C			3.5	A
Thermal Resistance	R _{TH}	T _{LD} = 25deg.C, B= 3900±100K	9.5	10.0	10.5	K□
Optical Isolation	R _o	T _{LD} = 25deg.C		30		dB
Extinction Ratio	X _P	P _f = 450mW	17			dB

Note) *1 : EOL(End of life) = BOL (Begin of life) × 1.2

■ TYPICAL CHARACTERISTICS

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





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.

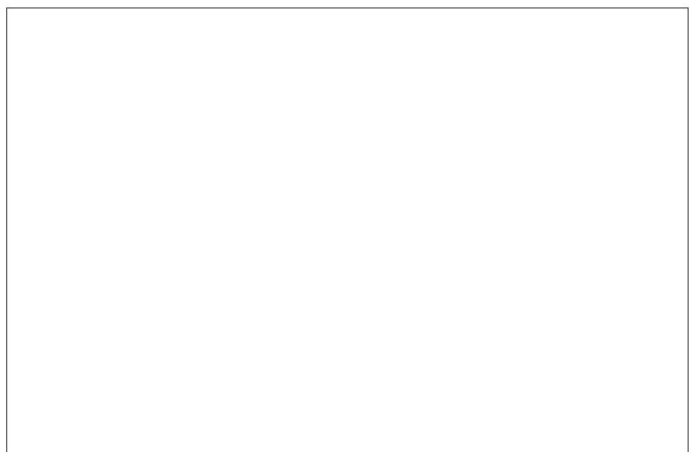
SEMICONDUCTOR LASER	
AVOID EXPOSURE	
Invisible laser radiation is emitted from this aperture	
DANGER INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION	
OUTPUT POWER 800mW WAVELENGTH 0.80 to 1.80 μm CLASS IV LASER PRODUCT	
Caution - use of controls or adjustments or 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	

**ANRITSU CORPORATION
DEVICES SALES DEPARTMENT
ANRITSU DEVICES CO., LTD.
OVERSEAS MARKETING DEPT.**

Tel +81 46 296 6783 fax +81 46 225 8390
5-1-1 Onna, Atsugi-shi, Kanagawa
243-0032 Japan

URL: <https://www.anritsu.com/anritsu-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.