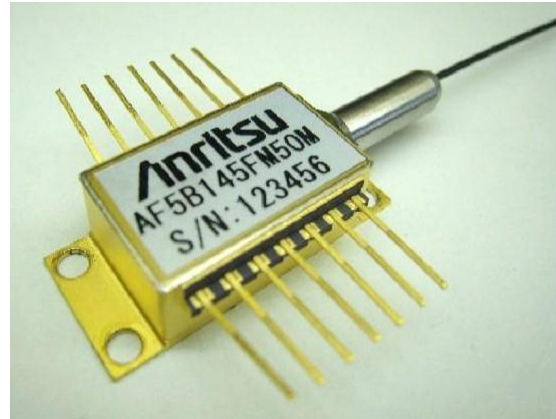


1.55 μ m LD Module AF5B145FM50M Optical Output Power 450mW

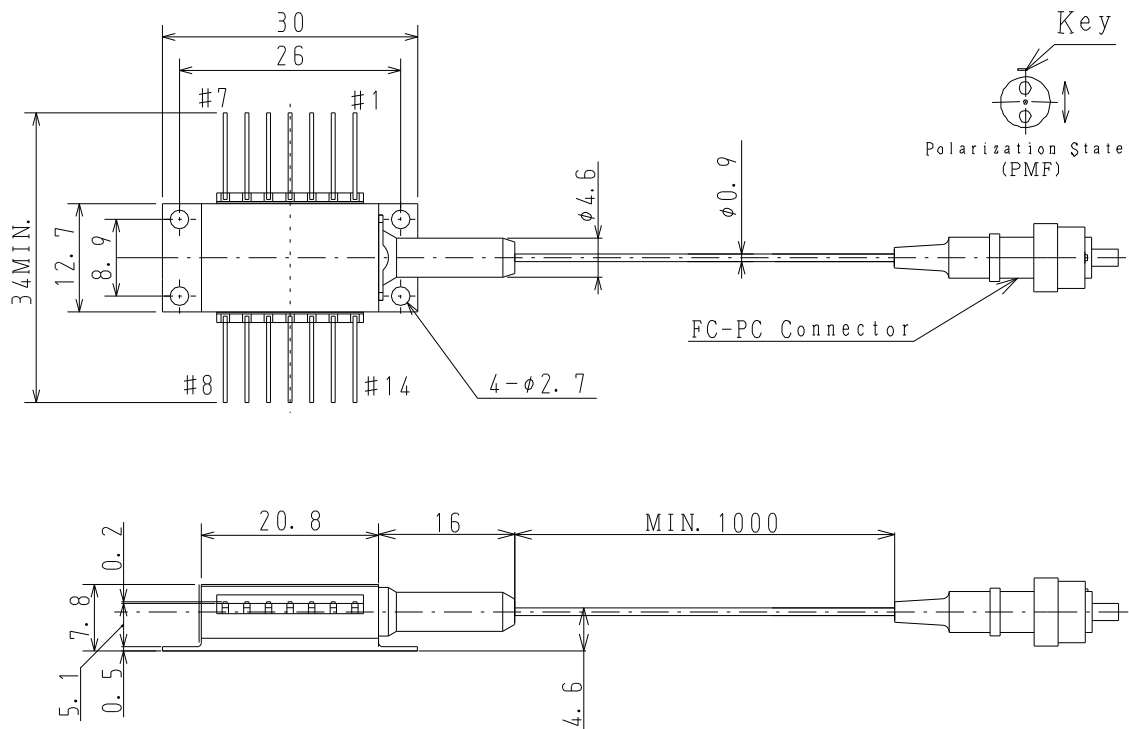
The AF5B145FM50M is 1.55 μ m laser diode modules designed for optical measurement and communication. The laser is packaged in a 14-pin standard butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

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

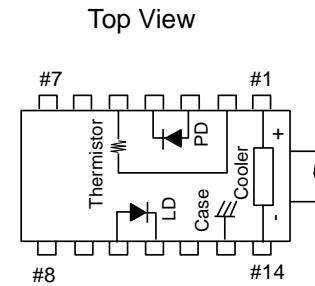


(Unit : mm)

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



■ 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.

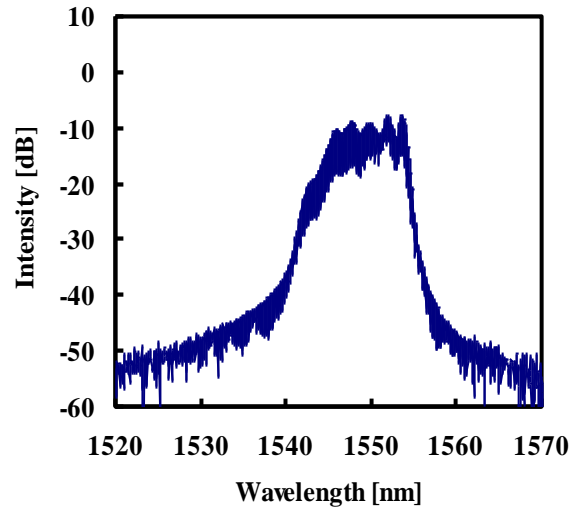
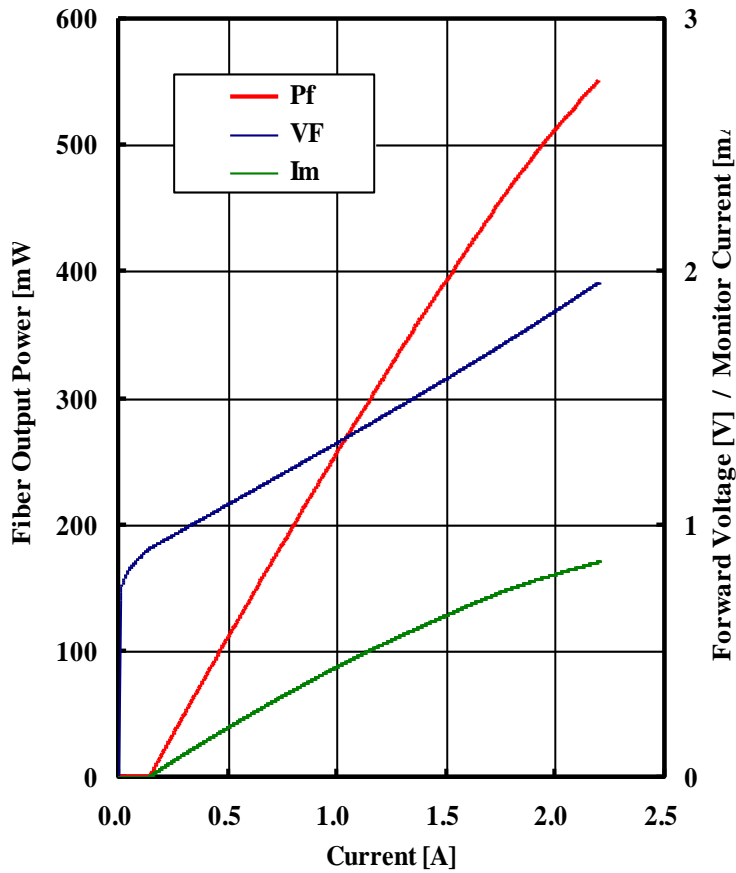
■ OPTICAL AND ELECTRICAL CHARACTERISTICS (TLD=25deg.C, Tc=25deg.C)

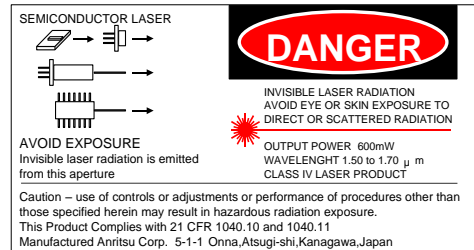
Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Output Power	Pf				450	mW
Forward Voltage	VF	Pf = 450mW			2.2	V
Threshold Current	Ith				180	mA
Forward Current (BOL)	IF	Pf = 450mW			1800	mA
Center Wavelength	λ_c	Pf = 450mW, RMS(-20dB)	1530	1550	1570	nm
Spectral Width	$\Delta \lambda$	Pf = 450mW, RMS(-20dB)		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	Δ PF	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.

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