

1.48 μ m LD Module AF4B SERIES type B Optical output power 170mW ~ 250mW

The AF4B SERIES type B is 1.48 μ m high power laser diode modules designed for Er doped fiber amplifier. The laser is packaged in a 14-pin butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

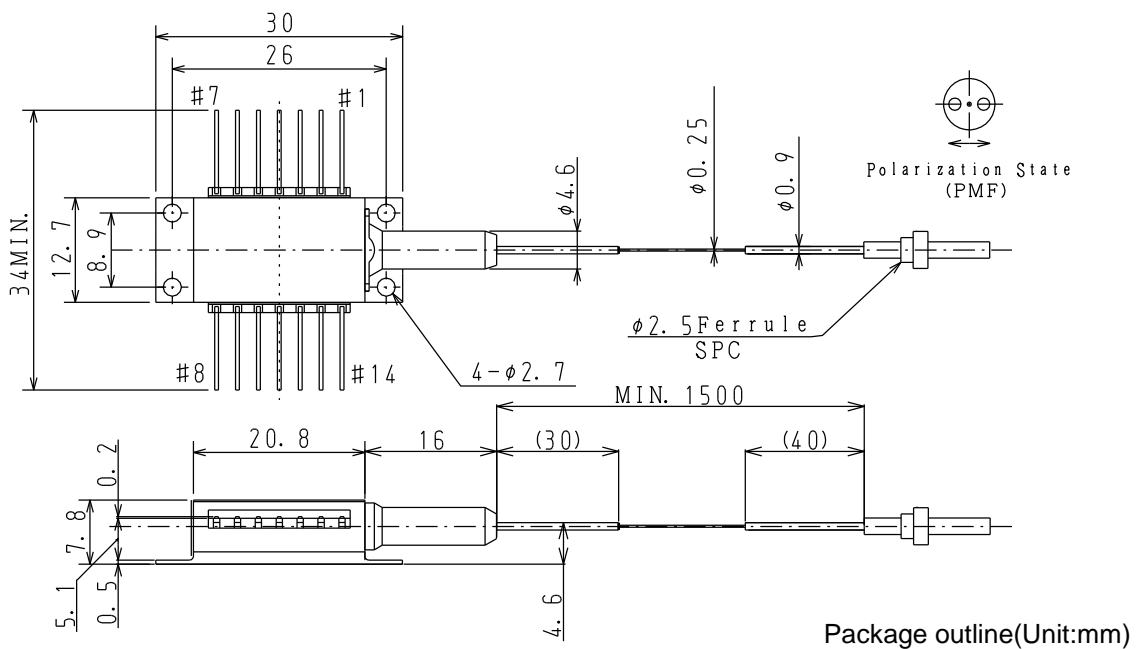
FEATURES

- ◆ Optical output :

170mW ($I_F \leq 600$ mA)	AF4B117EA75L / AF4B117ED75L
180mW ($I_F \leq 600$ mA)	AF4B118EA75L / AF4B118ED75L
200mW ($I_F \leq 700$ mA)	AF4B120EA75L / AF4B120ED75L
220mW ($I_F \leq 700$ mA)	AF4B122EA75L / AF4B122ED75L
250mW ($I_F \leq 800$ mA)	AF4B125EA75L / AF4B125ED75L
- ◆ Fiber
 - SMF output (UV coating fiber: $\phi 0.25$ mm)
 - PMF output (UV coating fiber: $\phi 0.25$ mm)
- ◆ 14pin butterfly package
- ◆ Built-in optical isolator
- ◆ Internal monitor PD and TEC
- ◆ Low power consumption



DIMENSIONS



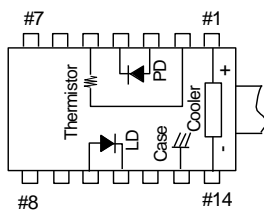
(Note) Polarization state of LD is aligned parallel to the slow axis.

■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating					Unit
		AF4B117EA75L AF4B117ED75L	AF4B118EA75L AF4B118ED75L	AF4B120EA75L AF4B120ED75L	AF4B122EA75L AF4B122ED75L	AF4B125EA75L AF4B125ED75L	
LD Forward Current	IF	1100		1300			mA
LD Reverse Voltage	VR	2					V
PD 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	2					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}=25°C, T_C=25°C)

Item	Symbol	Test condition		AF4B117EA75L AF4B117ED75L	AF4B118EA75L AF4B118ED75L	AF4B120EA75L AF4B120ED75L	AF4B122EA75L AF4B122ED75L	AF4B125EA75L AF4B125ED75L	Unit
				170	180	200	220	250	
Output power	Pf			170	180	200	220	250	mW
Forward Voltage	VF	At Output Power	Max.	2					V
Threshold Current	I _{th}		Typ.	70					mA
			Max.	150					
Forward Current (BOL)	IF	At Output Power	Max.	600		700		800	mA
Center Wavelength	λ _c	At Output Power	Min.	1460					nm
			Typ.	1475					
			Max.	1490					
Spectral width	Δλ	At Output Power RMS (-20dB)	Typ.	5					nm
			Max.	10					
Monitor Current	I _m	At Output Power V _{RD} =5V	Min.	100					μA
			Typ.	-					
			Max.	1000					
PD Dark Current	I _d	V _{RD} =5V	Max.	0.1					μA
Tracking Error	ΔPf	I _m =const, T _c =-20~70°C	Max.	0.5					dB
Cooler Voltage	V _c	IF=*EOL, T _c =70°C	Max.	3.1					V
Cooler Current	I _c	IF=*EOL, T _c =70°C	Max.	1.3				1.5	A
Thermistor Resistance	R _{th}	T _{LD} =25°C B=3900±100K	Min.	9.5					KΩ
			Typ.	10					
			Max.	10.5					
Optical Isolation	R _o	T _{LD} =25°C	Typ.	30					dB
Extinction Ratio ²	X _p	Output Power	Min.	17					dB

*EOL = BOL × 1.2

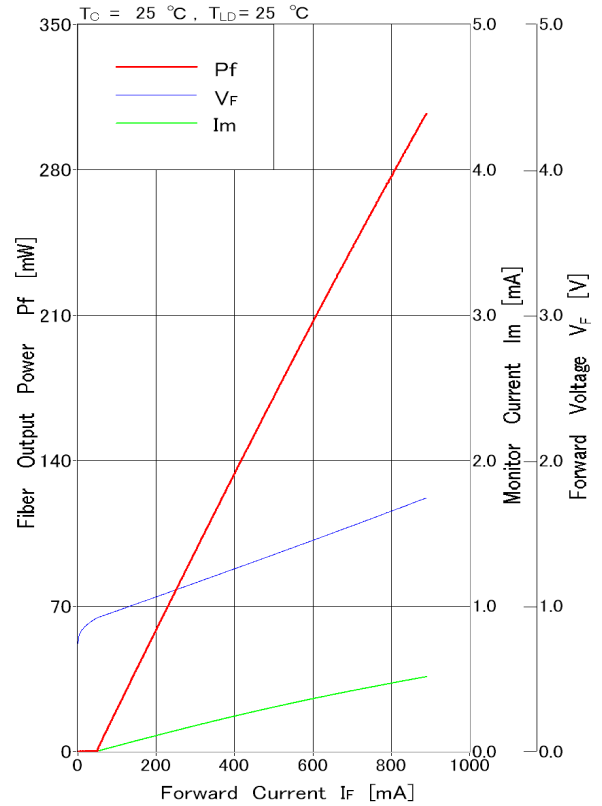
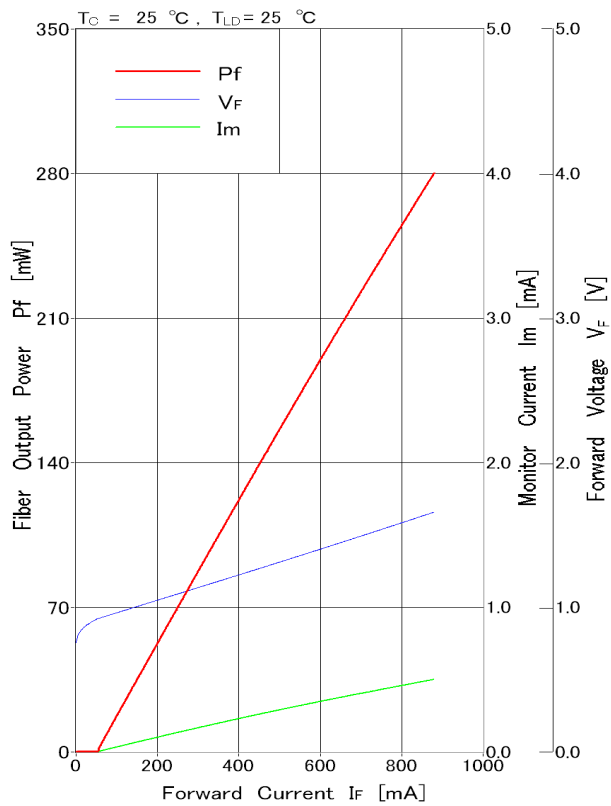
² Only PMF

■ AF4B SERIES type B TYPICAL CHARACTERISTICS

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

【AF4B122EA75L】

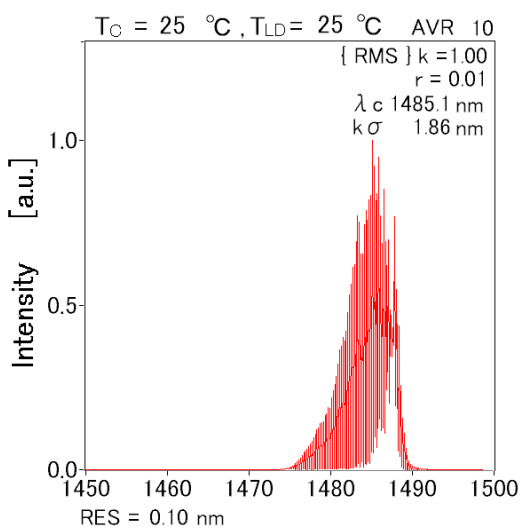
【AF4B125EA75L】



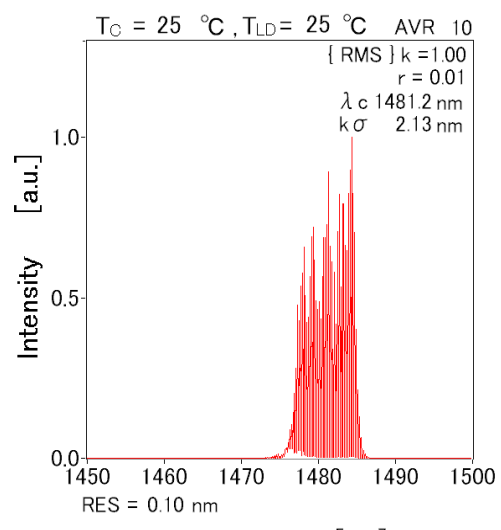
◆ EMISSION SPECTRUM

【AF4B122EA75L】

【AF4B125EA75L】



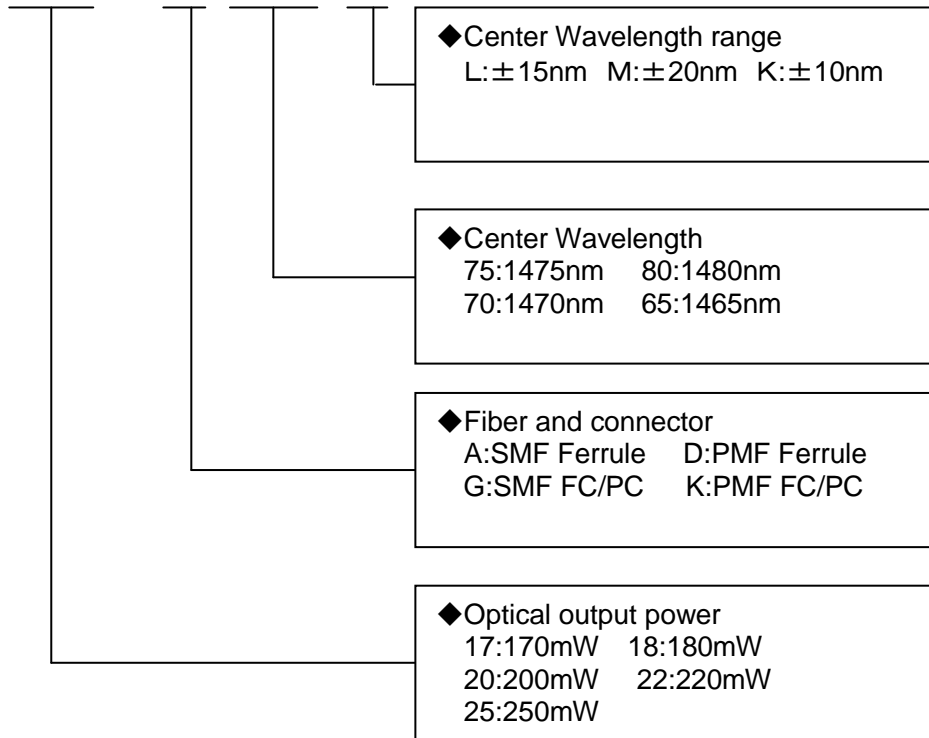
Wavelength [nm]
 $P_f = 220\text{ mW}$
 Emission Spectrum



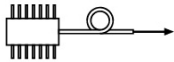
Wavelength [nm]
 $P_f = 250\text{ mW}$
 Emission Spectrum

■ORDERING INFORMATION

MODEL : A F 4 B 1 # # E # # # #



SEMICONDUCTOR LASER



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



INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM
OUTPUT POWER 500mW
WAVELENGTH 1.40 to 1.50 μm
CLASS IIIb LASER PRODUCT

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

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