

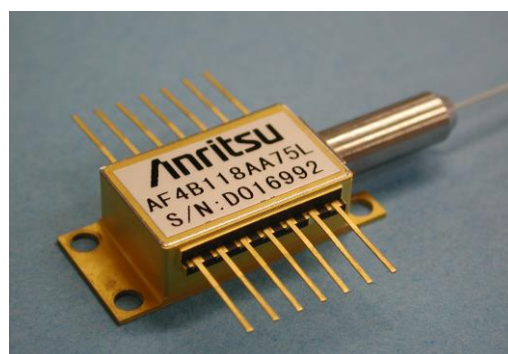
1.48 μ m LD Module **AF4B SERIES type A**

Optical output power 120mW ~ 180mW

The AF4B SERIES type A 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).

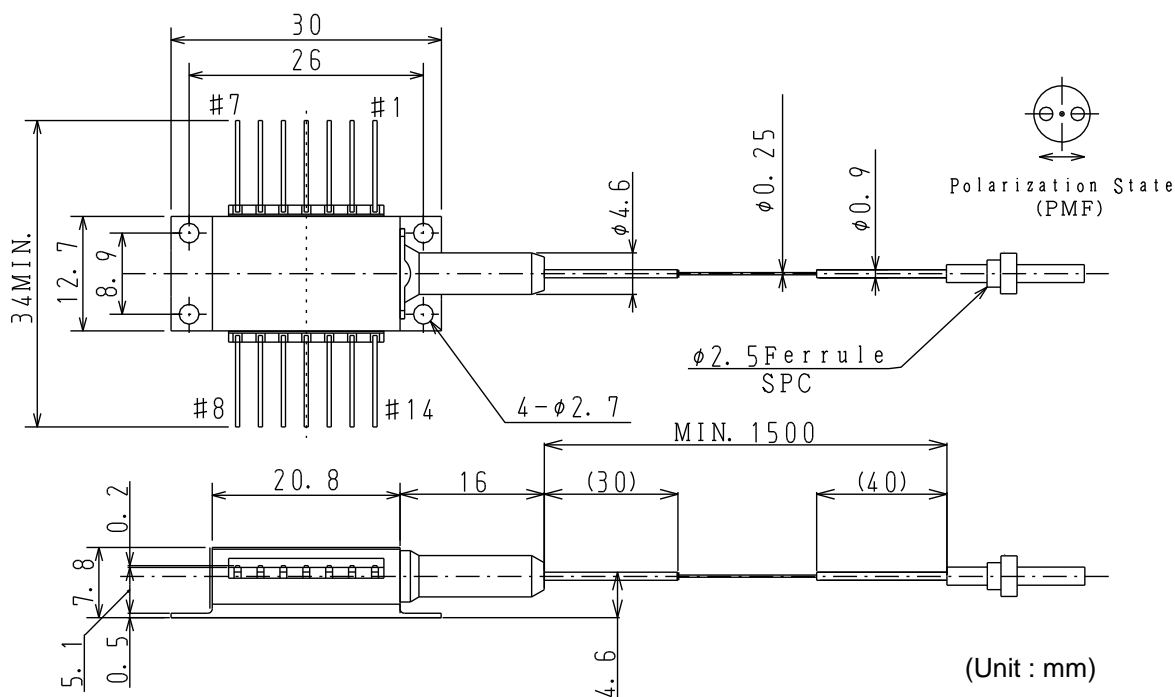
■ FEATURES

- ◆ Optical output :
 - 120mW ($I_F \leq 500\text{mA}$) AF4B112AA75L / AF4B112AD75L
 - 140mW ($I_F \leq 550\text{mA}$) AF4B114AA75L / AF4B114AD75L
 - 160mW ($I_F \leq 600\text{mA}$) AF4B116AA75L / AF4B116AD75L
 - 180mW ($I_F \leq 600\text{mA}$) AF4B118AA75L / AF4B118AD75L
- ◆ Fiber
 - SMF output (UV coating fiber: $\phi 0.25\text{mm}$)
 - PMF output (UV coating fiber: $\phi 0.25\text{mm}$)
- ◆ 14pin butterfly package
- ◆ Built-in optical isolator
- ◆ Internal monitor PD and TEC
- ◆ Operating case Temperature 75 $^{\circ}\text{C}$



※PMF: Polarization Maintaining Fiber

■ DIMENSIONS



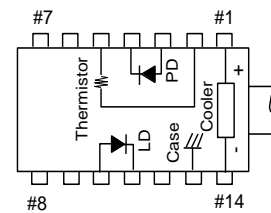
(Note) Polarization state of LD is aligned parallel to the slow axis.

■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
LD Forward Current	IF	1100	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 +75	°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		AF4B112AA75L	AF4B114AA75L	AF4B116AA75L	AF4B118AA75L	Unit
				AF4B112AD75L	AF4B114AD75L	AF4B116AD75L	AF4B118AD75L	
Output power	Pf			120	140	160	180	mW
Forward Voltage	VF	At Output Power	Max.	2.5				V
Threshold Current	Ith		Max.	50				mA
Forward Current (BOL)	IF	At Output Power	Max.	500	550	600		mA
Center Wavelength	λC	At Output Power	Min.	1460				nm
			Typ.	1475				
			Max.	1490				
Spectral width	Δλ	At Output Power RMS (-20dB)	Typ.	4				nm
			Max.	8				
Monitor Current	Im	At Output Power VRD=5V	Min.	100				μA
			Typ.	400				
			Max.	800				
PD Dark Current	Id	VRD=5V	Max.	0.1				μA
Tracking Error	ΔPf	Im=const, Tc=-20~75°C	Max.	0.5				dB
Cooler Voltage	Vc	IF=EOL ^{*1} , Tc=75°C	Max.	3.5				V
Cooler Current	Ic	IF=EOL, Tc=75°C	Max.	1.2	1.4			A
Thermistor Resistance	Rth	T _{LD} =25°C B=3900±100K	Min.	9.5				KΩ
			Typ.	10				
			Max.	10.5				
Optical Isolation	Ro	T _{LD} =25°C	Typ.	30				dB
Extinction ratio ^{*2}	Xp	At Output Power	Min.	17				dB

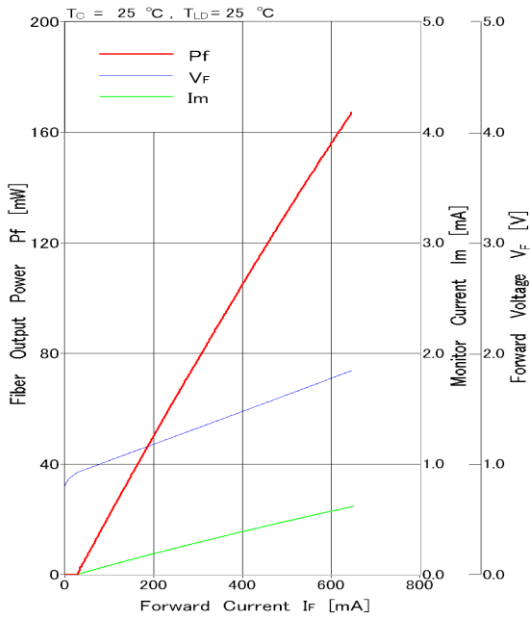
*1 EOL(End of life) =BOL(Begin of life) × 1.2

*2 Specified for PMF

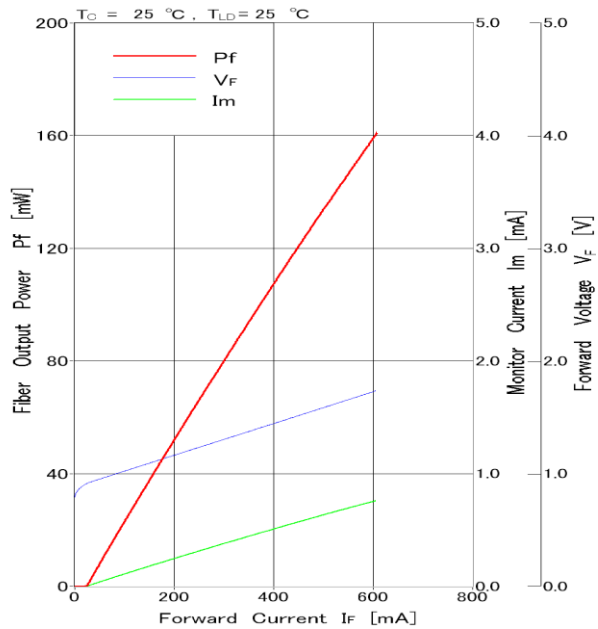
TYPICAL CHARACTERISTICS

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

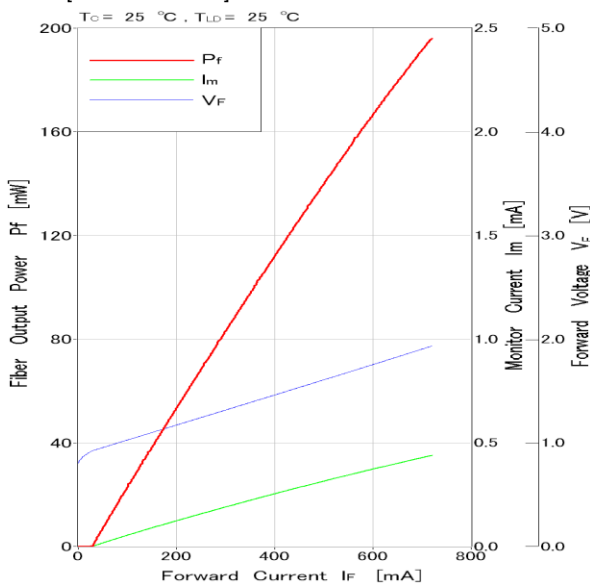
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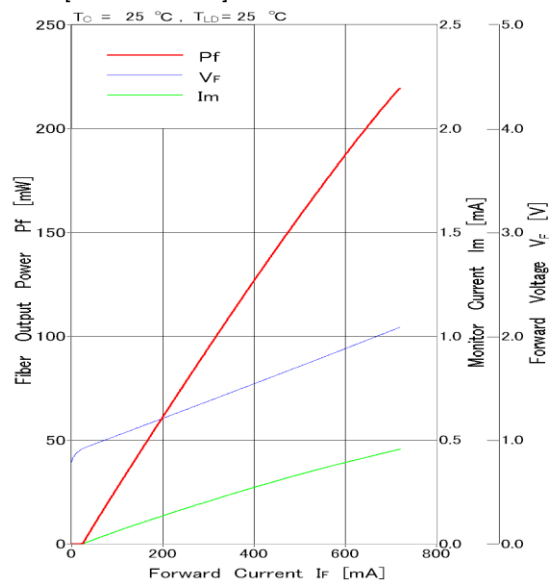
[AF4B114AA75L]



[AF4B116AA75L]

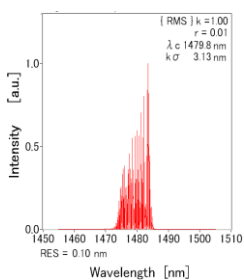


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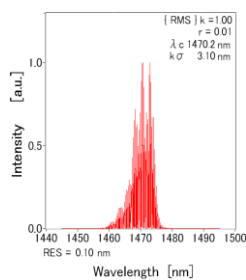


EMISSION SPECTRUM

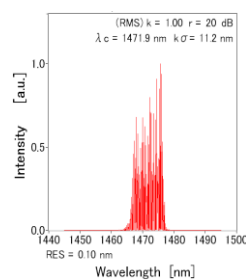
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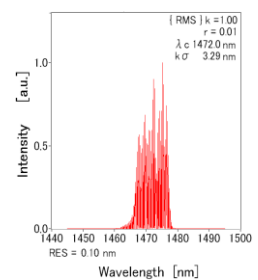
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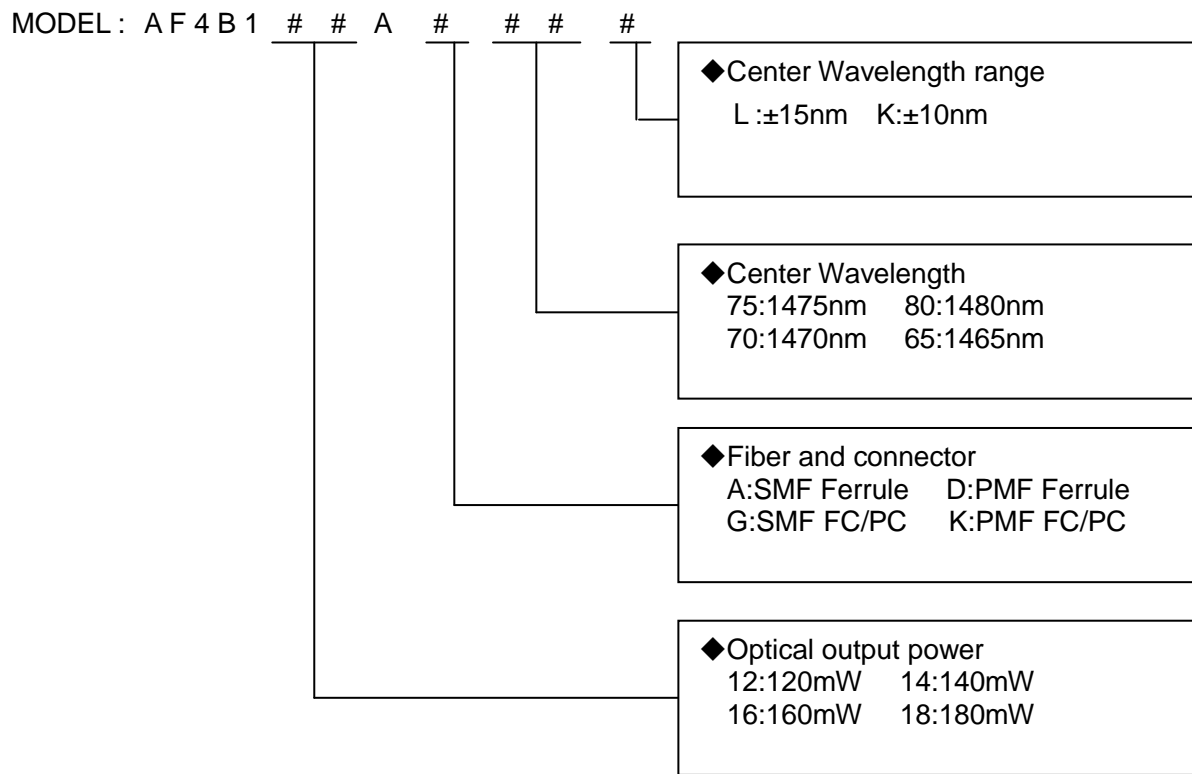
[AF4B116AA75L]



[AF4B118AA75L]



■ ORDERING INFORMATION





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.

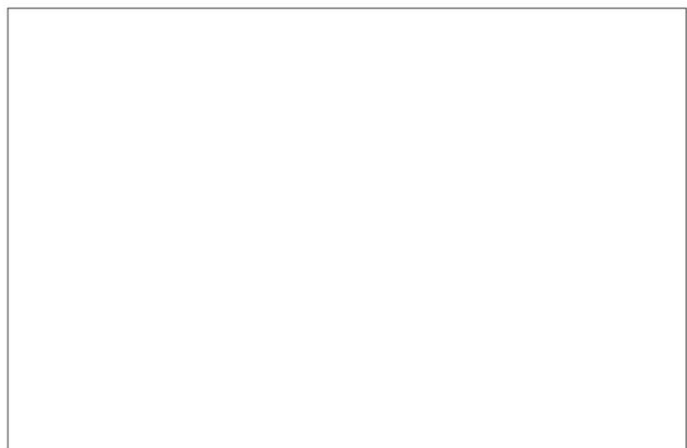
<p>SEMICONDUCTOR LASER</p>	
<p>AVOID EXPOSURE Invisible laser radiation is emitted from this aperture</p>	<p>INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION</p> <p> OUTPUT POWER 500mW WAVELENGTH 0.80 to 1.80 μm CLASS IIIb LASER PRODUCT</p>
<p>Caution - use of controls 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</p>	

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