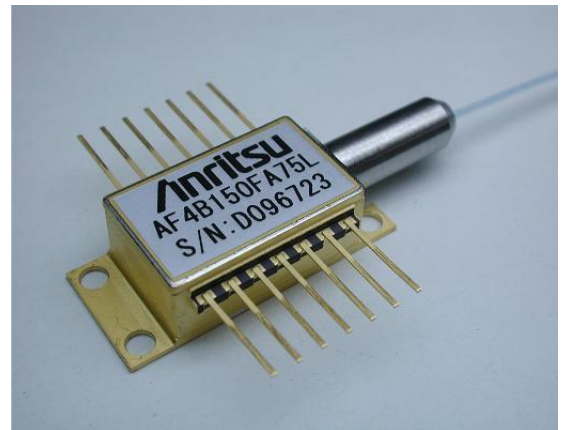


1.48 μ m LD Module **AF4B SERIES type D** Optical output power 420mW ~ 500mW

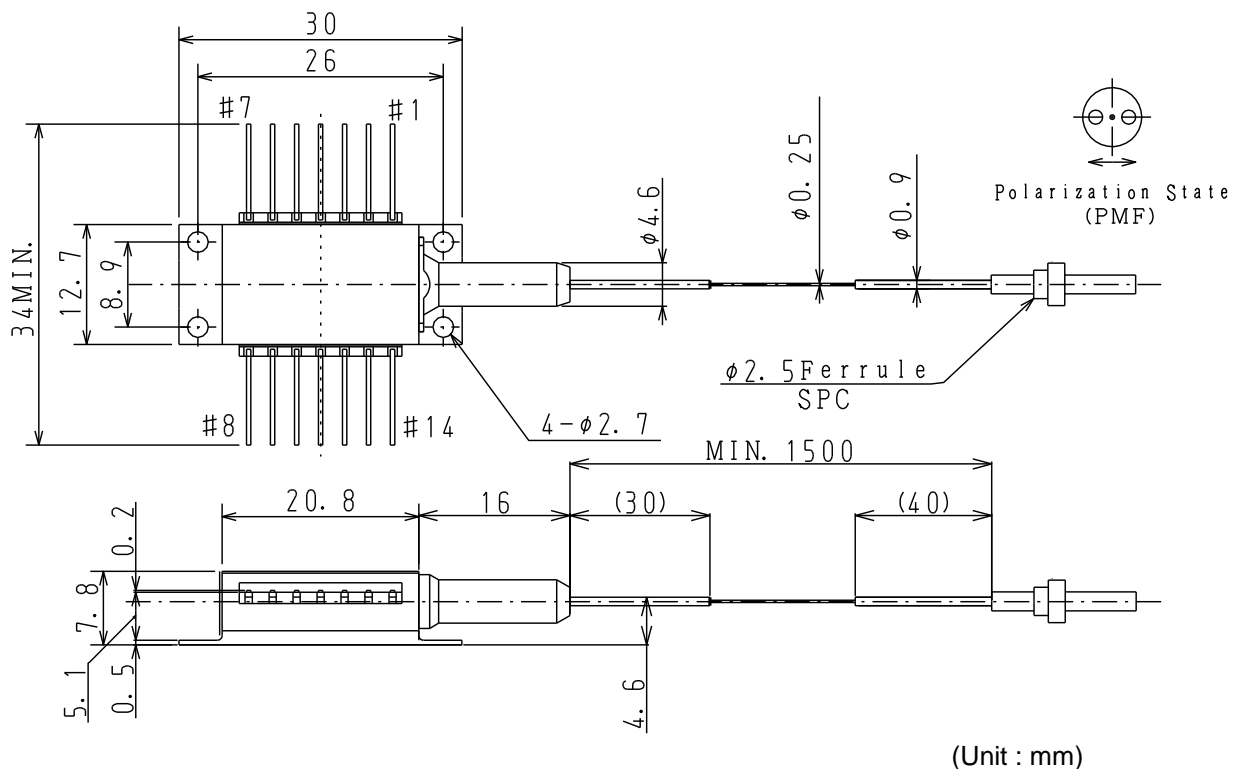
The AF4B SERIES type D is 1.48 μ m high power laser diode modules designed for Er doped fiber amplifier (EDFA). The laser is packaged in a 14-pin standard butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

■ FEATURES

- ◆ Optical output :
 - 420mW ($I_F \leq 1600\text{mA}$) AF4B142FA75L / AF4B142FD75L
 - 460mW ($I_F \leq 1700\text{mA}$) AF4B146FA75L / AF4B146FD75L
 - 500mW ($I_F \leq 1800\text{mA}$) AF4B150FA75L / AF4B150FD75L
- ◆ 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
- ◆ Low power consumption



■ DIMENSIONS



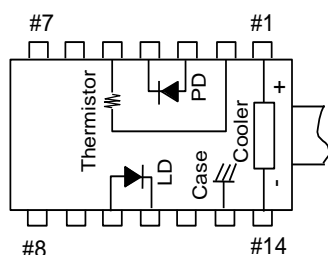
(Note) Polarization state of LD is aligned parallel to the slow axis.

■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating			unit
		AF4B142FA75L AF4B142FD75L	AF4B146FA75L AF4B146FD75L	AF4B150FA75L AF4B150FD75L	
LD Forward Current	IF	2200			mA
LD Reverse Voltage	VR	2			V
PD Forward Current	IFD	10			mA
PD Reverse Voltage	VRD	20			V
Operating Case Temperature	Tc	-20~+70			°C
Storage Temperature	Tstg	-40~+85			°C
Cooler Current	Ic	5.8			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)

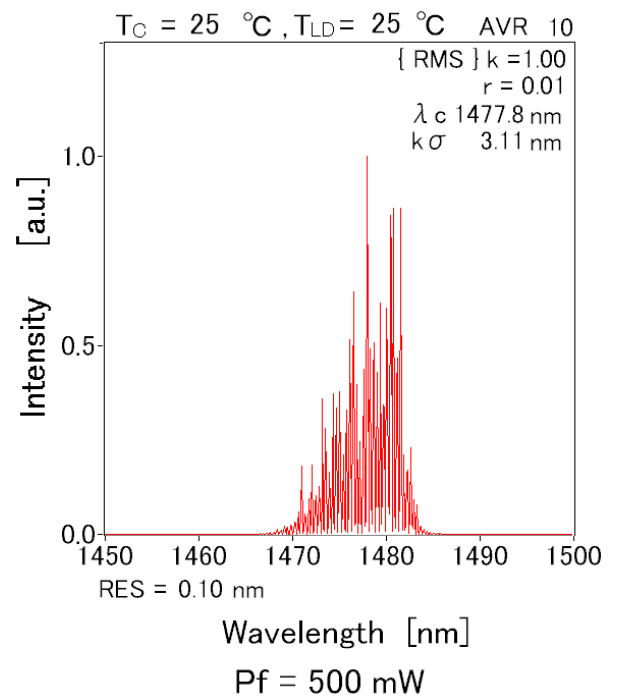
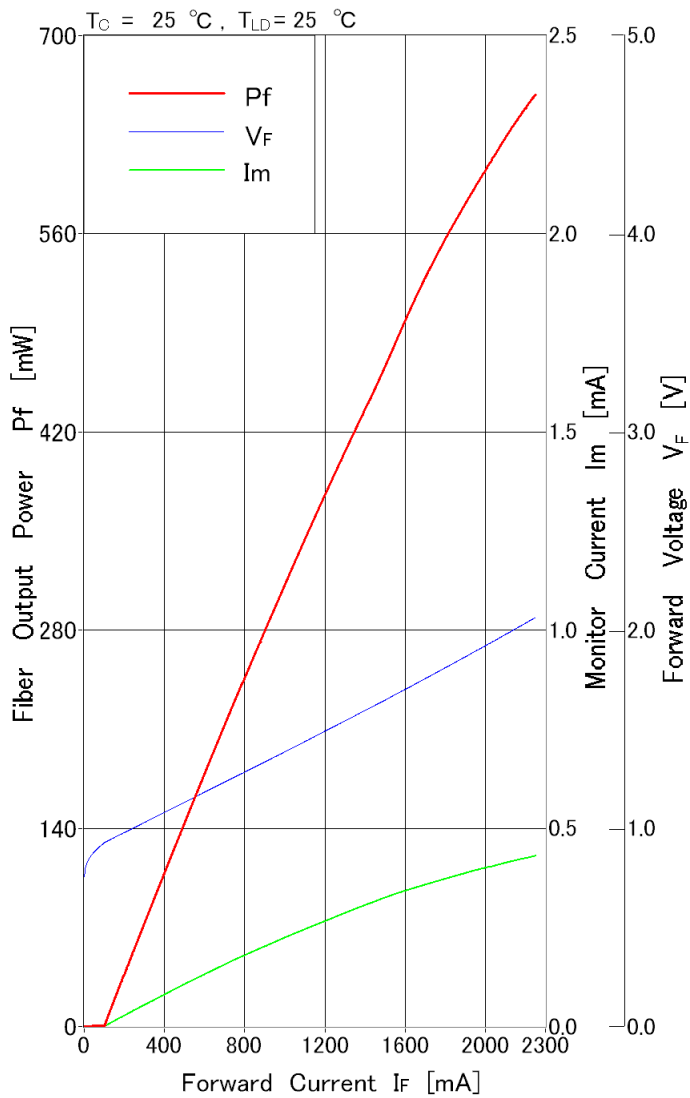
Item	Symbol	Test condition		AF4B142FA75L AF4B142FD75L	AF4B146FA75L AF4B146FD75L	AF4B150FA75L AF4B150FD75L	Unit
Output power	Pf			420	460	500	mW
Forward Voltage	VF	at Rated Power	Max.	2.2			V
Threshold Current	I _{th}		Max.	180			mA
Forward Current (BOL)	IF	at Rated Power	Max.	1600	1700	1800	mA
Center Wavelength	λ _c	at Rated Power	Min.	1460			nm
			Typ.	1475			
			Max.	1490			
Spectral width	Δλ	at Rated Power RMS (-20dB)	Typ.	5			nm
			Max.	10			
Monitor Current	I _m	at Rated Power V _{RD} =5V	Min.	100			μA
			Typ.	-			
			Max.	2000			
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.	3.5	3.7	4.0	V
Cooler Current	I _c	IF=*EOL, T _C =70°C	Max.	3.1	3.2	3.5	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	at Rated Power	Min.	17			dB

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

*2 : This specification is applied only with PMF (Polarization Maintain Fiber) models.

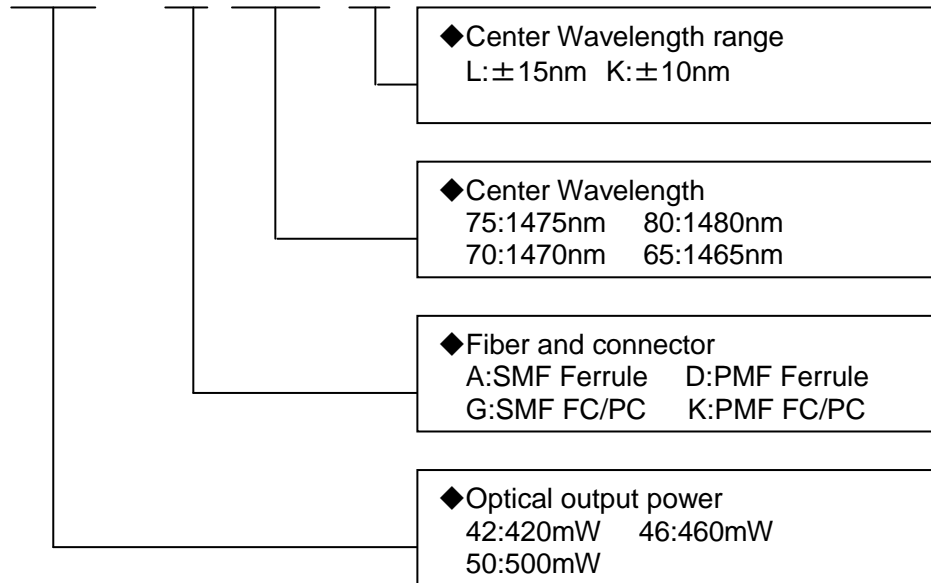
■ TYPICAL CHARACTERISTICS

- ◆ Fiber output power / Monitor Current / Voltage-Forward current characteristics / Emission spectrum
[AF4B150FA75L]



■ ORDERING INFORMATION

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



◆ Center Wavelength range
L:±15nm K:±10nm

◆ Center Wavelength
75:1475nm 80:1480nm
70:1470nm 65:1465nm

◆ Fiber and connector
A:SMF Ferrule D:PMF Ferrule
G:SMF FC/PC K:PMF FC/PC

◆ Optical output power
42:420mW 46:460mW
50:500mW



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 600 mW WAVELENGTH 1.30 to 1.65 μm CLASS IV 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>	

**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>

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.

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.

