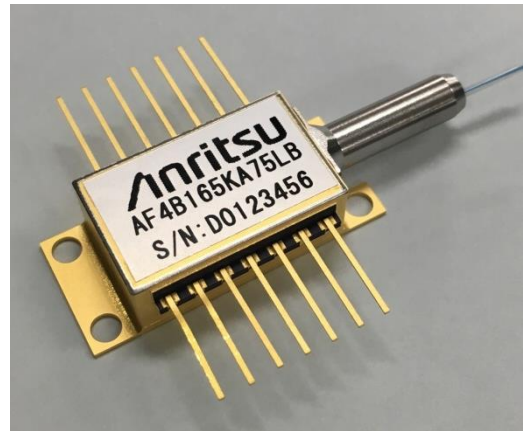


1.48 μ m LD Module *AF4B Series type E*

AF4B SERIES type E 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 thermos-electric cooler(TEC).

FEATURES

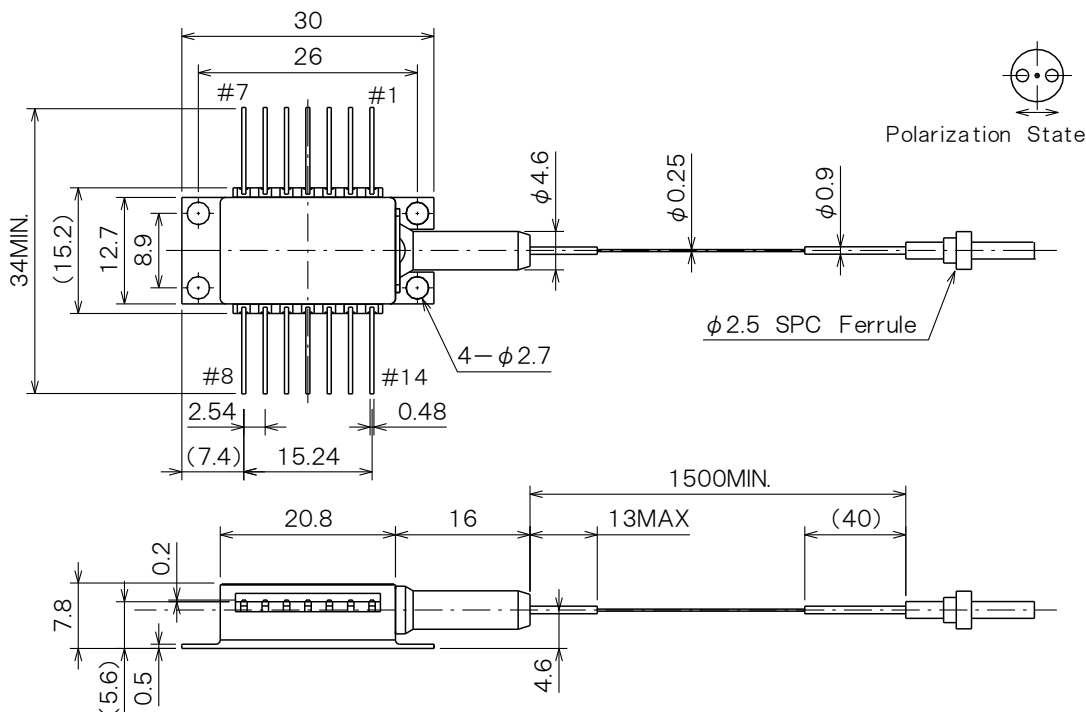
- Optical Output:
 AF4B155KA/KD75LB: 550mW
 AF4B160KA/KD75LB: 600mW
 AF4B165KA/KD75LB: 650mW
- Fiber (UV coating fiber: ϕ 0.25mm)
- 14 pin butterfly Package
- Built-in optical Isolator, Monitor photodiode and Thermoelectric cooler
- LD operating temperature: 35°C



APPLICATION

- for Er doped Fiber Amplifier.

DIMENSIONS (unit : mm)

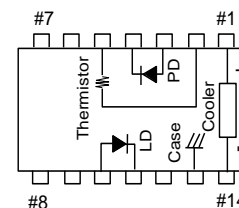


ABSOLUTE MAXIMUM RATINGS PIN CONFIGURATION

Item	Symbol	Ratings	Unit
LD Forward Current	I_F	2800	mA
LD Reverse Voltage	V_R	2	V
PD Forward Current	I_{FD}	10	mA
PD Reverse Voltage	V_{RD}	20	V
Operating Case temperature	T_C	-5 to +70	°C
Storage Temperature	T_{stg}	-40 to +85	°C
Cooler Current	I_C	5.8	A

*Excess over the absolute maximum ratings may cause device failure.

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 ($T_{LD}=35^{\circ}\text{C}$, $T_C=25^{\circ}\text{C}$)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	-	-	-	250	mA
Center Wavelength	λ_c	At Output Power RMS (-20dB)	1460	1475	1490	nm
Spectral width	$\Delta\lambda$	At Output Power -20dB	-	5	10	nm
Monitor Current	I_m	At Output Power	300	-	3000	μA
PD Dark Current	I_d	$V_{RD}=5\text{V}$	-	-	0.1	μA
Tracking Error	ΔP_f	$I_m=\text{const.}, T_C=-5\sim 70^{\circ}\text{C}$	-	-	0.5	dB
Isolation	R_O	$T_{LD}=35^{\circ}\text{C}$	-	30	-	dB
*Extinction Ratio	X_p	At Output Power	17	-	-	dB
Thermistor Resistance	R_{th}	$T_{LD}=35^{\circ}\text{C}$	-	6.5	-	k Ω
		$T_{LD}=25^{\circ}\text{C}$	-	10.0	-	

*: PMF Only

OPTICAL OUTPUT POWER/COOLER/CONSUMPTION POWER

Item	Forward Current (Max.)	Forward Voltage (Max.)		Cooler Current (Max.)	Cooler Voltage (Max.)	Total Consumption Power (Max.)	
Item	I_F	V_F		I_C	V_C	P_{total}	
Test Condition	At Output Power			$I_F=*EOL, T_C=70^{\circ}\text{C}$			
At Output Power	550mW	1980	2.00	2.24	2.30	2.85	11.0
	600mW	2170	2.05	2.30	2.60	3.15	13.0
	650mW	2400	2.15	2.41	2.90	3.45	15.5
Unit	BOL [mA]	BOL [V]	EOL [V]	EOL [A]	EOL [V]	EOL [W]	

*: $EOL = BOL \times 1.12$



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