

1.48μm LD MODULE AF4A1142A75L/AF4A1142E75L

The AF4A1142A75L/AF4A1142E75L are 1.48μm 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).

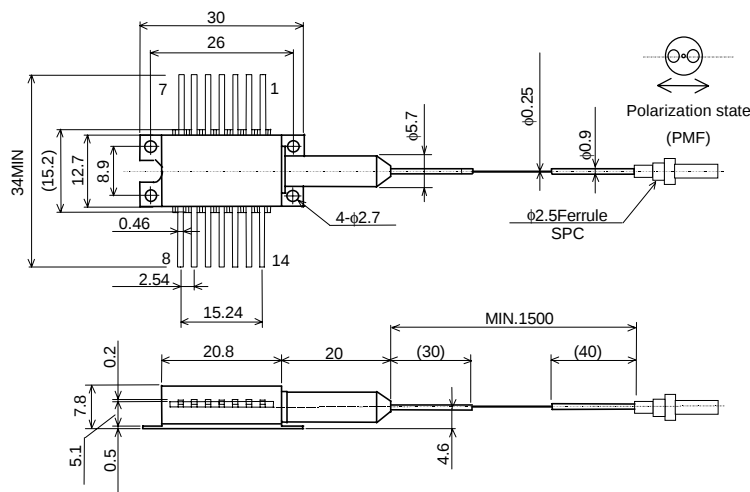
◆ FEATURES

- High optical output : 140mW ($I_F \leq 600\text{mA}$)
AF4A1142A75L
→SMF output (UV coating fiber:φ0.25mm)
AF4A1142E75L
→PMF output (UV coating fiber:φ0.4mm)
- Built-in optical isolator
- Internal monitor PD and TEC

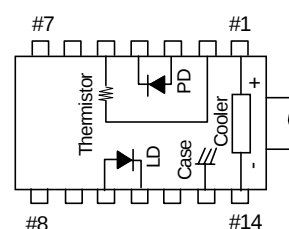
◆ ABSOLUTE MAXIMUM RATINGS ($T_{LD}=25^\circ\text{C}$)

Item	Symbol	Rating	Unit
LD Forward Current	I_F	1300	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	-20 to +70	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +85	$^\circ\text{C}$
Cooler Current	I_C	2	A

◆ DIMENSIONS



Package outline(Unit:mm) Type:AF4A1142A75L



TOP VIEW

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

Pin Configuration

◆ OPTICAL AND ELECTRICAL CHARACTERISTICS ($T_{LD}=25^\circ\text{C}$, $T_C=25^\circ\text{C}$)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$P_f=140\text{mW}$		2.0	2.5	V
Threshold Current	I_{th}			30	50	mA
Forward Current (BOL)	I_F	$P_f=140\text{mW}$			600	mA
Center Wavelength	λ_C	$P_f=140\text{mW}$, RMS(-20dB)	1460	1475	1490	nm
Spectral Width	σ	$P_f=140\text{mW}$, RMS(-20dB)		4	8	nm
Monitor Current	I_m	$P_f=140\text{mW}$, $V_{RD}=5\text{V}$	100	400	800	μA
PD Dark Current	I_d	$V_{RD}=5\text{V}$			0.1	μA
Tracking Error	ΔP_f	$I_m=\text{const}$, $T_C=-20$ to 70°C			0.5	dB
Cooler Voltage	V_c	$I_F=*EOL$, $T_C=70^\circ\text{C}$			3.5	V
Cooler Current	I_c	$I_F=*EOL$, $T_C=70^\circ\text{C}$			1.4	A
Thermistor Resistance	R_{th}	$T_{LD}=25^\circ\text{C}$, $B=3900\pm100\text{K}$	9.5	10	10.5	k Ω
Optical Isolation	R_o	$T_{LD}=25^\circ\text{C}$		30		dB

(Note) *EOL=BOL X 1.2

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

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