1.48μm LD MODULE

AF4A1122A75L/AF4A1122E75L

The AF4A1122A75L/AF4A1122E75L 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).

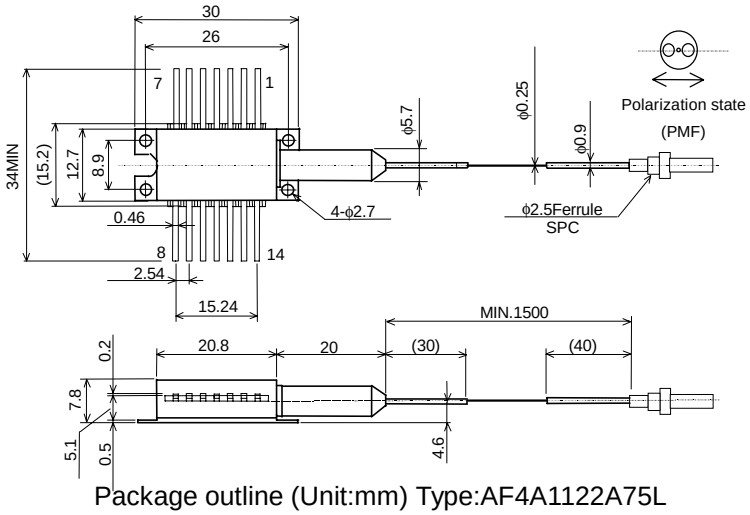
♦FEATURES

- High optical output : 120mW (I_F ≤500mA)
  AF4A1122A75L
  →SMF output (UV coating fiber:ϕ0.25mm)
  AF4A1122E75L
  →PMF output (UV coating fiber:ϕ0.4mm)
- Built-in optical isolator
- Internal monitor PD and TEC

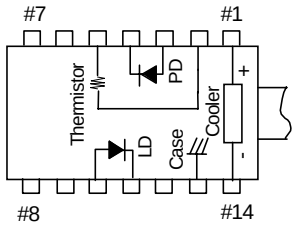
♦ABSOLUTE MAXIMUM RATINGS (T_{LD}=25°C)

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	°C
Storage Temperature	T_{stg}	-40 to +85	°C
Cooler Current	I_C	2	A

♦DIMENSIONS



Package outline (Unit:mm) Type:AF4A1122A75L



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°C, T_C=25°C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	P_f=120mW		2.0	2.5	V
Threshold Current	I_{th}			30	60	mA
Forward Current (BOL)	I_F	P_f=120mW			500	mA
Center Wavelength	λ_C	P_f=120mW, RMS(-20dB)	1460	1475	1490	nm
Spectral Width	σ	P_f=120mW, RMS(-20dB)		4	8	nm
Monitor Current	I_m	P_f=120mW, V_{RD}=5V	100	400	800	μA
PD Dark Current	I_d	V_{RD}=5V			0.1	μA
Tracking Error	ΔP_f	I_m=const, T_C=-20 to 70°C			0.5	dB
Cooler Voltage	V_c	I_F=*EOL, T_C=70°C			3.2	V
Cooler Current	I_c	I_F=*EOL, T_C=70°C			1.2	A
Thermistor Resistance	R_{th}	T_{LD}=25°C, B=3900±100K	9.5	10	10.5	kΩ
Optical Isolation	R_o	T_{LD}=25°C		30		dB

(Note) *EOL=BOL X 1.2

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