

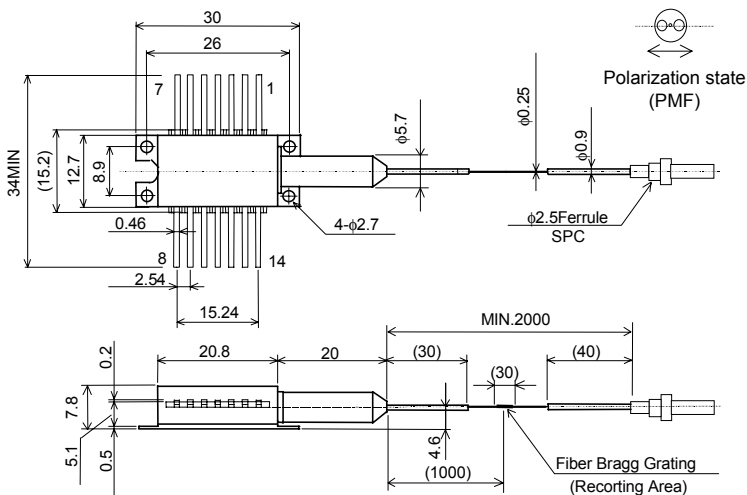
1.4μm FBG LD MODULE AF4A2227D xxxF

The AF4A2227D is 1.4μm band high power laser diode modules with fiber bragg grating designed for Raman fiber amplifier and Er doped fiber amplifier. The laser is packaged in a 14-pin butterfly package with monitor photodiode and thermo-electric cooler (TEC).

◆ FEATURES

- Wavelength : $1420\text{nm} \leq \lambda < 1500\text{nm}$
AF4A2227D xxxF
Exp. xxx=755 : $\lambda=1475.5\text{nm}$
(0.5nm spacing available)
- High optical output : 220mW ($I_F \leq 800\text{mA}$)
→PMF output (UV coating fiber: $\phi 0.25\text{mm}$)
- Internal monitor PD and TEC

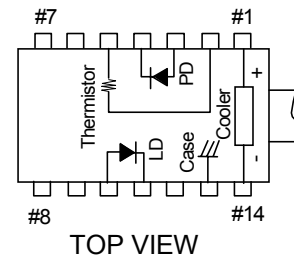
◆ DIMENSIONS



Package outline(Unit:mm) Type:AF4A2227DxxxF

◆ 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}	10	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	4.5	A



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	$P_f=220\text{mW}$		2.0	2.5	V
Threshold Current	I_{th}			40	70	mA
Forward Current (BOL)	I_F	$P_f=220\text{mW}$			800	mA
Center Wavelength	λ_c	$P_f=220\text{mW}$, RMS(-20dB)	$\lambda-1$	λ	$\lambda+1$	nm
Spectral Width	$\Delta\lambda$	$P_f=220\text{mW}$, -10dB			3.5	nm
Monitor Current	I_m	$P_f=220\text{mW}$, $V_{RD}=5\text{V}$	100		2000	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	$I_F=*EOL$, $T_C=70^{\circ}\text{C}$		3.0	3.7	V
Cooler Current	I_c	$I_F=*EOL$, $T_C=70^{\circ}\text{C}$		1.8	2.0	A
Thermistor Resistance	R_{th}	$T_{LD}=25^{\circ}\text{C}$, $B=3900\pm 100\text{K}$	9.5	10	10.5	k Ω

(Note) *EOL=BOL X 1.2

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

Fiber option: Single mode fiber (UV coating fiber: $\phi 0.25\text{mm}$) is acceptable by custom order.