

1.55μm LD MODULE

AF5B310DM50L

The AF5B310DM50L is 1.55μm laser diode modules designed for optical measurement and communication. The laser is packaged in a 14-pin butterfly package with optical isolator, monitor photodiode and thermo-electric cooler (TEC).

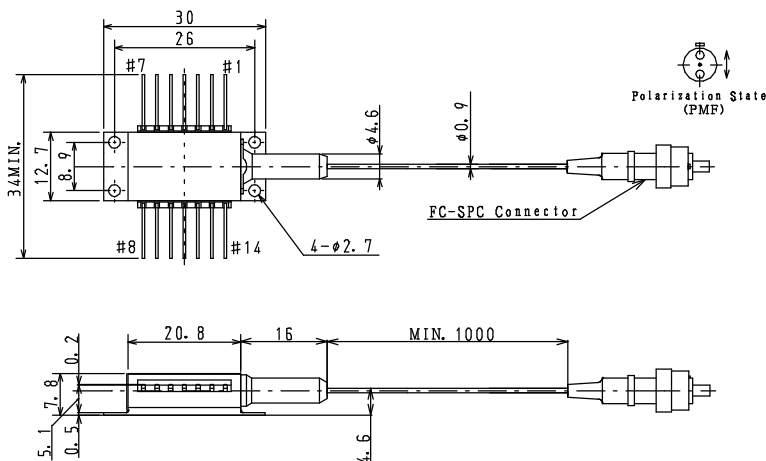
◆ FEATURES

- High optical output : 100mW/≦500mA
- PMF output (fiber: ϕ 0.9mm)
- Built-in optical isolator
- Internal monitor PD and TEC

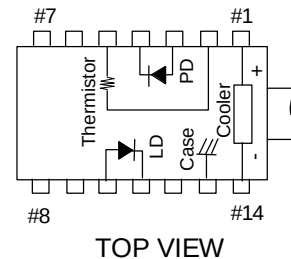
◆ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Rating	Unit
LD Forward Current	I_F	900	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)



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	$I_F=500\text{mA}$		2.0	2.5	V
Threshold Current	I_{th}			30	60	mA
Optical Output Power	P_f	$I_F=500\text{mA}$	100			mW
Center Wavelength	λ_C	$I_F=500\text{mA}$, RMS(-20dB)	1535	1550	1565	nm
Spectral Width	$\Delta\lambda$	$I_F=500\text{mA}$, RMS(-20dB)		5	10	nm
Monitor Current	I_m	$I_F=500\text{mA}$, $V_{RD}=5\text{V}$	100	400		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	$I_F=600\text{mA}$, $T_C=70^{\circ}\text{C}$			3.2	V
Cooler Current	I_C	$I_F=600\text{mA}$, $T_C=70^{\circ}\text{C}$			1.2	A
Thermistor Resistance	R_{th}	$T_{LD}=25^{\circ}\text{C}$, $B=3900\pm 100\text{K}$	9.5	10	10.5	kΩ
Optical Isolation	R_o	$T_{LD}=25^{\circ}\text{C}$		30		dB
Extinction Ratio	X_p	$I_F=500\text{mA}$	17			dB

(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.