

1.31 μ m LD MODULE AF3B310DM10L

The AF3B310DM10L is 1.31 μ m laser diode module 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).

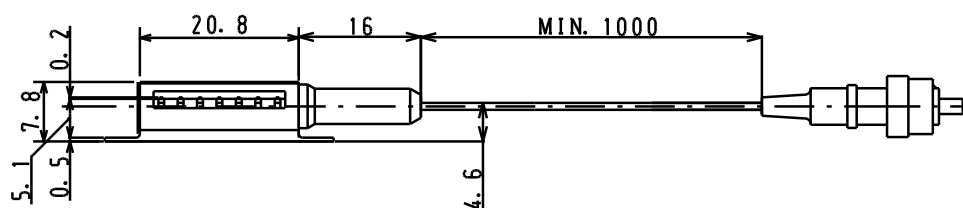
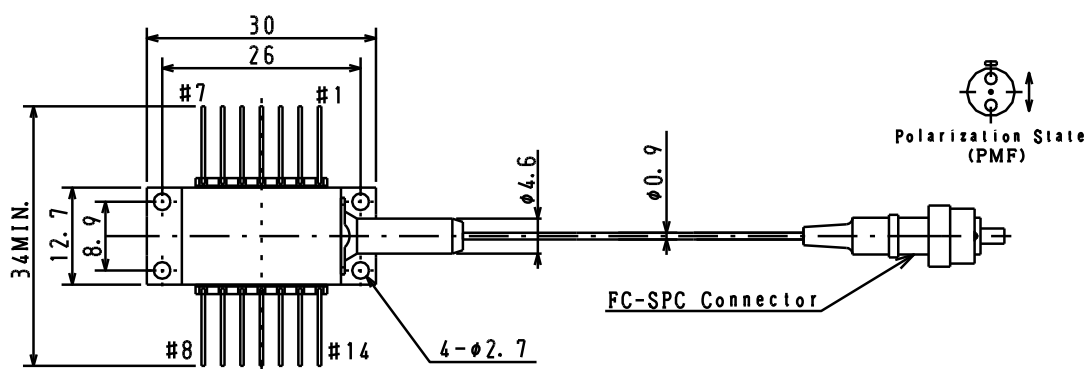
FEATURES

- ◇ High optical output : 100mW/ \leq 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	$^{\circ}$ C
Storage Temperature	T_{stg}	-40 to +85	$^{\circ}$ C
Cooler Current	I_C	2	A

DIMENSIONS

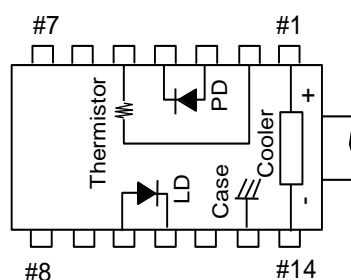


(Unit: mm)

PIN CONFIGURATION

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

TOP VIEW



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

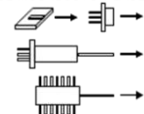
Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=500\text{mA}$		2.0	2.5	V
Threshold Current	I_{th}			30	60	mA
Optical Output Power	P_f	$I_F=500\text{mA}$	100			mW
Center Wavelength	λ_C	$I_F=500\text{mA}$, RMS(-20dB)	1295	1310	1325	nm
Spectral Width	$\Delta\lambda$	$I_F=500\text{mA}$, RMS(-20dB)		4	8	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	$\text{k}\Omega$
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.



CAUTION : Handle the fiber of the enclosed device(s) with extreme care ; glass fiber is subject to breakage if mishandled and permanent damage to the device may result. Do not pull the device by the fiber or protective sleeve.
Do not coil the fiber into a loop of than 30 mm in radius.

SEMICONDUCTOR LASER



AVOID EXPOSURE

Invisible laser radiation is emitted from this aperture

Caution – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
This Product Complies with 21 CFR 1040.10 and 1040.11
Manufactured Anritsu Corp. 5-1-1 Onna, Atsugi-shi, Kanagawa, Japan



INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION



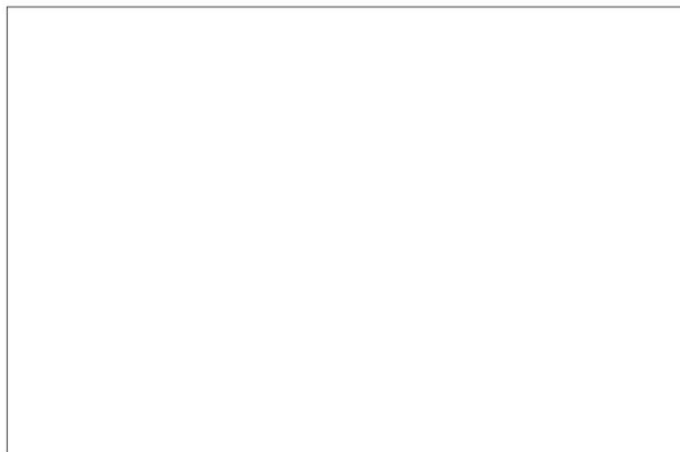
OUTPUT POWER 800mW
WAVELENGTH 0.90 to 1.80 μm
CLASS IV LASER PRODUCT

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