

## 1.31 $\mu$ m LD MODULE AF3B310AC10L/AF3B310AF10L

The AF3B310AC50L/AF3B310AF50L are 1.31 $\mu$ m 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).

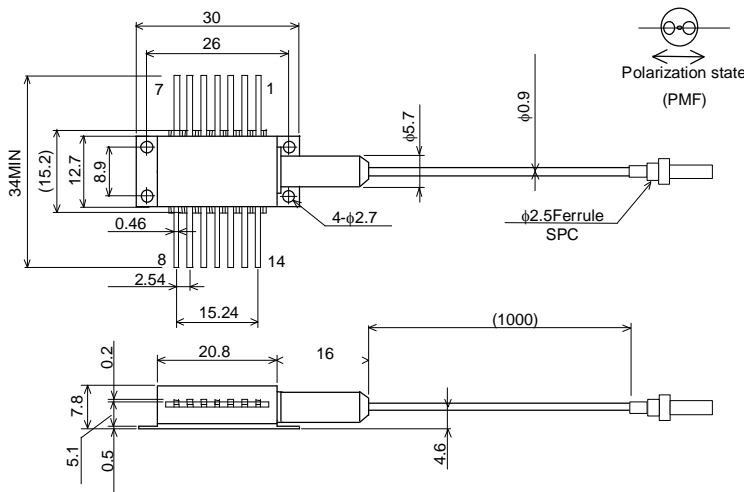
### ◆ FEATURES

- High optical output : 100mW/ 500mA
- AF3B310AC10L  
SMF output (Nylon jacket fiber: 0.9mm)  
AF3B310AF10L  
PMF output (Nylon jacket fiber: 0.9mm)
- Built-in optical isolator
- Internal monitor PD and TEC

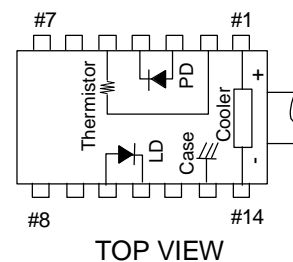
### ◆ ABSOLUTE MAXIMUM RATINGS

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



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 ( $T_{LD}=25^{\circ}$ C, $T_C=25^{\circ}$ C)

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=500$ mA		2.0	2.5	V
Threshold Current	$I_{th}$			30	60	mA
Optical Output Power	$P_f$	$I_F=500$ mA	100			mW
Center Wavelength	$\lambda_C$	$I_F=500$ mA, RMS(-20dB)	1295	1310	1325	nm
Spectral Width	$\Delta\lambda$	$I_F=500$ mA, RMS(-20dB)		4	8	nm
Monitor Current	$I_m$	$I_F=500$ mA, $V_{RD}=5$ V	100	400		$\mu$ A
PD Dark Current	$I_d$	$V_{RD}=5$ V			0.1	$\mu$ A
Tracking Error	$\Delta P_f$	$I_m=const$ , $T_C=-20$ to $70^{\circ}$ C			0.5	dB
Cooler Voltage	$V_C$	$I_F=600$ mA, $T_C=70^{\circ}$ C			3.2	V
Cooler Current	$I_C$	$I_F=600$ mA, $T_C=70^{\circ}$ C			1.2	A
Thermistor Resistance	$R_{th}$	$T_{LD}=25^{\circ}$ C, $B=3900\pm 100$ K	9.5	10	10.5	k $\Omega$
Optical Isolation	$R_o$	$T_{LD}=25^{\circ}$ C		30		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.