

OL5311L

DFB-LD MODULE for OC-48

Preliminary**1. DESCRIPTION**

The OL5311L Flat Lead type DFB-LD module is a 1550nm, InGaAsP/InP laser diode coupled to a single mode fiber with a pigtail. It is designed for OC-48, STM-16 S-16.2.

2. FEATURES

- 1550nm DFB-LD
- Flat Lead Package
- Pigtail type
- Built-in Bias T and Optical Isolator

3. APPLICATION

- OC-48,STM-16

4. OPTICAL AND ELECTRICAL CHARACTERISTICS

(Ta = 0 to 85°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Fiber Output Power	Pf	CW	1			mW
Operation Current	Iop	CW			150	mA
Threshold Current	Ith	CW,BOL			40	mA
		CW,EOL			1.5* Ith-BOL	
Center Wavelength	λ_c	2.5Gbps, NRZ2 ²³ -1 PRBS, Ppeak= 1mW	1430		1580	nm
Spectral Width	$\Delta\lambda$	P0 = 1mW, -20dB			1	nm
Side Mode Suppression Ratio	SMSR	P0 = 1mW	30			dB
LD Forward Voltage	Vf	P0 = 1mW			1.6	V
Rise/Fall times	Tr/Tf	10-90%, Ppeak= 1mW		150		ps
Input Impedance	Zin	-		25		Ω
Monitor Current	Im	P0 = 1mW(RT/SOL)	300		2000	μ A
Tracking Error	TER	(RT to WCT)	-1.5		+1.5	dB
Photodiode Dark Current	ID	VR = 2.2V			1	μ A
Photodiode Capacitance	Ct	VR=2.2V, f=1MHz			20	pF
Thermistor Resistance	Rth		9	10	11	k Ω
B Constant of Thermistor Resistance	-	-		3435		K

5.ABSOLUTE MAXIMUM RATING

(Ta = 25°C, unless otherwise specified)

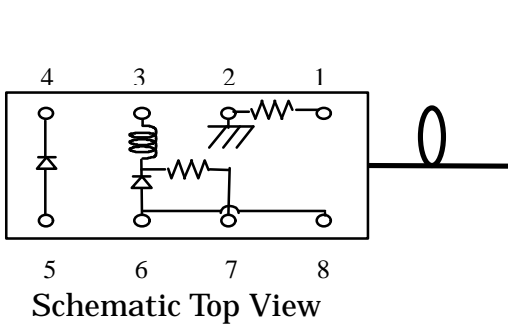
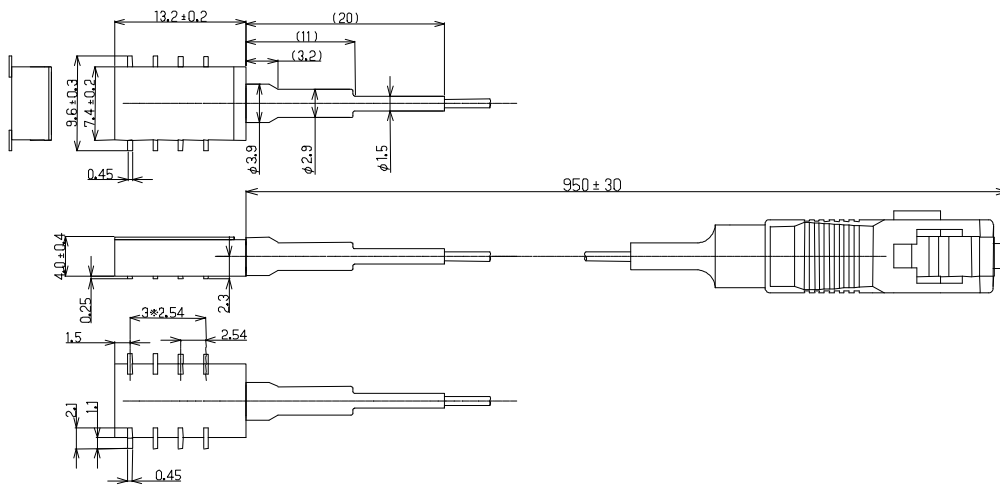
Parameter	Symbol	Rating	Unit
Fiber Output Power	P0	7	mW
LD Reverse Voltage	VR	2	V
PD Forward Current	IF	50	mA
PD Reverse Current	IR	3	mA
PD Reverse Voltage	VR	15	V
Operating Ambient Temperature (Ta)	Ta	0 to 85	°C
Storage Temperature	Tstg	-40 to 85	°C
Lead Soldering Temperature (10s)	-	260	°C

6. CONNECTOR AND FIBER SPECIFICATIONS

Parameter	Specifications	Unit
Fiber	Single Mode Fiber	-
Code Diameter	0.9	mm
Color	Yellow	-
Bending Radius	20 (min)	mm
Material	Heat-resistant	-
Length	950 +/-30	mm
Connector	SC	-

7.OUTLINE DRAWING

All dimensions in millimeters
 Package No. (Unit: mm)



NO:	Function
1:	Thermistor
2:	Thermistor. Ground
3:	LD DC bias Cathode
4:	PD Cathode
5:	PD Anode
6:	LD Anode
7:	LD RF input Cathode. 25 ohms
8:	LD Anode

Safety Information on this product



Warning Laser Beam	A laser beam is emitted from this laser diode during operation. The invisible or visible laser beam, directly or indirectly, may cause injury to the eye or loss of eyesight. Do not look directly into the laser beam. Avoid exposure to the laser beam, any reflected or collimated beam.
Caution GaAs Product	The product contains gallium arsenide, GaAs. GaAs vapor and powder are hazardous to human health if inhaled, ingested or swallowed. Do not destroy or burn the product. Do not crush or chemically dissolve the product. Do not put the product in the mouth. Observe related laws and company regulations when discarding this product. The product should be excluded from general industrial waste or household garbage.
Caution Optical Fiber	A glass-fiber is attached on the product. Handle with care. When the fiber is broken or damaged, handle carefully to avoid injury from the damaged part or fragments.

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