

## OLx107L-5 Series

5mW Laser Diode Butterfly Modules with Single Mode Fiber,Built in Cooler, Isolator.

### 1. DESCRIPTION

OLx107L-5 Series are Laser Diodes in Butterfly package with single mode fiber.

### 2. FEATURES

- Single mode fiber output : Po=5mW
- Includes monitor PD for power control
- Multi-quantum-well (MQW) DFB structure
- Thermo-electric cooler
- Built-in optical isolator

### 3. APPLICATION

- WDM supervisory channel in SDH system with optical in-line amplifier

### 4.OPTICAL AND ELECTRICAL CHARACTERISTICS

(TLD= 25°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Threshold Current	I <sub>th</sub>	CW	---	---	30	mA	
Operation current	I <sub>op</sub>	Po=5mW, CW	---	---	100	mA	
Forward Voltage	V <sub>f</sub>	Po=5mW, CW	---	---	3	V	
Peak Wavelength	$\lambda_p$	Po=5mW , CW	OL4107L-5	1470	1480	1490	nm
			OL5107L-5A	1505	1510	1515	nm
			OL6107L-5A	1615	1625	1635	nm
			OL6107L-5B	1640	1650	1660	nm
Spectral width	$\Delta\lambda$	Po=5mW, CW, -20dB	---	---	1	nm	
Side Mode Suppression Ratio	SMSR	Po=5mW, CW	30	---	---	dB	
Isolation	---	Tc=-5 to 65°C	20	---	---	dB	
Rise Time	$\tau_r$	I <sub>bias</sub> = I <sub>th</sub>	---	---	0.5	ns	
Fall Time	$\tau_f$	Po=5mW,10-90%	---	---	0.5	ns	
Photodiode Dark Current	I <sub>D</sub>	V <sub>r</sub> (PD)=5V	---	---	1	$\mu$ A	
Monitor Current	I <sub>m</sub>	Po=5mW,CW, V <sub>r</sub> (PD)=5V	50	---	---	$\mu$ A	
PD Capacitance	C <sub>t</sub>	V <sub>r</sub> (PD)=5V,f=1MHz	---	15	---	pF	
Cooler Capacity	$\Delta T$	Po=5mW	40	---	---	°C	
Cooler Current	I <sub>c</sub>	$\Delta T=40^\circ\text{C},Po=5\text{mW}$	---	---	1.2	A	
Cooler Voltage	V <sub>c</sub>	$\Delta T=40^\circ\text{C},Po=5\text{mW}$	---	---	2.4	V	
Thermistor Resistance	R <sub>th</sub>	T <sub>thm</sub> = 25 °C	9.5	---	10.5	k $\Omega$	

## 5. ABSOLUTE MAXIMUM RATING

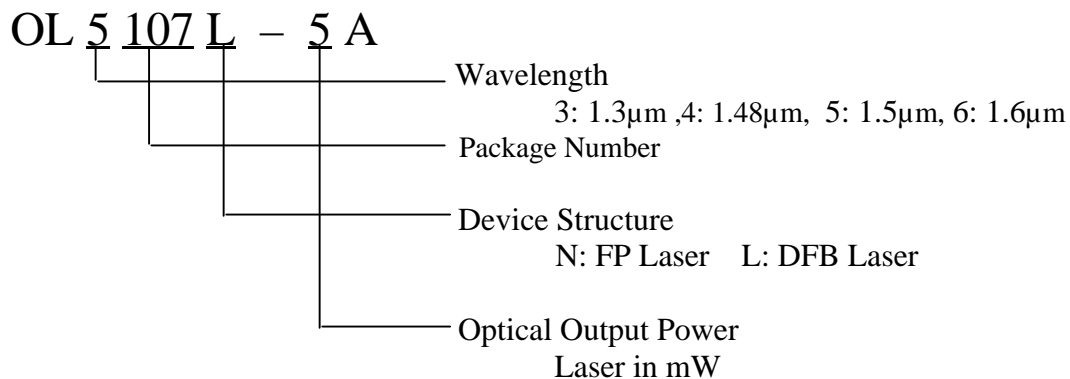
(Tc = 25°C, unless otherwise specified)

Parameter	Symbol	Rating	Unit
Fiber Output Power	Po	6	mW
LD Reverse Voltage	VR	2	V
Photodiode Forward Current	IF	10	mA
Photodiode Reverse Voltage	Vr(PD)	20	V
Cooler Current	Ic	1.4	A
Operating Case	Tc	-5 to 65	°C
Storage Temperature	Tstg	-40 to 85	°C
Lead Soldering	-	260 (10sec)	°C

## 6. CONNECTOR AND FIBER SPECIFICATIONS

Parameter	Specifications	Unit
Type	SM	---
Mode Field Diameter	9+/-1	μm
Cladding Diameter	125+/-2	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC/SPC	---

## 7. ORDERING INFORMATION



Peak Wavelength(Typ.)	Oki Part Number
1480nm	OL4107L-5
1510nm	OL5107L-5A
1625nm	OL6107L-5A
1650nm	OL6107L-5B

