

OL3412L-Wnnn, OL4412L-Wnnn, OL5412L-Wnnn, OL6412L-Wnnn

Preliminary

2mW Coaxial DFB Laser Diode Modules with Single Mode Fiber.

1. DESCRIPTION

OL3412L-Wnnn, OL4412L-Wnnn, OL5412L-Wnnn, OL6412L-Wnnn are laser diode coaxial modules with single mode fiber pigtailed.

2. FEATURES

- Single mode fiber output: $P_o=2\text{mW}$
- Includes monitor PD for power control
- Multi-quantum-well (MQW) DFB structure
- Side mode suppression ratio: 30dB
- Wide operation temperature range
- Without optical isolator

3. APPLICATION

- Coarse WDM (~ 1.25Gb/s)

4. OPTICAL AND ELECTRICAL CHARACTERISTICS

($T_a = 0$ to 65°C , unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Fiber Output Power	P_o	CW	2	---	---	mW	
Threshold Current	$I_{th}(25)$	CW, $T_a=25^\circ\text{C}$	---	10	35	mA	
Threshold Current	$I_{th}(65)$	CW, $T_a=65^\circ\text{C}$	---	27	40	mA	
Operation current	$I_{op}(65)$	$P_o=2\text{mW}$, CW, $T_a=65^\circ\text{C}$	---	60	120	mA	
Forward Voltage	V_f	$P_o=2\text{mW}$, CW	---	1.1	1.5	V	
Peak Wavelength	λ_p	$P_o=2\text{mW}$, CW, $T_a=25^\circ\text{C}$	OL3412L-W131	1307	1310	1313	nm
			OL4412L-W147	1467	1470	1473	nm
			OL4412L-W149	1487	1490	1493	nm
			OL5412L-W151	1507	1510	1513	nm
			OL5412L-W153	1527	1530	1533	nm
			OL5412L-W155	1547	1550	1553	nm
			OL5412L-W157	1567	1570	1573	nm
			OL5412L-W159	1587	1590	1593	nm
OL6412L-W161	1607	1610	1613	nm			
Side Mode Suppression Ratio	SMSR	$P_o=2\text{mW}$, CW	30	---	---	dB	
Tracking Error	TRE	$P_o=2\text{mW}$, $I_m=\text{const.}$, related to 25°C	-1.0	---	1.0	dB	
Rise Time	τ_r	$I_{bias} = I_{th}$ $P_o=2\text{mW}$, 10-90%	---	0.3	0.5	ns	
Fall Time	τ_f		---	0.3	0.5	ns	
Photodiode Dark Current	I_D	$V_R(\text{PD})=5\text{V}$	---	8	50	nA	
Monitor Current	I_m	$P_o=2\text{mW}$, CW, $V_R(\text{PD})=5\text{V}$	50	250	---	μA	

$TRE = 10 * \log \{ P_f / P_f(25^\circ\text{C}) \}$

5.ABSOLUTE MAXIMUM RATING

(Ta = 25°C, unless otherwise specified)

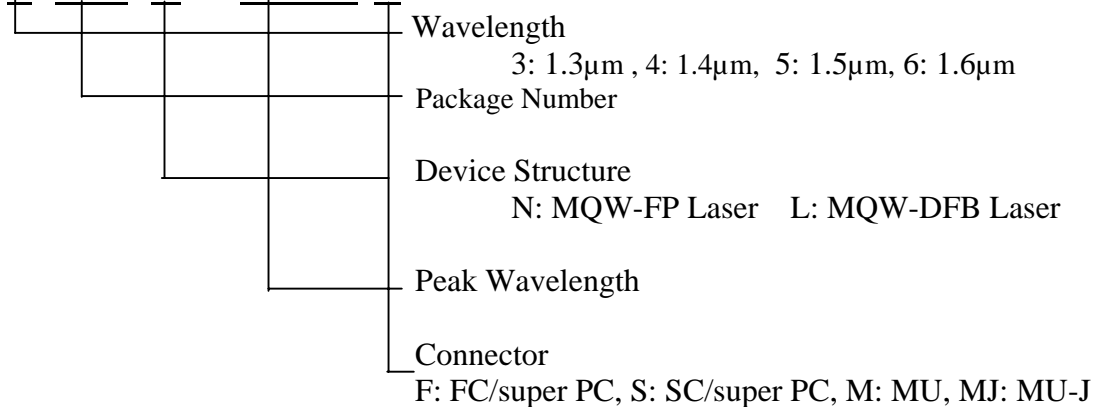
Parameter	Symbol	Rating	Unit
Fiber Output Power	Po	3	mW
LD Forward Current	IF(LD)	150	mA
Photodiode Forward Current	IF	10	mA
Photodiode Reverse Voltage	VR(PD)	20	V
Operating Temperature	Ta	0 to 65	°C
Storage Temperature	Tstg	-40 to 85	°C

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

7.ORDERING INFORMATION

OL 5 412 L - Wnnn-F



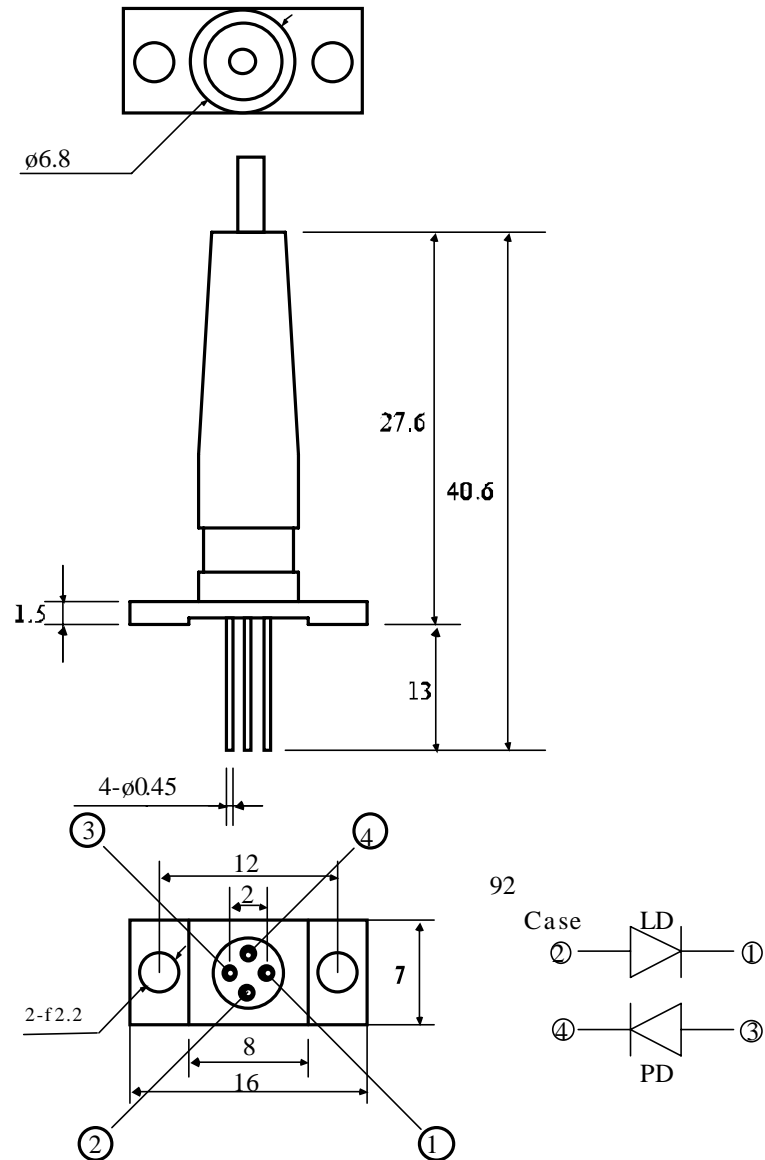
Peak Wavelength(Typ.)	Oki Part Number	Peak Wavelength(Typ.)	Oki Part Number
1310nm	OL3412L-W131-*	1550nm	OL5412L-W155-*
1470nm	OL4412L-W147-*	1570nm	OL5412L-W157-*
1490nm	OL4412L-W149-*	1590nm	OL5412L-W159-*
1510nm	OL5412L-W151-*	1610nm	OL6412L-W161-*
1530nm	OL5412L-W153-*	----	---

*: Connector type

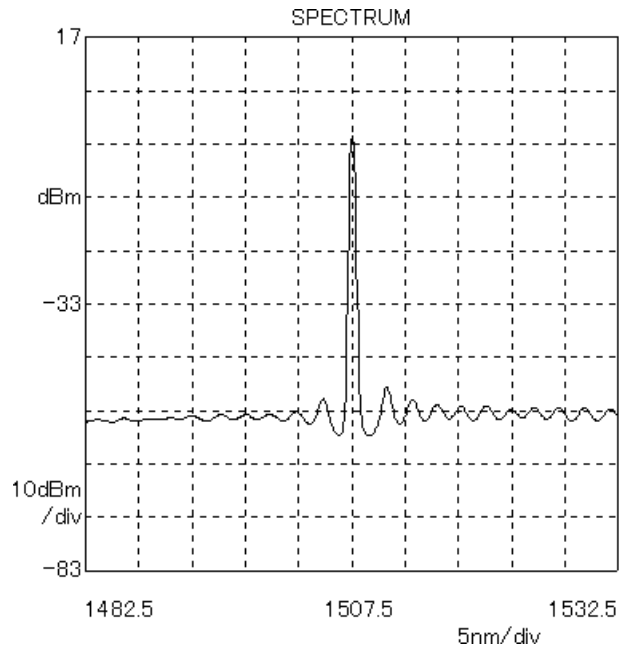
8.OUTLINE DRAWING

All dimensions in millimeters
Tolerances unless noted +/-0.5

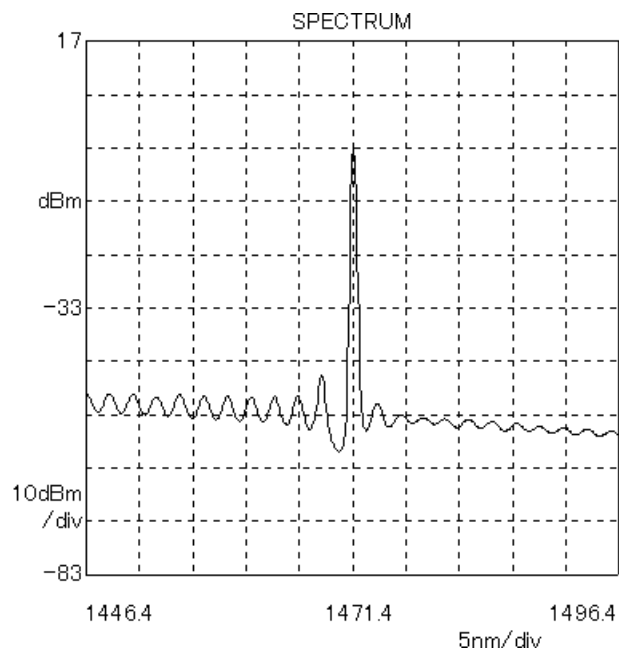
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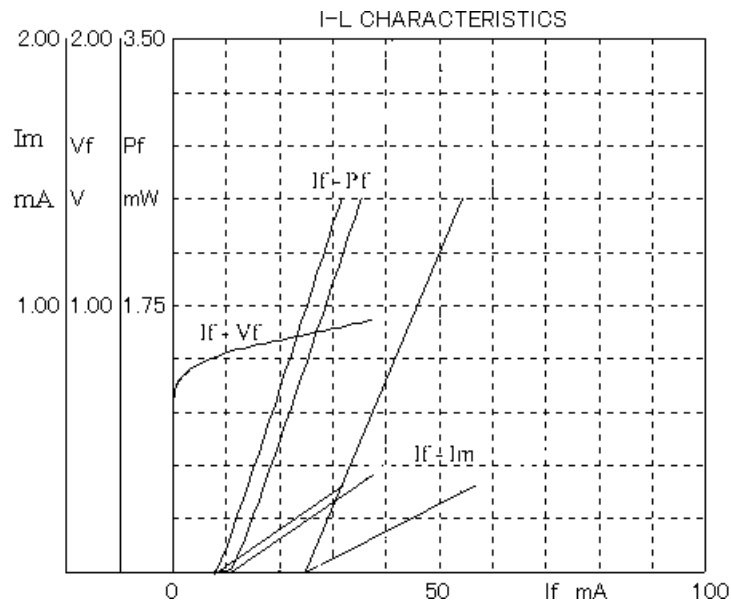
9. Typical characteristics



Peak Wavelength 1510nm



Peak Wavelength 1470nm



Electrical and optical characteristics (0, 25, 65°C)

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