

**OL4413L-4-Wnnn,OL5413L-4-Wnnn****OL6413L-4-Wnnn****Preliminary**

Transmitter optical sub-assembly for SFP/SFF

**1. DESCRIPTION**

The OL4413L-4-Wnnn, OL5413L-4-Wnnn, OL6413L-4-Wnnn series consist of a MQW-DFB laser diode, a monitor PD, a single-stage optical isolator, a single-mode fiber-stub, a split sleeve for the optical connector with  $\phi 1.25$  mm ferrule and a coaxial package.

These modules are transmitter optical sub-assembly for CWDM 2.5Gbit/s transmission with high power at high temperature.

**2. FEATURES**

- Fiber output power:  $P_f=4.0\text{mW}$
- Multi-quantum-well (MQW) DFB structure
- Includes monitor PD for power control
- Built-in single-stage optical isolator
- Coaxial Package
- Wide operation range:  $T_a=0$  to  $+70^\circ\text{C}$
- Side mode suppression: 32dB

**3. APPLICATION**

- CWDM

## OKI Electronics Components

## 4.OPTICAL AND ELECTRICAL CHARACTERISTICS

(Ta = 0 to +70°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Fiber Output Power	Pf	CW	4.0			mW	
Operation Current	Iop	Pf=4.0mW,CW			90	mA	
Threshold Current	Ith	CW			60	mA	
Peak Wavelength	$\lambda_p$	Pf=4.0mW, CW, Ta=25°C	OL4413L-4-W147	1467	1470	1473	nm
			OL4413L-4-W149	1487	1490	1493	
			OL5413L-4-W151	1507	1510	1513	
			OL5413L-4-W153	1527	1530	1533	
			OL5413L-4-W155	1547	1550	1553	
			OL5413L-4-W157	1567	1570	1573	
			OL5413L-4-W159	1587	1590	1593	
			OL6413L-4-W161	1607	1610	1613	
Spectral Width	$\Delta\lambda$	Pf= 4.0mW,CW,-20dB			0.5	nm	
LD Forward Voltage	Vf	Pf= 4.0mW,CW			1.6	V	
Side-mode suppression ratio	SMSR	Pf=4.0mW,CW	32			dB	
Rise/Fall times	Tr/Tf	P <sub>peak</sub> = 4.0mW			0.15	ns	
Monitor Current	Im	Pf= 4.0mW,CW	120		2200	μA	
Tracking Error	TRE	(RT to WCT)	-1		+1	dB	
Connector repetability	-	master pigtail	-0.5		+0.5	dB	

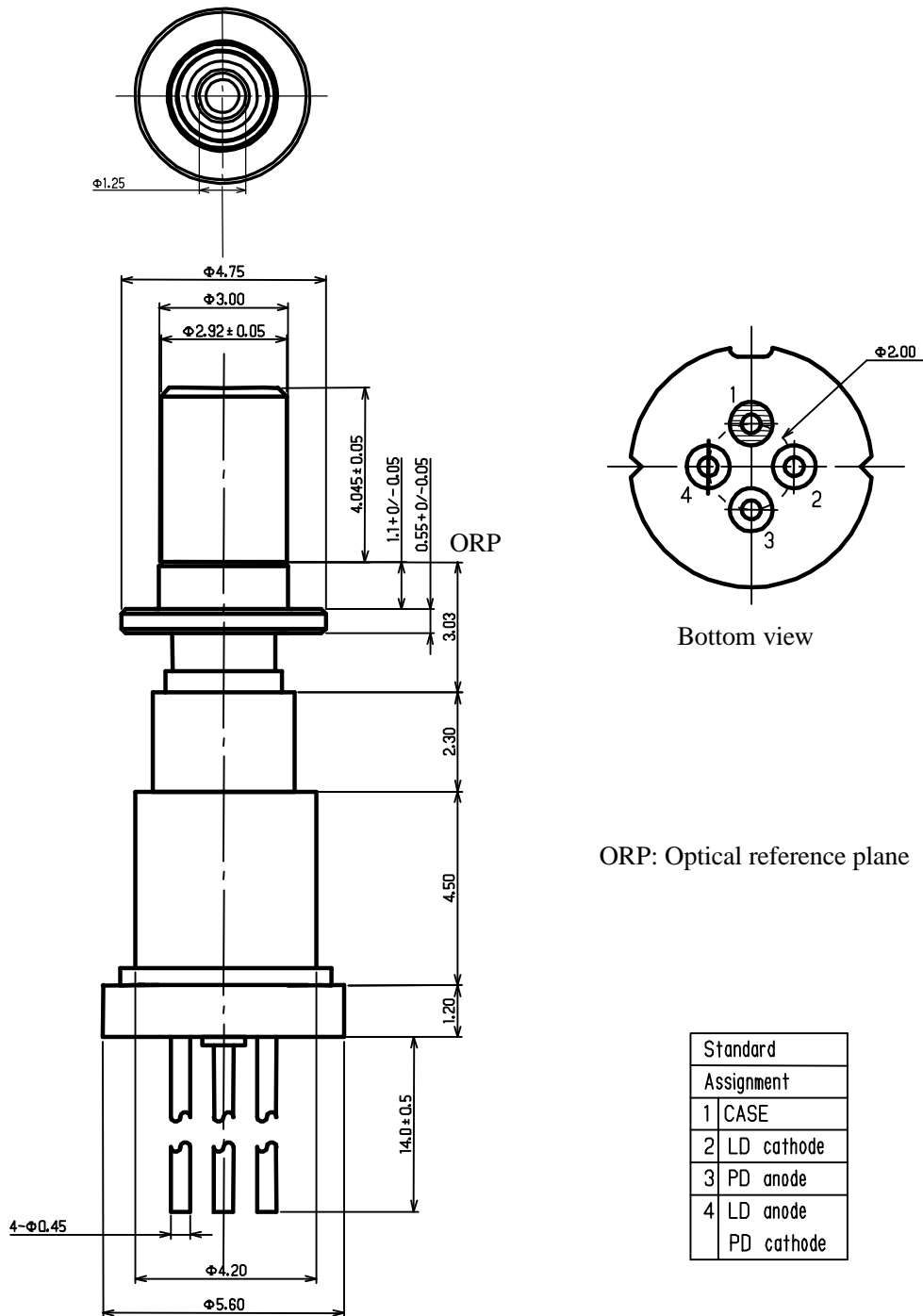
## 5.ABSOLUTE MAXIMUM RATING

(Ta = +25°C, unless otherwise specified)

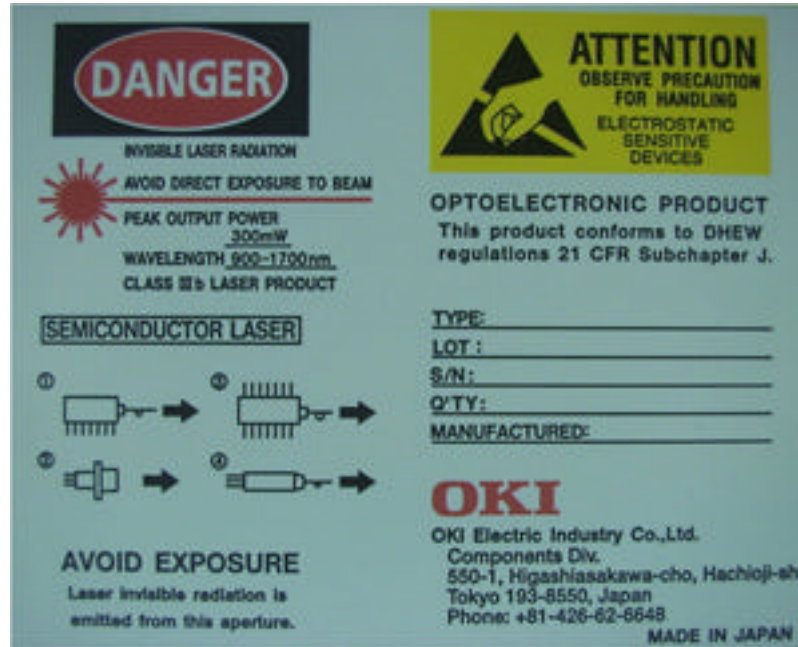
Parameter	Symbol	Rating	Unit
Fiber Output Power	Pf	6	mW
LD Reverse Voltage	VR	2	V
Monitor PD Forward Current	IF	10	mA
Monitor PD Reverse Current	IR	2	mA
Monitor PD Reverse Voltage	VR	30	V
Operating Ambient Temperature (Ta)	Ta	0 to +70	°C
Storage Temperature	Tstg	-40 to +85	°C
Lead Soldering Temperature (10s)	-	260	°C

6.OUTLINE DRAWING

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



7. SAFETY INFORMATION ON THIS PRODUCT



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

All specifications described herein are subject to change without notice.