

OL5415L-2**Preliminary****Transmitter optical sub-assembly for SFP/SFF****1. DESCRIPTION**

The OL5415L-2 consists of a 1.55 μ m 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 ϕ 1.25 mm ferrule and a coaxial package.

This module is a transmitter optical sub-assembly for 2.5Gbit/s transmission with high power at high temperature.

2. FEATURES

- High output power: 2.2mW fiber output power under CW
- Wide operating temperature range: Tc=0 to +85°C
- Side-mode suppression: 32dB
- Multi-quantum-well (MQW) DFB structure
- Internal monitor PD for power control
- Built-in single-stage optical isolator
- Coaxial Package
- No TEC required

3. APPLICATION

- STM-16
- OC-48

4.OPTICAL AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Fiber Output Power	Pf	CW	2.2			mW
Fiber Output Power(Average)	PAVG	Modulated	1.1			mW
Threshold Current	Ith	Tc=+25°C,CW		7	15	mA
		Tc=+85°C,CW,BOL			40	
		Tc=+85°C,CW,EOL			1.5*Ith-BOL	
Operation Current	Iop	Pf=2.2mW,CW,Tc=+25°C		34.5		mA
		Pf=2.2mW,CW			110	
Slope efficiency	η	Pf=2.2mW,CW,Tc=+25°C	0.055	0.08		W/A
Modulation Current	Imod	Pf=2.2mW,CW,Tc=+25°C		27.5	40	mA
Peak Wavelength	λp	Pf= 2.2mW,CW	1500		1580	nm
Spectral Wideth	Δλ	Pf=2.2mW,CW, -20dB			0.5	nm
Side-mode suppression ratio	SMSR	Pf=2.2mW,CW	32			dB
LD Forward Voltage	Vf	Pf=2.2mW,CW,Tc=+25°C			1.3	V
		Pf=2.2mW,CW			1.6	
Rise/Fall times	Tr/Tf	PAVG=1.1mW,20-80% ExR*=9dB			0.15	ns
Relative Intensity Noise	RIN	Pf=2.2mW,CW			-130	dB/Hz
Monitor Current	Im	Pf=2.2mW,CW,Tc=+25°C	50		2200	μA
Tracking Error**	TRE	(RT to WCT)	-1		+1	dB
Dispersion Penalty***	DP	-			2	dB
Connector repetability	-	master pigtail	-0.5		+0.5	dB

*ExR=Extinction ratio

**TRE=10*log{(Pf@0~+85°C)/(Pf@25°C)} at Im hold(@25°C)

***For OL5415L-2-L (See P.3) after Corning SMF-28™ 80km transmission

Test condition:ExR=9dB,NRZ,PRBS=2^23-1,@10^-10

5.ABSOLUTE MAXIMUM RATING

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

Parameter	Symbol	Rating	Unit
Fiber Output Power	Pf	5	mW
LD Reverse Voltage	Vrl	2	V
Monitor PD Forward Current	Ifd	10	mA
Monitor PD Reverse Current	Ird	3	mA
Monitor PD Reverse Voltage	Vrd	30	V
Operating Case Temperature (Tc)	Tc	0 to +85	°C
Storage Temperature	Tstg	-40 to +85	°C
Lead Soldering Temperature (10s)	-	260	°C

6.ORDERING INFORMATION

OL5415 L - 2 - L

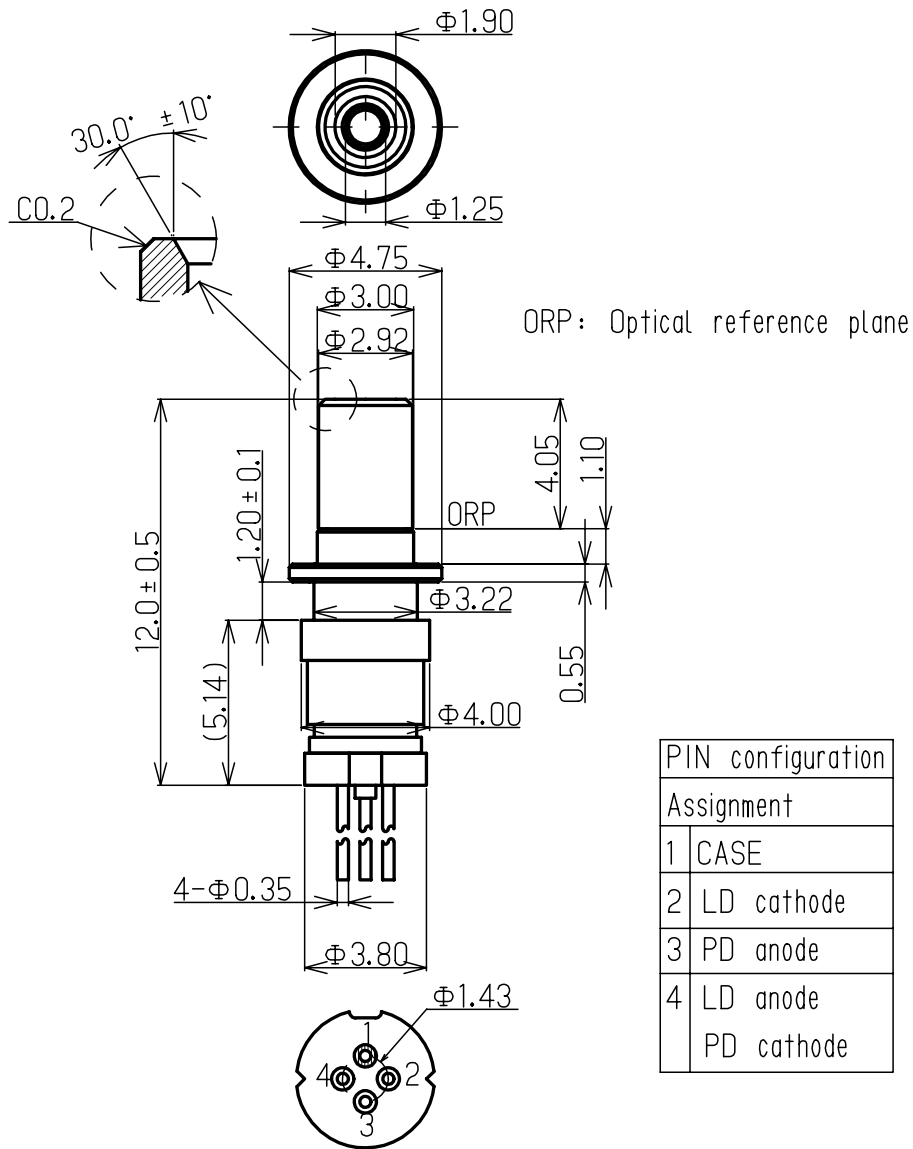
Distance

Default, no suffix: 40km

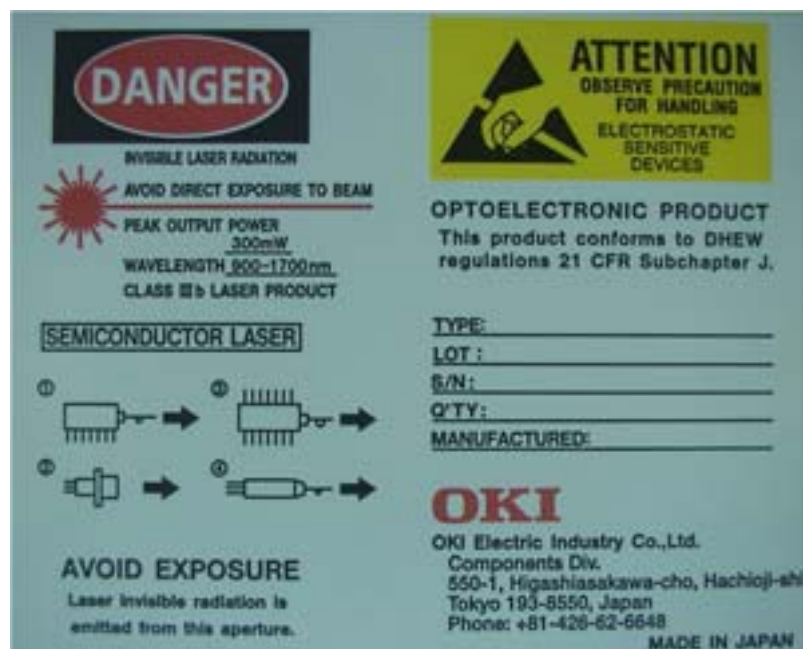
L: 80km

7.OUTLINE DRAWING

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



8. SAFETY INFORMATION ON THIS PRODUCT



<p>Warning</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>Caution</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>Caution</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>

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