

Optical Components

OL3450L-A,OL3451L-A,OL3453L-A OL4450L-A,OL4451L-A,OL4453L-A OL4450L-B,OL4451L-B,OL4453L-B OL5450L-A,OL5451L-A,OL5453L-A OL5450L-B,OL5451L-B,OL5453L-B OL6450L-A,OL6451L-A,OL6453L-A Series

2mW Coaxial DFB Laser Diode Modules

1. DESCRIPTION

The OL3450L-A, OL3451L-A, OL3453L-A, OL4450L-A, OL4451L-A, OL4453L-A, OL4450L-B, OL4451L-B, OL4453L-B, OL5450L-A, OL5451L-A, OL5453L-A, OL5450L-B, OL5451L-B, OL5453L-B, OL6450L-A, OL6451L-A, OL6453L-A series consist of an MQW-DFB laser diode, a monitor PD, a single-stage optical isolator, a single-mode fiber and a coaxial package.

2. FEATURES

- High output power: 2.0mW fiber output power under CW
- Wide operating temperature range: Tc=0 to +70°C
- Side-mode suppression: 30dB
- 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

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

4.OPTICAL AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Fiber Output Power	Pf	CW	2.0			mW	
Threshold Current	Ith	Tc=+25°C,CW		10	35	mA	
		Tc=+70°C,CW		27	40		
Operation Current	Iop	Pf=2.0mW,CW		50	120	mA	
Forward Voltage	Vf	Pf=2.0mW,CW		1.1	1.5	V	
Peak Wavelength	λ_p	Pf=2.0mW ,CW	OL345xL-A	1300	1310	1320	nm
			OL445xL-A	1470	1480	1490	
			OL445xL-B	1480	1490	1500	
			OL545xL-A	1500	1510	1520	
			OL545xL-B	1510	1520	1530	
			OL645xL-A-S1	1620	1630	1640	
			OL645xL-A-S2	1625	1630	1645	
Side-mode suppression ratio	SMSR	Pf=2.0mW,CW, Tc=+25°C	30			dB	
Rise/Fall times	Tr/Tf	Pf =2.0mW,Ibias=Ith 10-90%			0.5	ns	
Photodiode Dark Current	Id	Vrd=5V, Tc=+25°C			20	nA	
Monitor Current	Im	Pf=2.0mW,CW,Tc=+25°C	50			μ A	
Tracking Error*	TRE	(RT to WCT)	-1	---	+1	dB	

*TRE=10*log{(Pf@0~+70°C)/(Pf@25°C)} at Im hold(@25°C)

5.ABSOLUTE MAXIMUM RATING

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

Parameter	Symbol	Rating	Unit
Fiber Output Power	Pf	3	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	15	V
Operating Case Temperature (Tc)	Tc	0 to +70	°C
Storage Temperature	Tstg	-40 to +85	°C
Lead Soldering Temperature (10s)	-	260	°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 Type	FC/SC/LC/MU/MU-J	---

7.ORDERING INFORMATION

OL 6 45 0 L - A - AF SC - S1

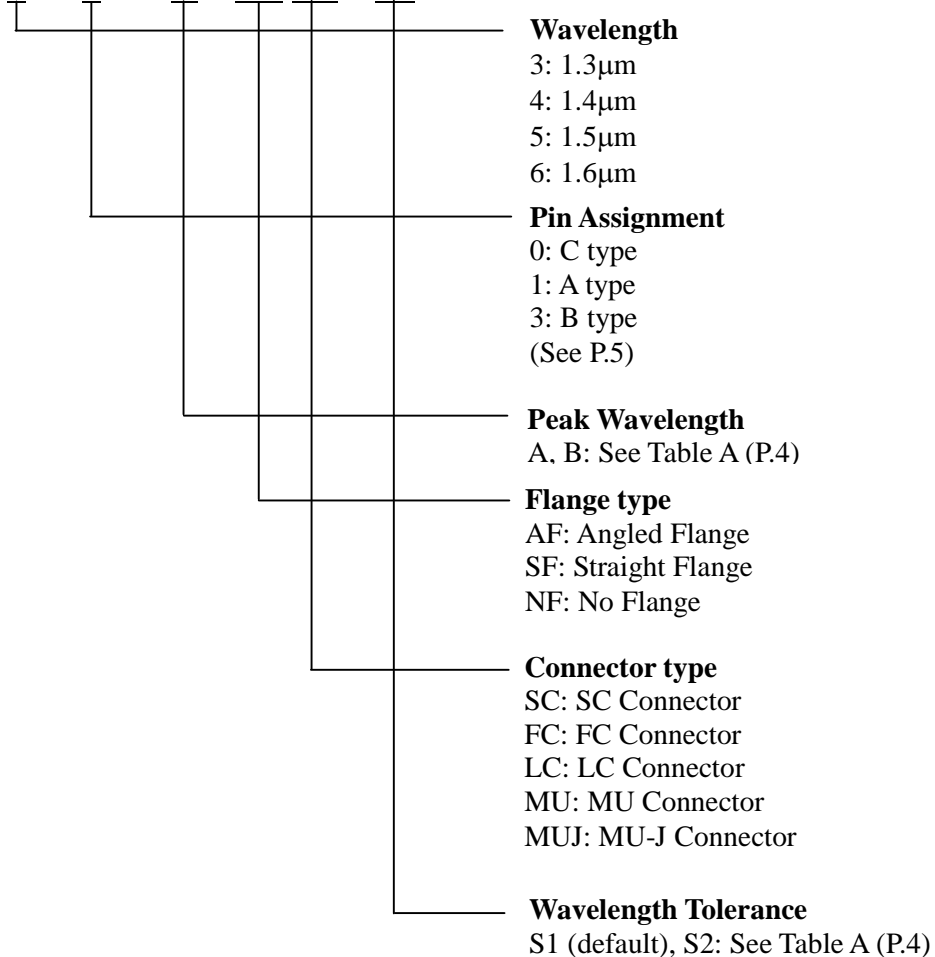
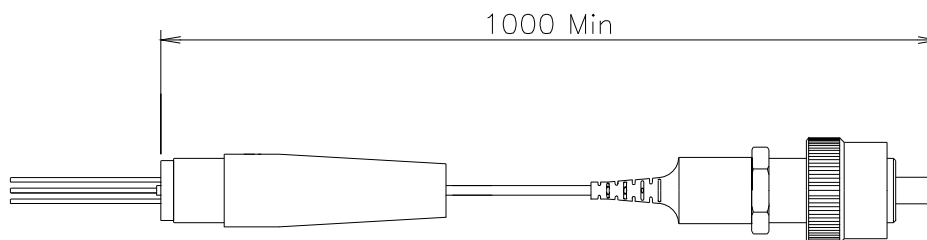


Table A. Peak Wavelength vs. Oki Part Number

Peak Wavelength(Typ.)	Wavelength Tolerance	Oki Part Number
1310nm	+/-10nm	OL345xL-A
1480nm	+/-10nm	OL445xL-A
1490nm	+/-10nm	OL445xL-B
1510nm	+/-10nm	OL545xL-A
1520nm	+/-10nm	OL545xL-B
1630nm	+/-10nm	OL645xL-A-S1
1630nm	+15/-5nm	OL645xL-A-S2

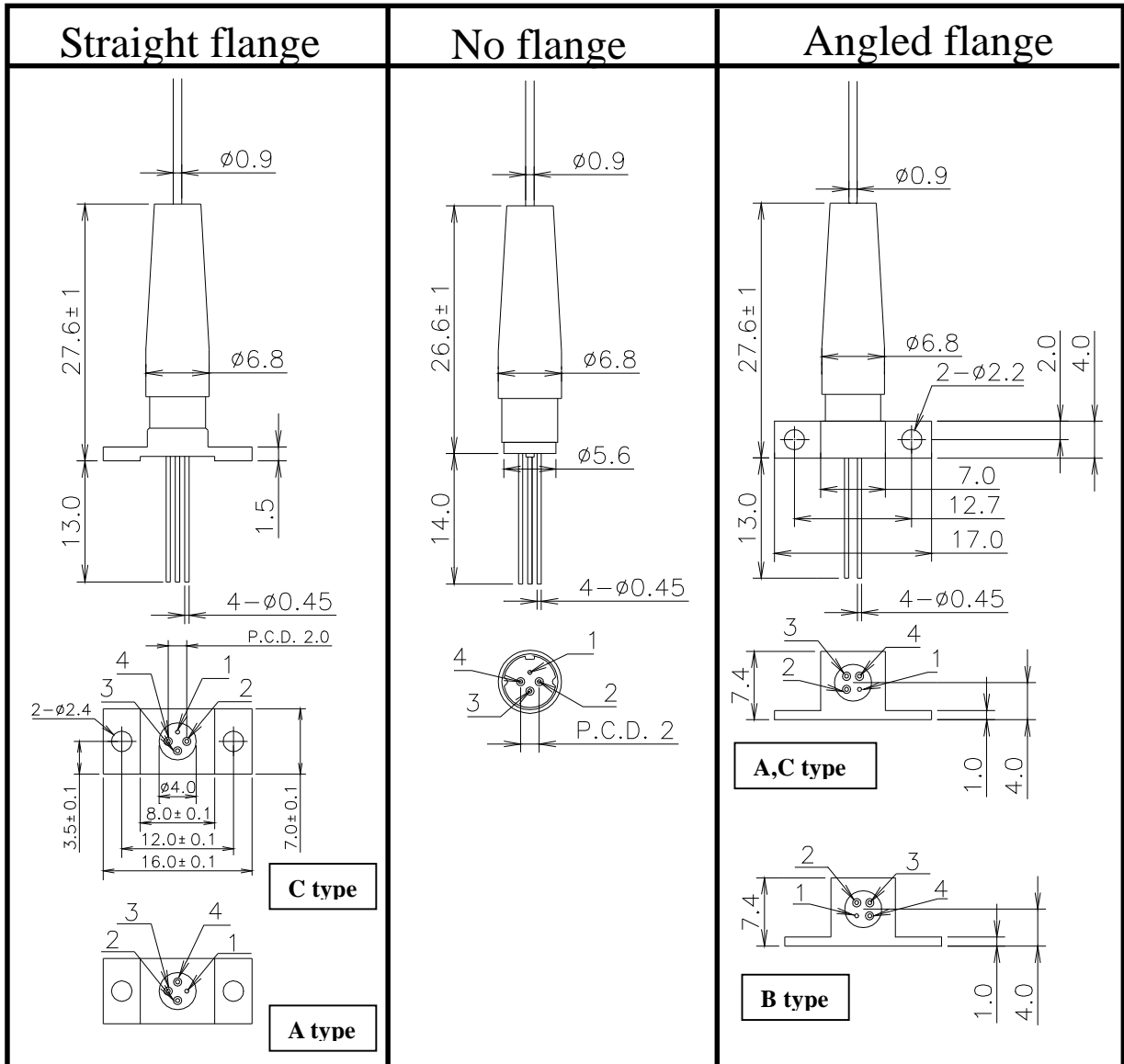
8.OUTLINE DRAWING

Length (mm)



All dimensions in millimeters


Flange Type



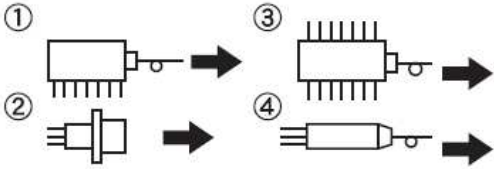
Pin Assignment

OL6450L (C type)	OL6451L (A type)	OL6453L (B type)																																				
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9. SAFETY INFORMATION ON THIS PRODUCT



PEAK OUTPUT POWER 500mW
 WAVELENGTH 900~1700nm
 CLASS 3B LASER PRODUCT



AVOID EXPOSURE
 Laser invisible radiation is emitted from the aperture.

Complies with CFR1040.10 and IEC60825-1

<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>

All specifications described herein are subject to change without notice.

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