

# Optical Components

Rev. 3 [10. 2008]

## OL5350L-3-A10,OL5351L-3-A10

## OL5353L-3-A10

**Preliminary**

### 3mW Coaxial DFB Laser Diode Modules

#### 1. DESCRIPTION

The OL5350L-3-A10,OL5351L-3-A10,OL5353L-3-A10 series consist of an MQW-DFB laser diode, a monitor PD, a single-mode fiber and a coaxial package.

#### 2. FEATURES

- High output power: 3.0mW fiber output power under CW
- Wide operating temperature range: Tc=0 to +75°C
- Side-mode suppression: 30dB
- Multi-quantum-well (MQW) DFB structure
- Internal monitor PD for power control
- 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 +75°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Fiber Output Power	Pf	CW	3			mW
Threshold Current	Ith(25)	CW, Tc=25°C	3.5		60	mA
Operation current	Iop	Pf=3mW, CW			110	mA
Forward Voltage	Vf	Pf=3mW, CW			2	V
Peak Wavelength	$\lambda_p$	Pf=3mW, CW	1500	1510	1520	nm
Spectral width	$\Delta\lambda$	Pf=3mW, -20dB, CW			1	nm
Side Mode Suppression Ratio	SMSR	Pf=3mW, CW	30			dB
Tracking Error	TRE	Pf=3mW, Im=const., related to 25°C	-1.0		1.0	dB
Rise/Fall Times	Tr/Tf	Ibias = Ith Pf=3mW, 10-90%			0.5	ns
Photodiode Dark Current	Id	Vrd=5V			1	$\mu$ A
Monitor Current	Im	Pf=3mW, CW, Vrd=5V	100		1000	$\mu$ A
PD capacitance	Ct	Vrd=5V, f=1MHz		15		pF

$$TRE = 10 \cdot \log \{ Pf(WCT) / Pf(25^\circ C) \}$$

Drawing No: JOG-01269 Rev.3

## 5.ABSOLUTE MAXIMUM RATING

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

Parameter	Symbol	Rating	Unit
Fiber Output Power	Pf	3.5	mW
LD Forward Current	Ifl	150	mA
LD Reverse Voltage	Vrl	2	V
Photodiode Forward Current	Ifd	10	mA
Photodiode Reverse Voltage	Vrd	15	V
Operating Temperature(Case)	Tc	0 to 75	°C
Storage Temperature	Tstg	-40 to 85	°C
Soldering(Max.10sec.)	Tsld	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	1000 (Min.)	mm

## 7.ORDERING INFORMATION

OL535 3 L - 3 - A10 - AT LC

### Pin Assignment

0: C type  
1: A type  
3: B type  
(See P.4)

### Flange type

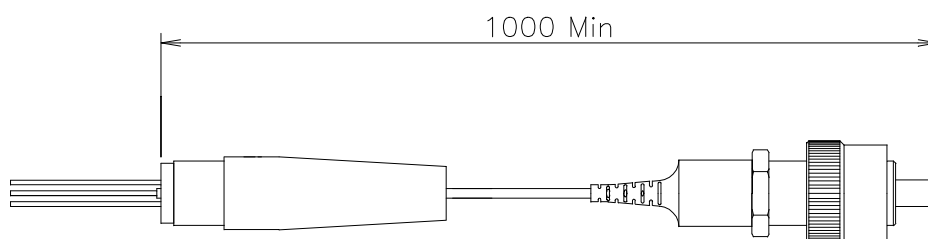
AT: Angled thin Flange  
SF: Straight Flange  
NF: No Flange

### Connector type

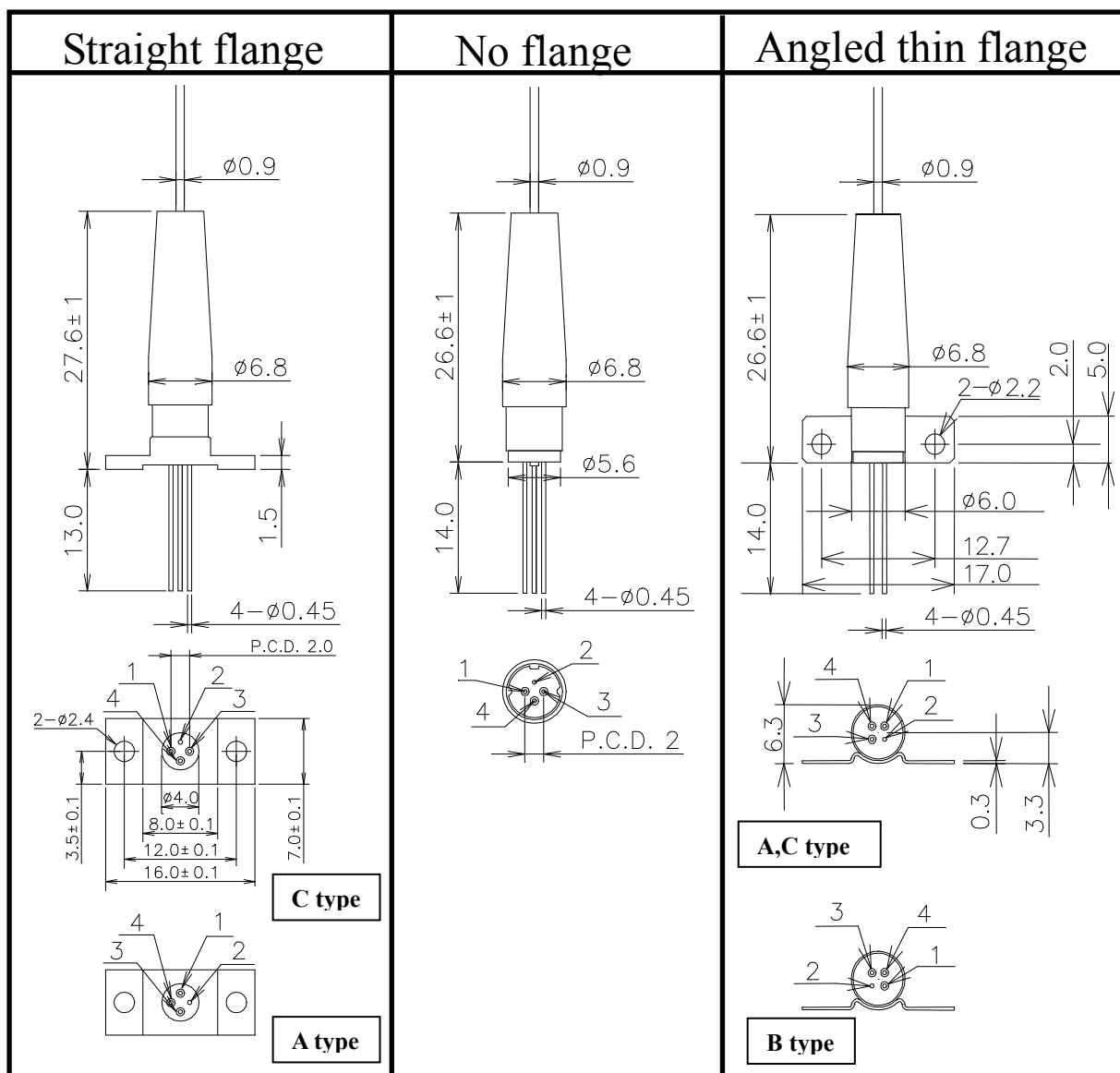
SC: SC Connector  
FC: FC Connector  
LC: LC Connector  
MU: MU Connector  
MUJ: MU-J Connector

## 8.OUTLINE DRAWING

Length (mm)



All dimensions in millimeters

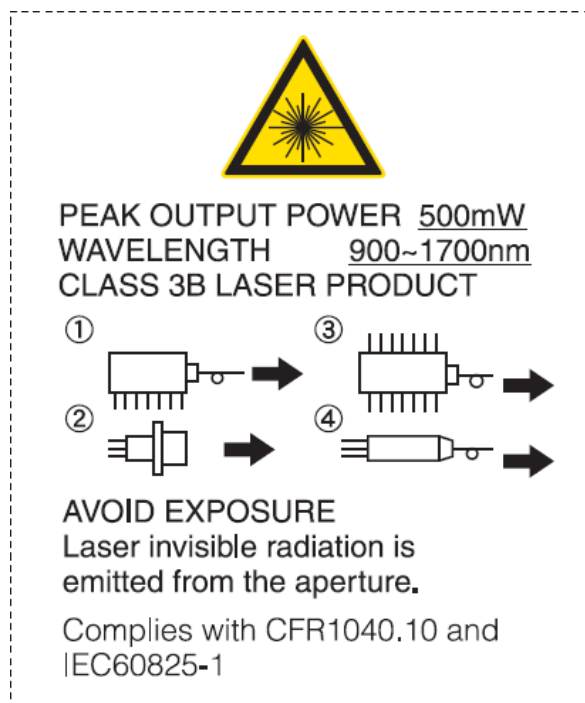


## Pin Assignment

OL5350L (C type)	OL5351L (A type)	OL5353L (B type)																																				
<table><tr><th colspan="2">PIN configuration</th></tr><tr><th colspan="2">Assignment</th></tr><tr><td>1</td><td>LD anode PD cathode</td></tr><tr><td>2</td><td>CASE</td></tr><tr><td>3</td><td>LD cathode</td></tr><tr><td>4</td><td>PD anode</td></tr></table>	PIN configuration		Assignment		1	LD anode PD cathode	2	CASE	3	LD cathode	4	PD anode	<table><tr><th colspan="2">PIN configuration</th></tr><tr><th colspan="2">Assignment</th></tr><tr><td>1</td><td>PD anode</td></tr><tr><td>2</td><td>LD anode (CASE)</td></tr><tr><td>3</td><td>LD cathode</td></tr><tr><td>4</td><td>PD cathode</td></tr></table>	PIN configuration		Assignment		1	PD anode	2	LD anode (CASE)	3	LD cathode	4	PD cathode	<table><tr><th colspan="2">PIN configuration</th></tr><tr><th colspan="2">Assignment</th></tr><tr><td>1</td><td>LD cathode</td></tr><tr><td>2</td><td>LD anode (CASE)</td></tr><tr><td>3</td><td>PD anode</td></tr><tr><td>4</td><td>PD cathode</td></tr></table>	PIN configuration		Assignment		1	LD cathode	2	LD anode (CASE)	3	PD anode	4	PD cathode
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Drawing No: JOG-01269 Rev.3

## 9. SAFETY INFORMATION ON THIS PRODUCT



<b>Warning</b> Laser Beam	<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>
<b>Caution</b> GaAs Product	<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>
<b>Caution</b> Optical Fiber	<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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