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**OL4492L,OL5492L/A,OL592L/A,OL5492L/B,OL592L/B**

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**1.48, 1.51, 1.52  $\mu$ m Coaxial DFB Laser Module**

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**GENERAL DESCRIPTION**

The OL4492L, OL5492L/A, OL592L/A, OL5492L/B and OL592L/B are MQW-DFB laser diode coaxial modules with optical isolator and single-mode fiber pigtails. These modules are optimal light sources for WDM supervisory channel in SDH system with optical in-line amplifier.

**FEATURES**

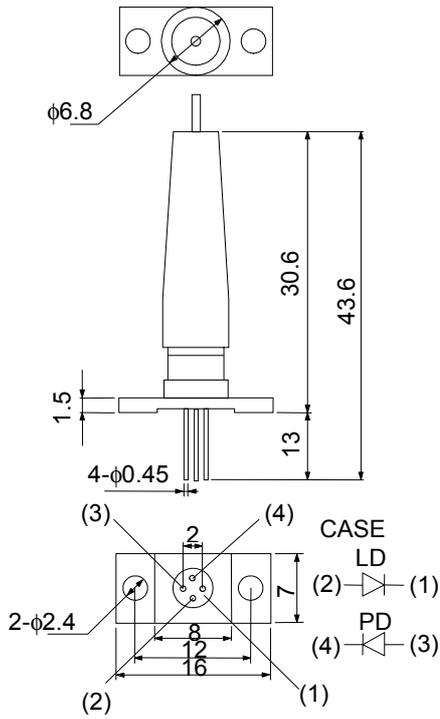
- Single-mode fiber output:  $P_f = 2$  mW
- Side mode suppression ratio: 30 dB
- Includes monitor PD for power control
- Built-in optical isolator
- Wide operation temperature range
- Multi-quantum-well (MQW) structure

**APPLICATIONS**

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

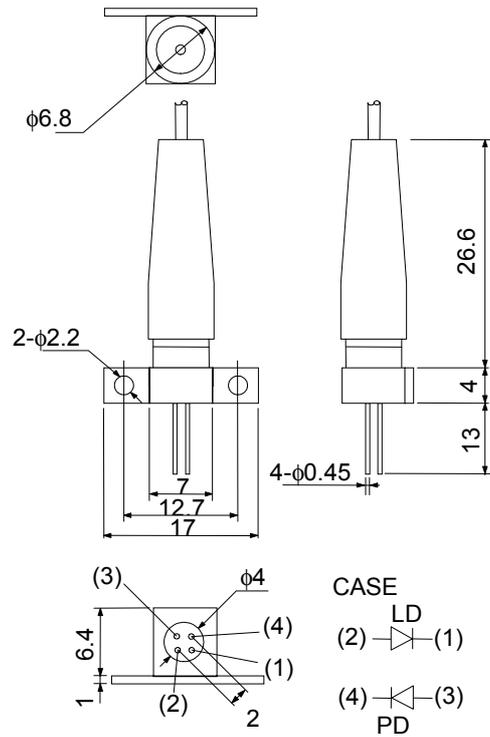
**PACKAGE DIMENSIONS**

**OL592L/A, OL592L/B**



**OL4492L, OL5492L/A, OL5492L/B**

(Unit: mm)



**ABSOLUTE MAXIMUM RATINGS**

Parameter	Symbol	Condition	Rating	Unit
Fiber Output	Pf	Ta = 25°C	3	mW
LD Forward Current	I <sub>F</sub> (LD)		150	mA
PD Reverse Voltage	V <sub>R</sub> (PD)		20	V
PD Forward Current	I <sub>F</sub> (PD)		10	mA
Operating Temperature	T <sub>opr</sub>	—	0 to +65	°C
Storage Temperature	T <sub>stg</sub>	—	-40 to +85	°C

**OPTICAL AND ELECTRICAL CHARACTERISTICS**

(Ta = 25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	I <sub>th</sub>	—	—	—	40	mA
Fiber Output Power	Pf	CW	2	—	—	mW
Operating Current	I <sub>op</sub>	Pf = 2 mW	—	—	120	mA
Side Mode Suppression Ratio	SMSR	Pf = 2 mW	30	—	—	dB
Rise Time	t <sub>r</sub>	I <sub>bias</sub> =1th	—	—	0.5	ns
Fall Time	t <sub>f</sub>	Pf = 2 mW, 10% to 90%	—	—	0.5	ns
Forward Voltage	V <sub>F</sub>	Pf = 2 mW	—	1.1	1.5	V
PD Dark Current	I <sub>DARK</sub>	V <sub>R</sub> (PD) = 5 V	—	0.5	20	nA
Monitor Current	I <sub>m</sub>	V <sub>R</sub> (PD) = 5 V, Pf = 2 mW	50	—	—	μA

**Peak Wavelength**

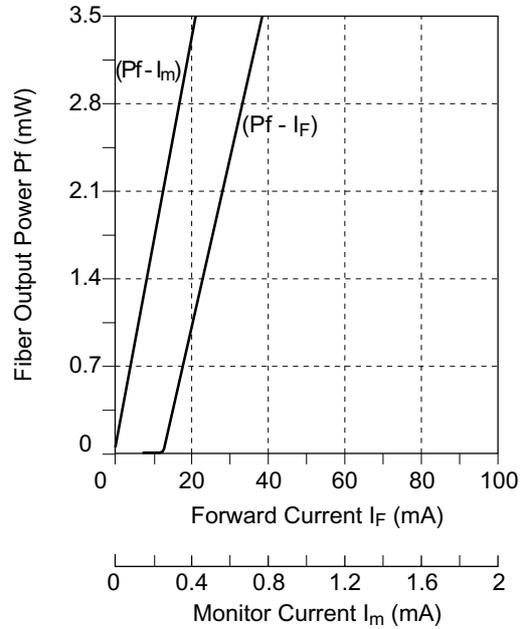
(Ta = 0 to 65°C)

Mode	Symbol	Condition	Min.	Max.	Unit
OL4492L	λ <sub>p</sub>	Pf = 2 mW	1470	1490	nm
OL5492L/A, OL592L/A			1500	1520	
OL5492L/B, OL592L/B			1510	1530	

**TYPICAL CHARACTERISTICS**

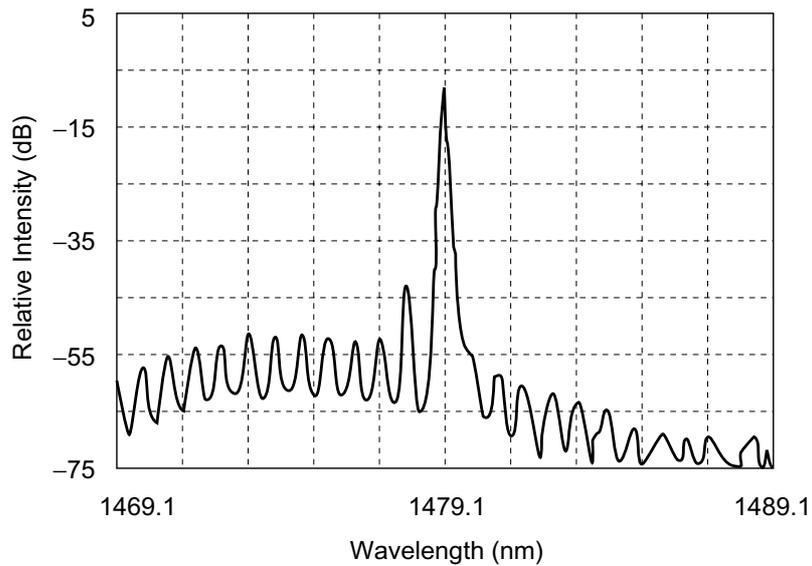
**OL4492L**

**Fiber Output Power vs. Forward Current ( $T_a = 25^\circ\text{C}$ )**



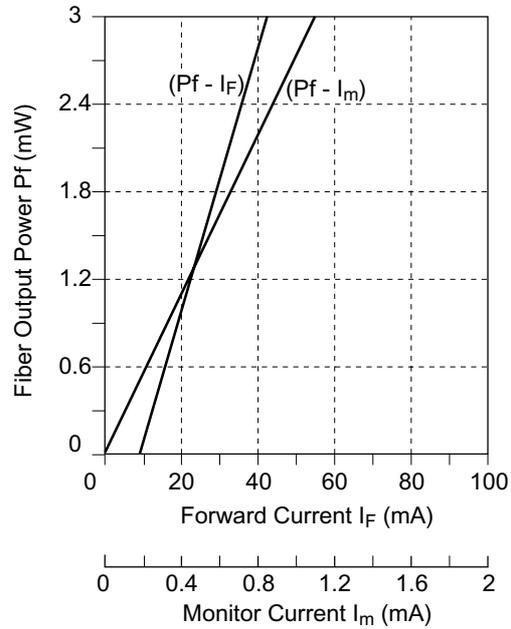
**OL4492L**

**Oscillation Spectrum ( $T_a = 25^\circ\text{C}$ )**



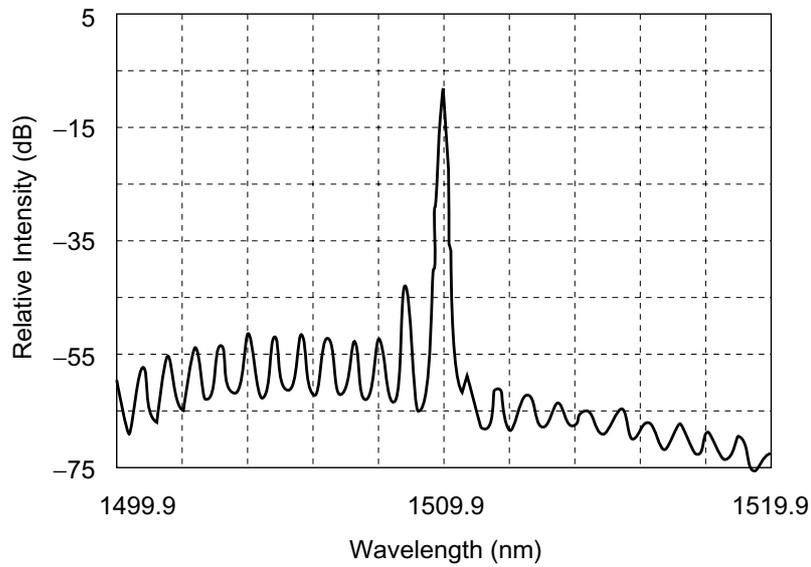
**OL5492L/A, OL592L/A**

**Fiber Output Power vs. Forward Current (Ta = 25°C)**



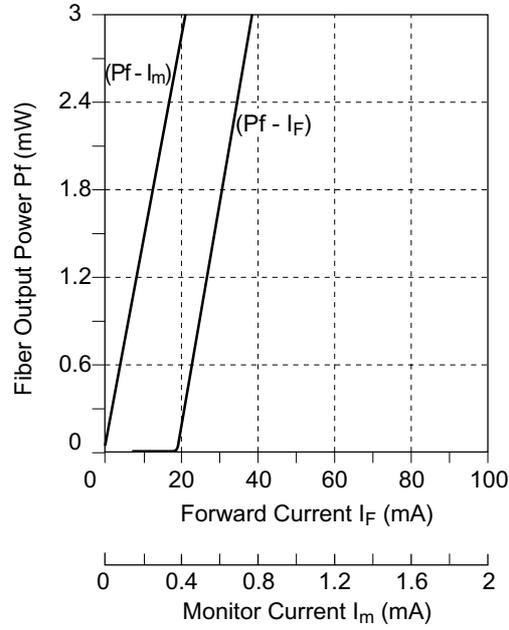
**OL5492L/A, OL592L/A**

**Oscillation Spectrum (Ta = 25°C)**



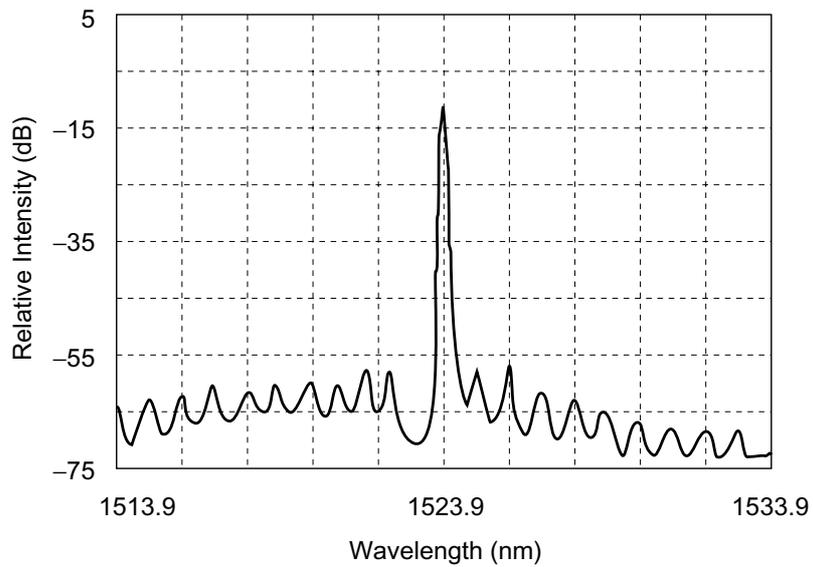
**OL5492L/B, OL592L/B**

**Fiber Output Power vs. Forward Current ( $T_a = 25^\circ\text{C}$ )**



**OL5492L/B, OL592L/B**

**Oscillation Spectrum ( $T_a = 25^\circ\text{C}$ )**



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