

OKI electronic components

OL4492L, OL5492L/A, OL5492L/B

1.48, 1.51, 1.52 μm Coaxial DFB Laser Module

GENERAL DESCRIPTION

The OL4492L, OL5492L/A, and OL5492L/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

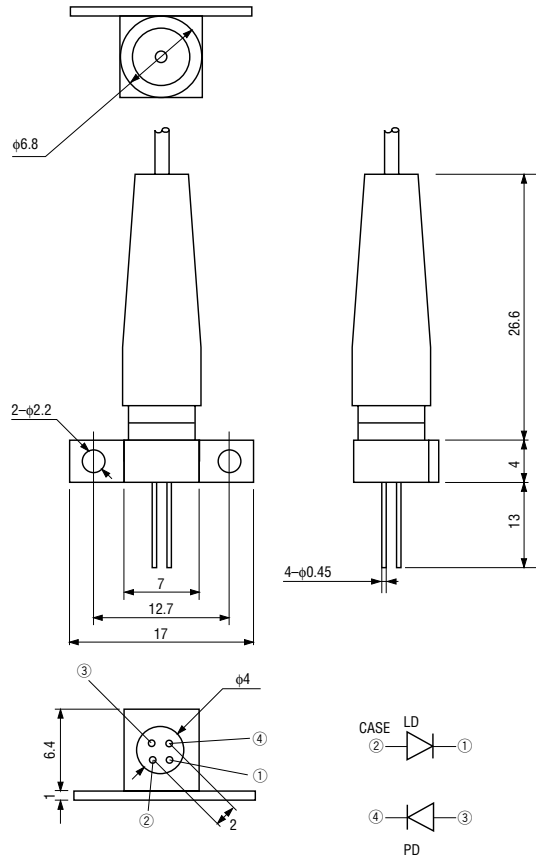
- Single-mode fiber output: $P_f=2$ mW
- Side mode suppression ratio: 30dB
- Includes monitor PD for power control
- Built-in optical isolator
- Wide operation temperature range
- Multi-quantum-well (MQW) structure

APPLICATIONS

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

PACKAGE DIMENSIONS (Unit: mm)

- OL4492L, OL5492L/A, OL5492L/B



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Conditions	Ratings	Unit
Fiber Output	Pf	Ta=25°C	3	mW
LD Forward Current	I _F (LD)		150	mA
PD Reverse Voltage	V _R (PD)		20	V
PD Forward Current	I _F (PD)		10	mA
Operating Temperature	T _{opr}	—	0 to +65	°C
Storage Temperature	T _{stg}	—	-40 to +85	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I _{th}	—	—	—	40	mA
Fiber Output Power	Pf	CW	2	—	—	mW
Operating current	I _{op}	Pf=2 mW	—	—	120	mA
Side Mode Suppression Ratio	SMSR	Pf=2 mW	30	—	—	dB
Rise Time	t _r	I _{bias} =I _{th}	—	—	0.5	ns
Fall Time	t _f	Pf=2 mW, 10% to 90%	—	—	0.5	ns
Forward Voltage	V _F	Pf=2 mW	—	1.1	1.5	V
PD Dark Current	I _{DARK}	V _R (PD)=5 V	—	0.5	20	nA
Monitor Current	I _m	V _R (PD)=5 V, Pf=2 mW	50	—	—	μA

Peak Wavelength

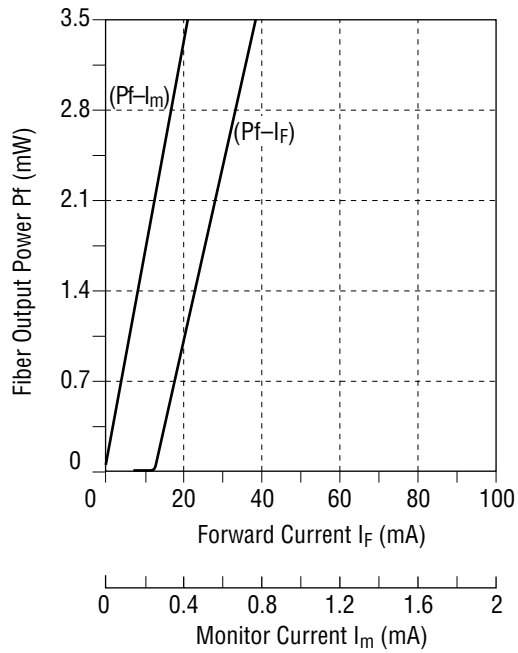
(Ta=0 to 65°C)

Model	Symbol	Test Conditions	Min.	Max.	Unit
OL4492L	λ _p	Pf=2mW	1470	1490	nm
OL5492L/A			1500	1520	
OL5492L/B			1510	1530	

TYPICAL CHARACTERISTICS

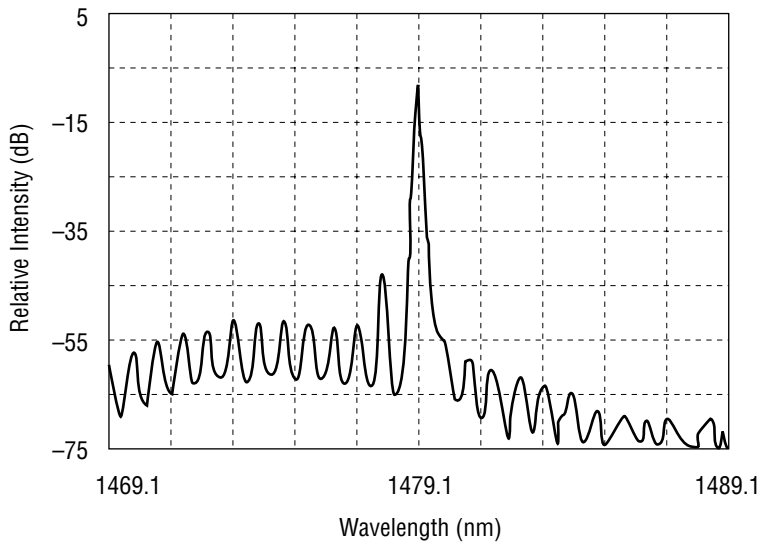
- OL4492L

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



- OL4492L

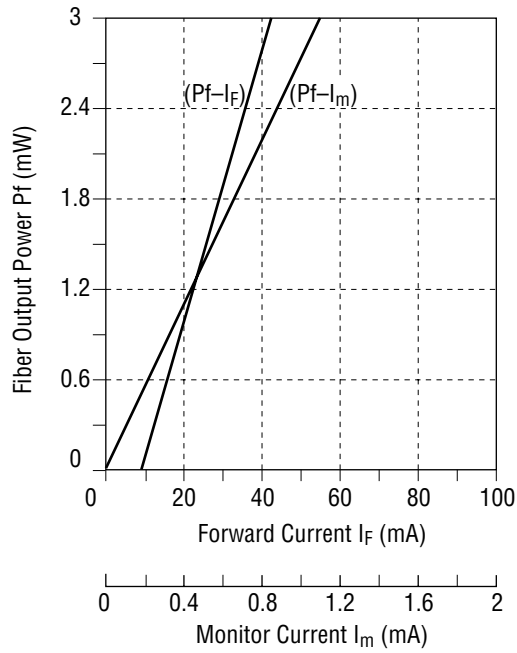
Oscillation Spectrum ($T_a=25^\circ\text{C}$)



TYPICAL CHARACTERISTICS (Continued)

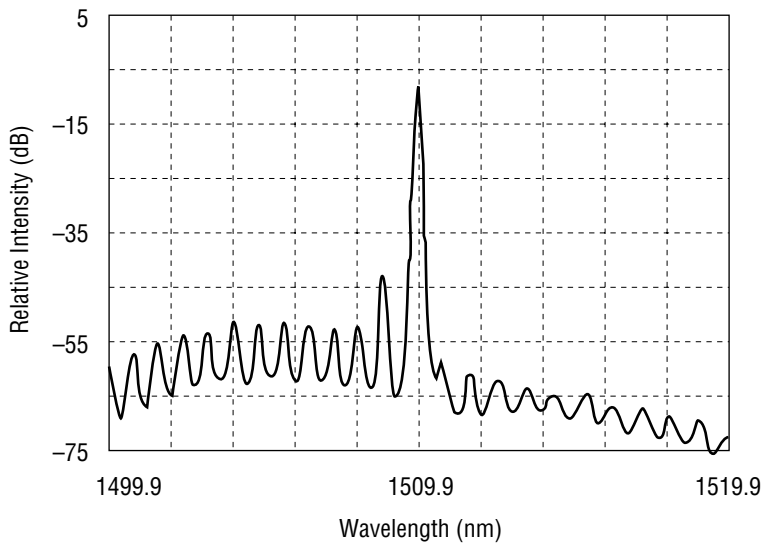
- OL5492L/A

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



- OL5492L/A

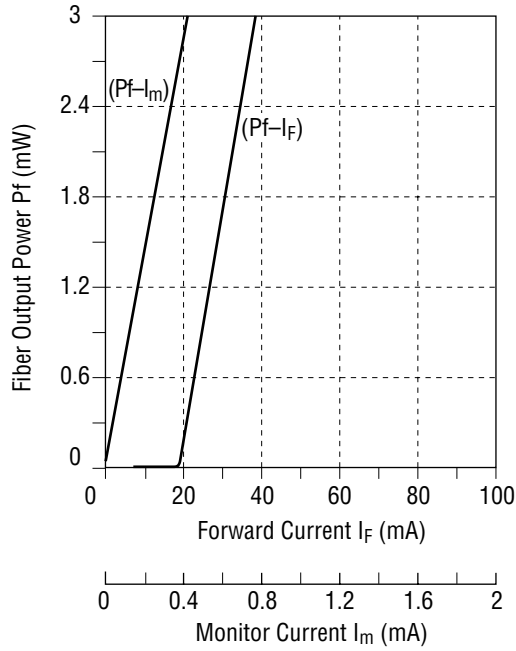
Oscillation Spectrum ($T_a=25^\circ\text{C}$)



TYPICAL CHARACTERISTICS (Continued)

- OL5492L/B

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



- OL5492L/B

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

