OKI electronic components

OL592L, OL5492L

1.55 μm Coaxial DFB Laser Module

GENERAL DESCRIPTION

The OL592L, and OL5492L are MQW structured, 1.55 μm coaxial DFB laser modules with single-mode fiber pigtails. Having a good side-mode suppression ratio and a wide operating temperature range, these devices are optimal light sources for high-capacity long-haul transmission systems.

FEATURES

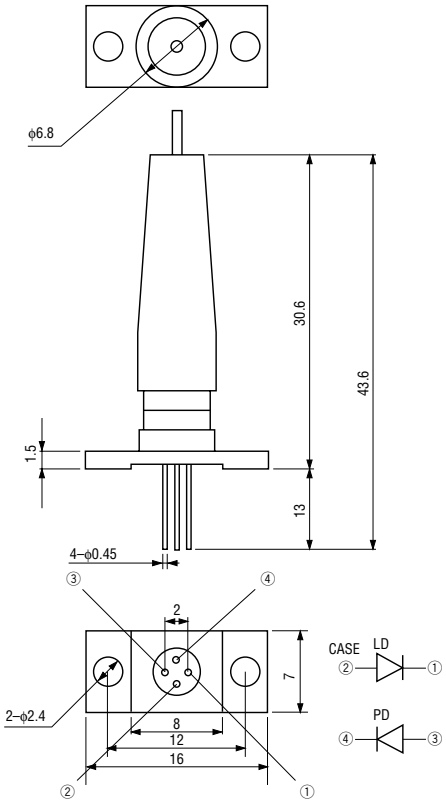
- Single-mode fiber output: Pf=1 mW
- Side mode suppression ratio: 30dB
- Includes monitor PD for power control
- Built-in optical Isolator
- Wide operation temperature range
- Multi-quantum-well (MQW) structure

APPLICATIONS

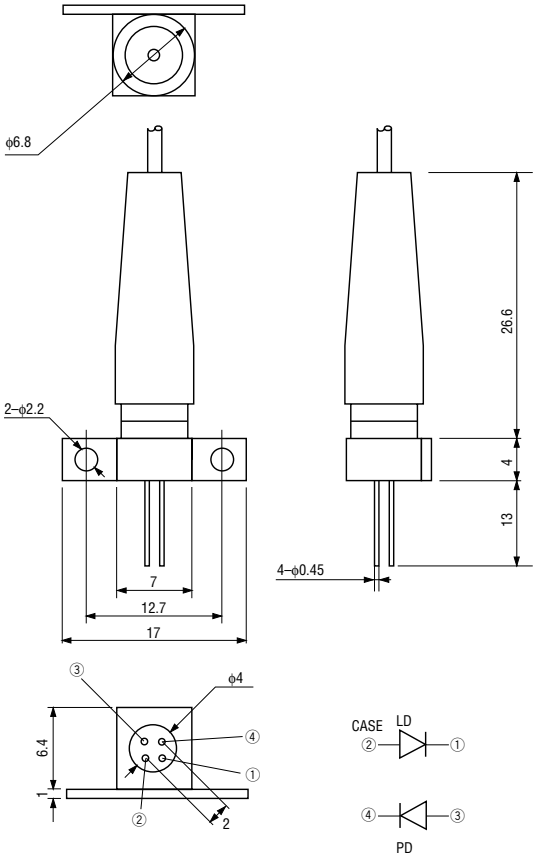
- Optical transmission systems
- Optical subscriber loops
- Optical measurement systems

PACKAGE DIMENSIONS (Unit: mm)

• OL592L



• OL5492L



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Conditions	Ratings	Unit
Fiber Output	Pf	Ta=25°C	2	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

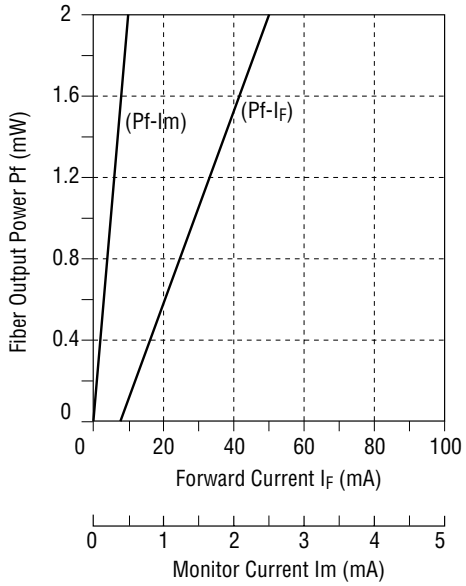
(Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	Ith	—	—	20	40	mA
Fiber Output Power	Pf	I_F=Ith+20 mA	1	—	—	mW
Peak Wavelength	λp	Pf=1 mW	1530	1550	1570	nm
Side Mode Suppresion Ratio	SMSR	Pf=1 mW	30	—	—	dB
Rise Time	t_r	Ibias=Ith	—	—	0.5	ns
Fall Time	t_f	Pf=1 mW, 10% to 90%	—	—	0.5	ns
Forward Voltage	V_F	Pf=1 mW	—	1.1	1.5	V
PD Dark Current	I_{DARK}	V_R(PD)=5 V	—	0.5	20	nA
Monitor Current	Im	V_R (PD)=5 V, Pf=1 mW	50	—	—	μA

TYPICAL CHARACTERISTICS

- **OL592L, OL5492L**

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



- **OL592L, OL5492L**

Oscillation Spectrum (Ta=25°C)

