

# OKI electronic components

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## OL592L, OL5492L

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### 1.55 $\mu\text{m}$ Coaxial DFB Laser Module

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#### GENERAL DESCRIPTION

The OL592L, and OL5492L are MQW structured, 1.55  $\mu\text{m}$  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

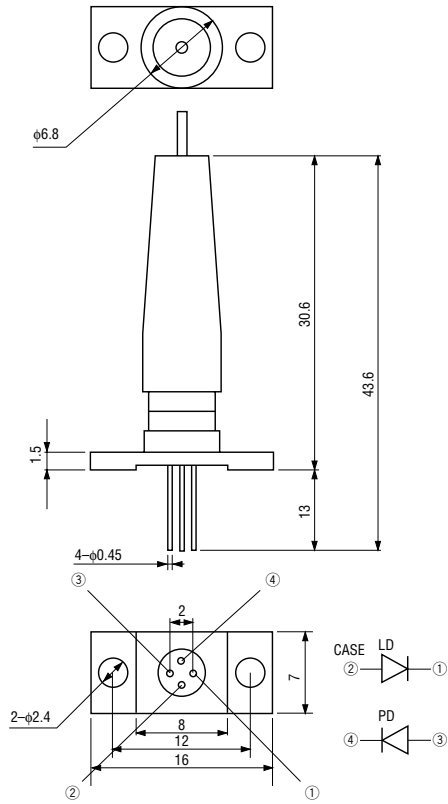
- Single-mode fiber output:  $P_f=1$  mW
- Side mode suppression ratio: 30dB
- Includes monitor PD for power control
- Built-in optical Isolator
- Wide operation temperature range
- Multi-quantum-well (MQW) structure

#### APPLICATIONS

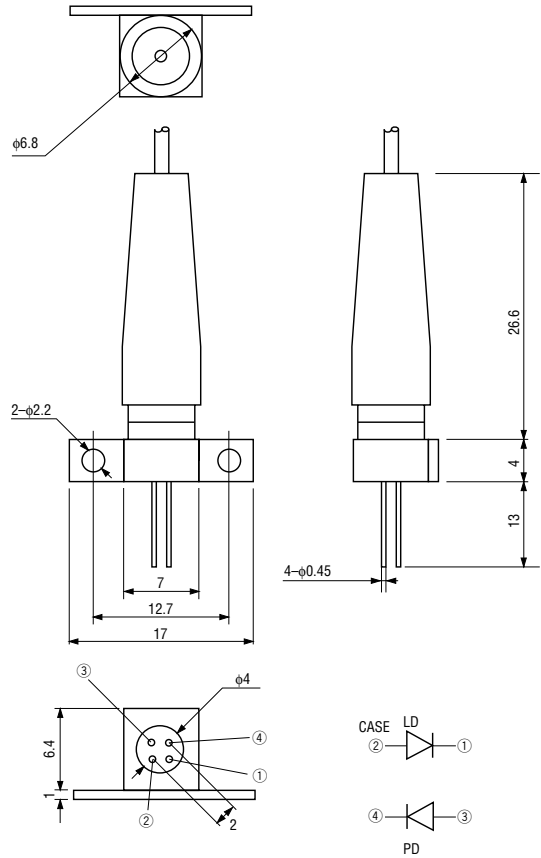
- Optical transmission systems
- Optical subscriber loops
- Optical measurement systems

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 <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**

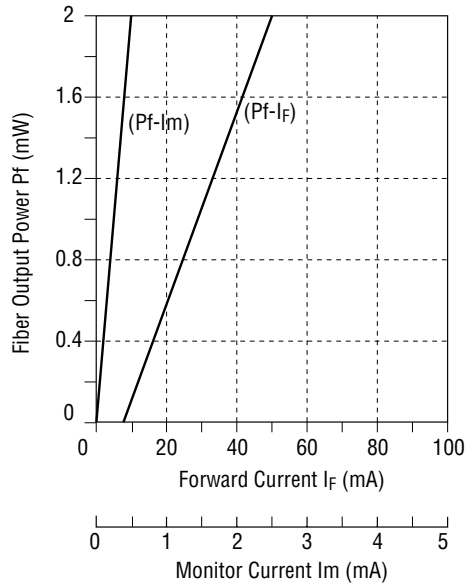
(Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I <sub>th</sub>	—	—	20	40	mA
Fiber Output Power	Pf	I <sub>F</sub> =I <sub>th</sub> +20 mA	1	—	—	mW
Peak Wavelength	λ <sub>p</sub>	Pf=1 mW	1530	1550	1570	nm
Side Mode Suppression Ratio	SMSR	Pf=1 mW	30	—	—	dB
Rise Time	t <sub>r</sub>	I <sub>bias</sub> =I <sub>th</sub>	—	—	0.5	ns
Fall Time	t <sub>f</sub>	Pf=1 mW, 10% to 90%	—	—	0.5	ns
Forward Voltage	V <sub>F</sub>	Pf=1 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=1 mW	50	—	—	μA

TYPICAL CHARACTERISTICS

- OL592L, OL5492L

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



- OL592L, OL5492L

Oscillation Spectrum (Ta=25°C)

