

# **OKI** electronic components

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## **OL592N, OL597N, OL5492N, OL5497N**

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### **1.55 $\mu\text{m}$ Laser-Diode Coaxial Module**

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#### **GENERAL DESCRIPTION**

The OL592N, OL597N, OL5492N, and OL5497N are 1.55  $\mu\text{m}$ , MQW InGaAsP/InP laser-diode coaxial modules with single-mode fiber pigtails. These modules are optimal light sources for high-capacity long-haul optical transmission systems.

#### **FEATURES**

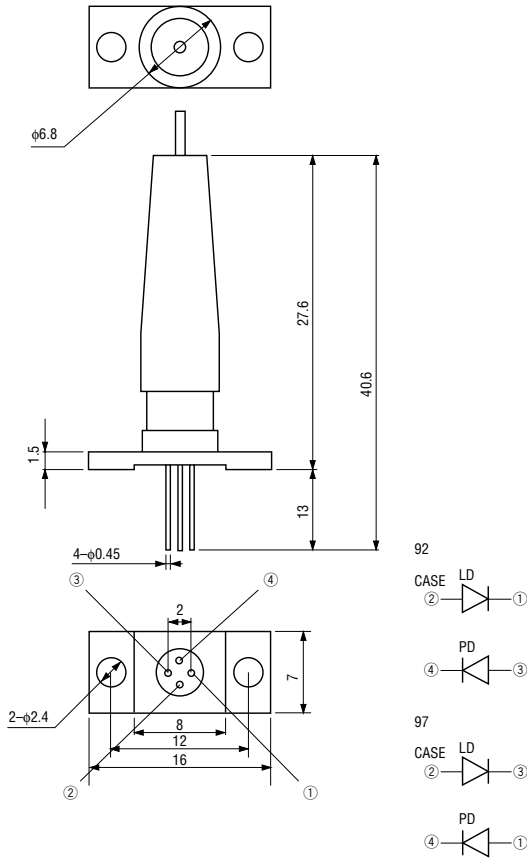
- Fiber output power:  $P_f=1$  mW
- Single-mode fiber
- Includes monitor photodiode for power control
- High speed
- Multi-quantum-well (MQW) structure

#### **APPLICATIONS**

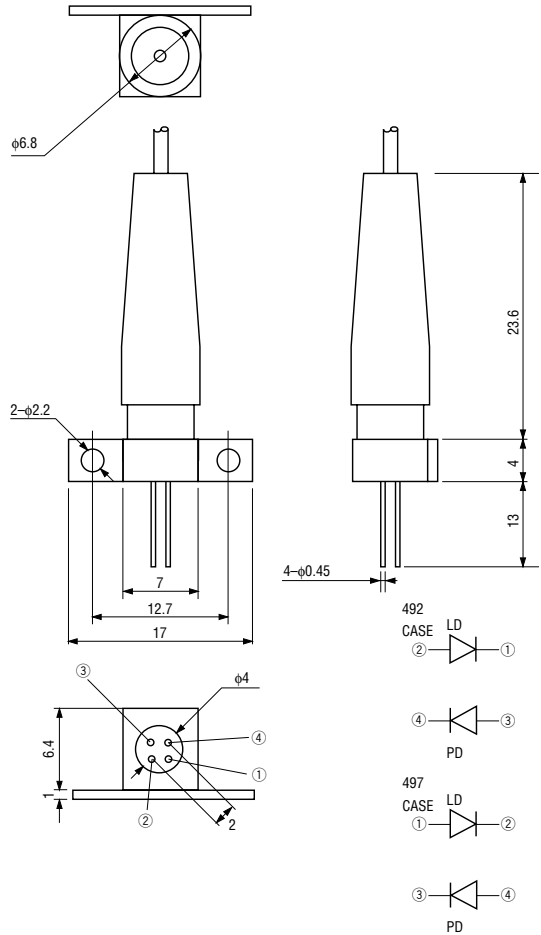
- Line transmission systems
- Subscriber loops
- Optical measuring instruments

PACKAGE DIMENSIONS (Unit: mm)

• OL592N, OL597N



• OL5492N, OL5497N



**ABSOLUTE MAXIMUM RATINGS**

Parameter	Symbol	Test Conditions	Ratings	Unit
Fiber Output	Pf	Ta=25°C	2	mW
LD Reverse Voltage	V <sub>R</sub> (LD)		2	V
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>	—	-20 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> +30 mA	1.0	—	—	mW
Center Wavelength	λ <sub>c</sub>	Pf=1 mW	1520	1550	1580	nm
Spectral Width	σ	Pf=1 mW, RMS	—	—	5	nm
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	—	—	0.8	ns
Forward Voltage	V <sub>F</sub>	Pf=1 mW	—	—	1.5	V
PD Dark Current	I <sub>DARK</sub>	V <sub>R</sub> (PD)=5 V	—	—	0.2	μA
Monitor Current	I <sub>m</sub>	Pf=1 mW	50	—	—	μA

**TYPICAL CHARACTERISTICS**

**Fiber Output Power vs. Forward Current**

