

# OKI electronic components

## OL391N, OL392N, OL397N, OL3492N, OL3497N

### High Temperature Operation 1.3 $\mu\text{m}$ Laser-Diode Coaxial Module

#### GENERAL DESCRIPTION

The OL391N, OL392N, OL397N, OL3492N, and OL3497N are 1.3  $\mu\text{m}$ , MQW InGaAsP/InP laser diode coaxial modules with single-mode fiber pigtailed. These modules are optimal light sources for high-capacity long-haul optical transmission systems.

#### FEATURES

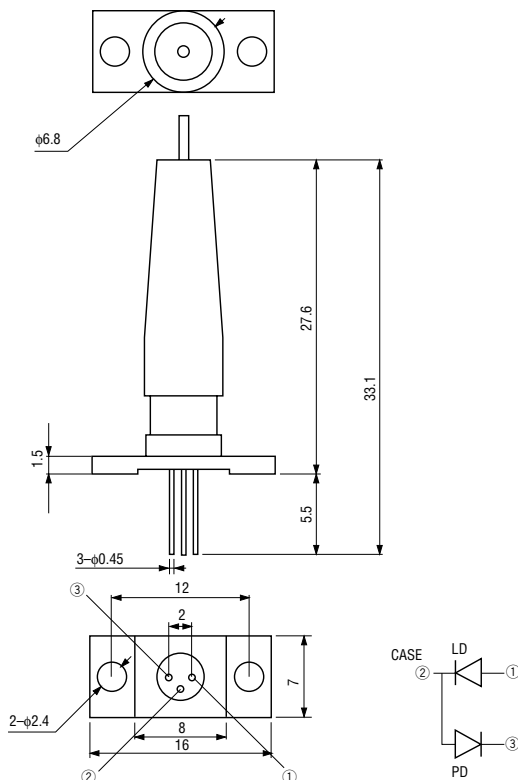
- Single-mode fiber output:  $P_f=1$  mW
- Includes monitor photodiode for power control
- High speed
- Multi-quantum-well (MQW) structure

#### APPLICATIONS

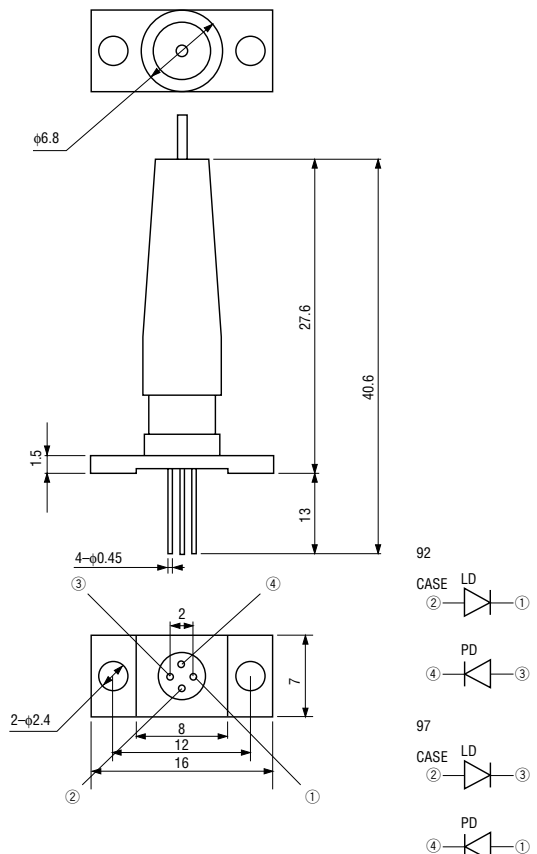
- Line transmission systems
- Subscriber loops
- Optical measuring instruments

#### PACKAGE DIMENSIONS (Unit: mm)

##### • OL391N

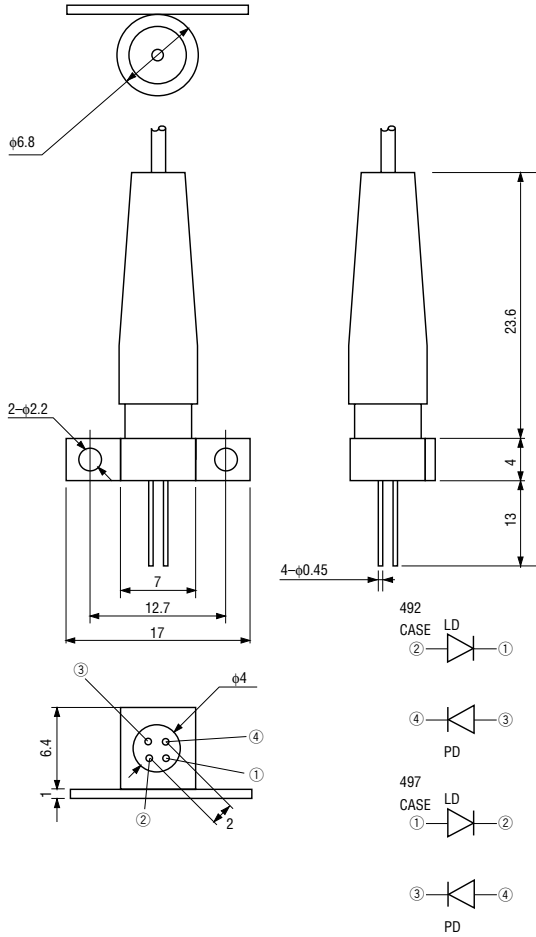


##### • OL392N, OL397N



PACKAGE DIMENSIONS (Continued)

- OL3492N, OL3497N



**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>	—	-40 to +85	°C
Storage Temperature	T <sub>stg</sub>	—	-40 to +85	°C

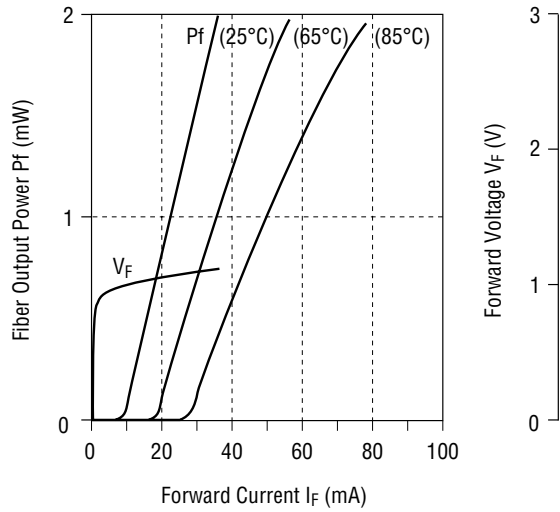
**OPTICAL AND ELECTRICAL CHARACTERISTICS**

(Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I <sub>th</sub>	—	—	10	20	mA
Fiber Output Power	Pf	I <sub>F</sub> =I <sub>th</sub> +20 mA	1.0	—	—	mW
Center Wavelength	λ <sub>c</sub>	Pf=1 mW	1280	1310	1340	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	—	—	0.5	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	—	—	20	nA
Monitor Current	I <sub>m</sub>	Pf=1 mW	50	—	—	μA

TYPICAL CHARACTERISTICS

Fiber Output Power vs. Forward Current



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

