

OKI electronic components

OL391N, OL392N, OL397N, OL3492N, OL3497N

High Temperature Operation 1.3 μm Laser-Diode Coaxial Module

GENERAL DESCRIPTION

The OL391N, OL392N, OL397N, OL3492N, and OL3497N are 1.3 μm , 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

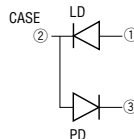
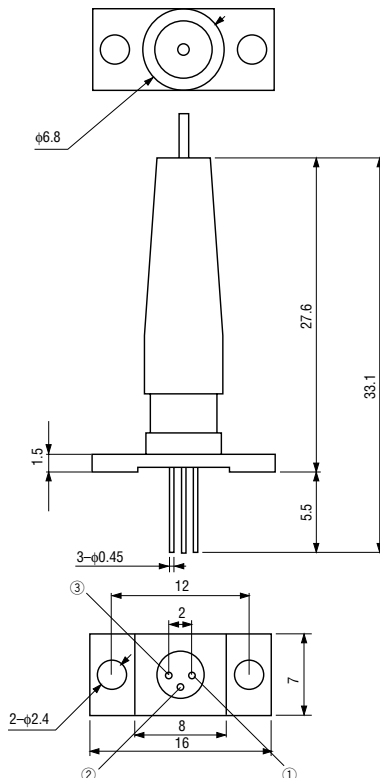
- Single-mode fiber output: $P_f=1$ mW
- Includes monitor photodiode for power control
- High speed
- Multi-quantum-well (MQW) structure

APPLICATIONS

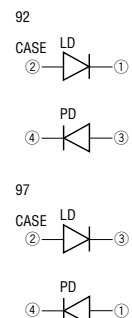
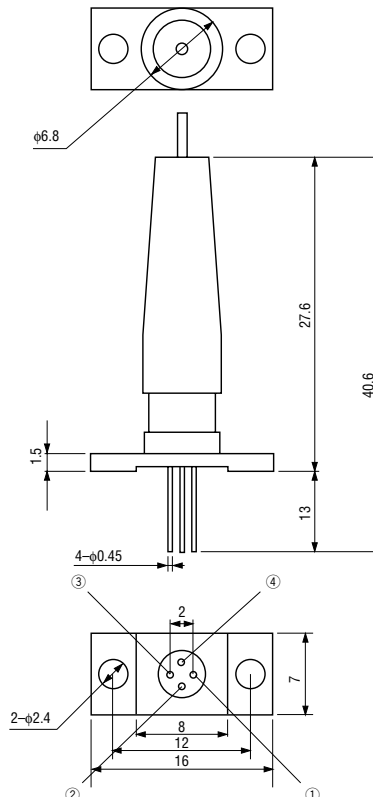
- Line transmission systems
- Subscriber loops
- Optical measuring instruments

PACKAGE DIMENSIONS (Unit: mm)

• OL391N

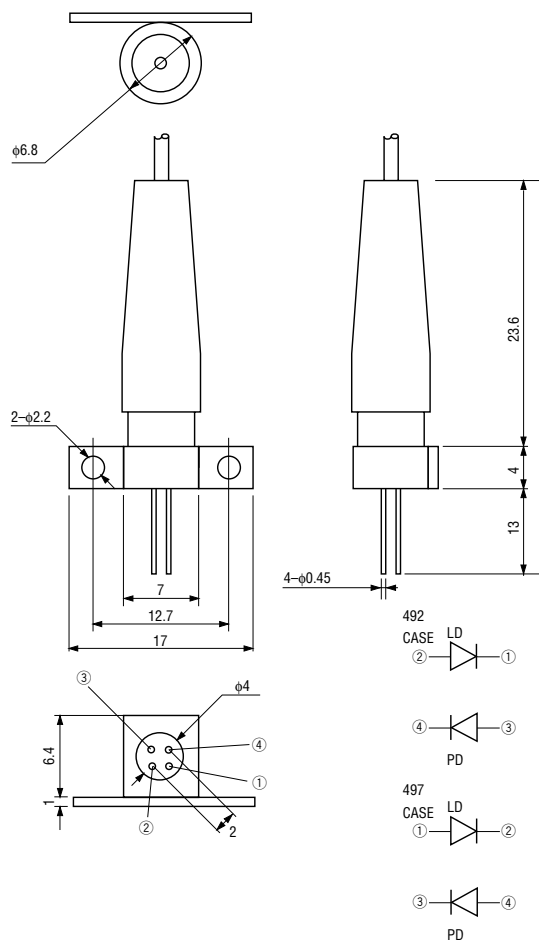


• OL392N, OL397N



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 _R (LD)		2	V
PD Reverse Voltage	V _R (PD)		20	V
PD Forward Current	I _F (PD)		10	mA
Operating Temperature	T _{opr}	—	−40 to +85	°C
Storage Temperature	T _{stg}	—	−40 to +85	°C

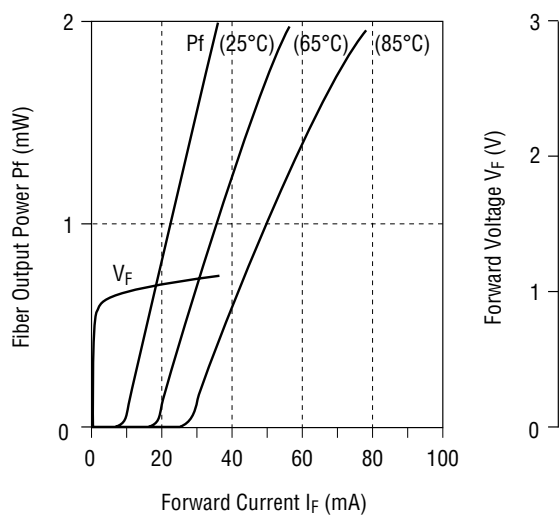
OPTICAL AND ELECTRICAL CHARACTERISTICS

(Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I _{th}	—	—	10	20	mA
Fiber Output Power	Pf	I _F =I _{th} +20 mA	1.0	—	—	mW
Center Wavelength	λ _c	Pf=1 mW	1280	1310	1340	nm
Spectral Width	σ	Pf=1 mW, RMS	—	—	5	nm
Rise Time	t _r	I _{bias} =I _{th}	—	—	0.5	ns
Fall Time	t _f	Pf=1 mW	—	—	0.5	ns
Forward Voltage	V _F	Pf=1 mW	—	—	1.5	V
PD Dark Current	I _{DARK}	V _R (PD)=5 V	—	—	20	nA
Monitor Current	I _m	Pf=1 mW	50	—	—	μA

TYPICAL CHARACTERISTICS

Fiber Output Power vs. Forward Current

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