OKI electronic components

OL3200N

1.3 μm Laser-Diode DIP Module

GENERAL DESCRIPTION

The OL3200N is a 1.3 μm, InGaAsP/InP laser diode DIP module with a single-mode fiber pigtail. This module is an optimal light source for high-capacity long-haul optical transmission systems.

FEATURES

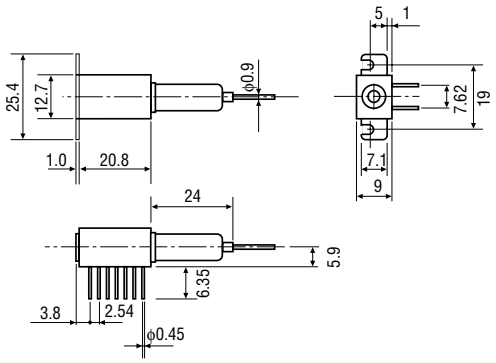
- High output power: Pf=2 mW
- Single-mode fiber
- Hermetically-sealed,14-pin Dual-In-line Package (DIP)
- Includes thermoelectric cooler and monitor photodiode for temperature and power control

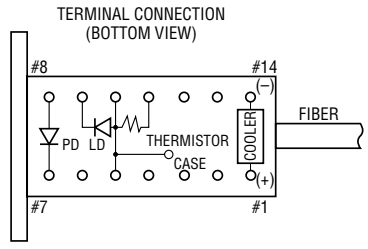
APPLICATIONS

- Line transmission systems
- Subscriber loops
- Optical measuring instruments

PACKAGE DIMENSIONS (Unit: mm)

- **OL3200N**





PIN No.	FUNCTION	PIN No.	FUNCTION
1	COOLER ANODE	8	PD ANODE
2	NC	9	LD CATHODE
3	NC	10	LD ANODE,
4	NC		CASE GROUND
5	LD ANODE,		and THERMISTOR
	CASE GROUND	11	THERMISTOR
	and THERMISTOR	12	NC
6	NC	13	NC
7	PD CATHODE	14	COOLER CATHODE

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Conditions	Ratings	Unit
Fiber Output Power	Pf	Ta=25°C	3	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
Cooler Current	Ic		1.2	A
Operating Temperature	T_{opr}	—	–20 to +65	°C
Storage Temperature	T_{stg}	—	–20 to +70	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS

(Ta= 25°C)

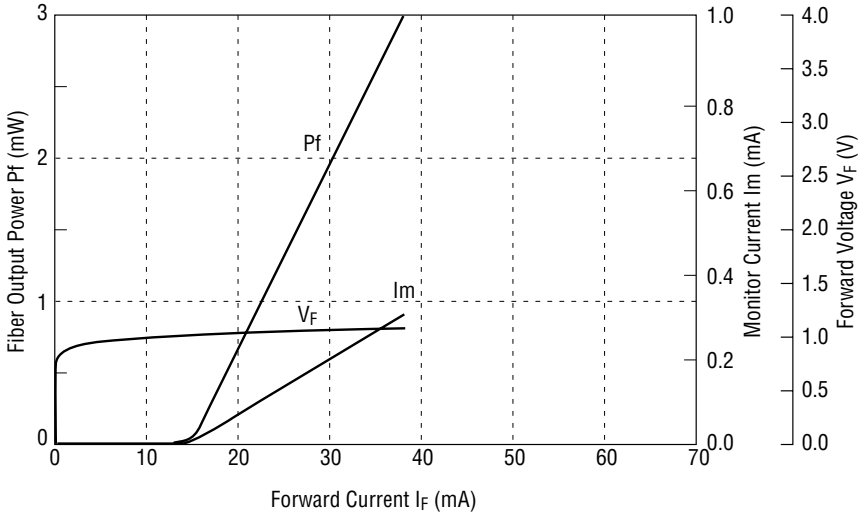
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	Ith	—	—	20	35	mA
Fiber Output Power	Pf	SMF, I_F=Ith+30 mA	2	2.5	—	mW
Center Wavelength	λc	Pf=2 mW	1280	1310	1330	nm
Spectral Half Width	Δλ	Pf=2 mW	—	3	7	nm
Rise Time	t_r	Ibias=Ith	—	0.3	0.5	ns
Fall Time	t_f	Pf=2 mW	—	0.5	0.8	ns
Forward Voltage	V_F	I_F=Ith+30 mA	—	—	2	V
PD Dark Current	I_{DARK}	V_R (PD)=5 V	—	—	1	μA
Monitor Current	Im	Pf=2 mW	100	300	—	μA
PD Capacitance	Ct	V_R (PD)=5 V, f=1 MHz	—	15	—	pF
Cooler Capacity	ΔT	Pf=2 mW	40	—	—	°C
Cooler Current	Ic	ΔT=40°C	—	—	1.2	A
Cooler Voltage	Vc	ΔT=40°C	—	—	2.4	V
Thermistor Resistance	Rth	—	—	10	—	kΩ

FIBER PIGTAIL SPECIFICATIONS

Parameter	Specifications	Unit
Fiber Type	Single-mode	—
Mode Field Diameter	10±1	μm
Cladding Diameter	125±2	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC	—

TYPICAL CHARACTERISTICS

Fiber Output Power vs. Forward Current



Oscillation Spectrum