

OKI electronic components

OL5200N-5

1.55 μm Laser Diode DIP Module

GENERAL DESCRIPTION

The OL5200N-5 is a 1.55 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

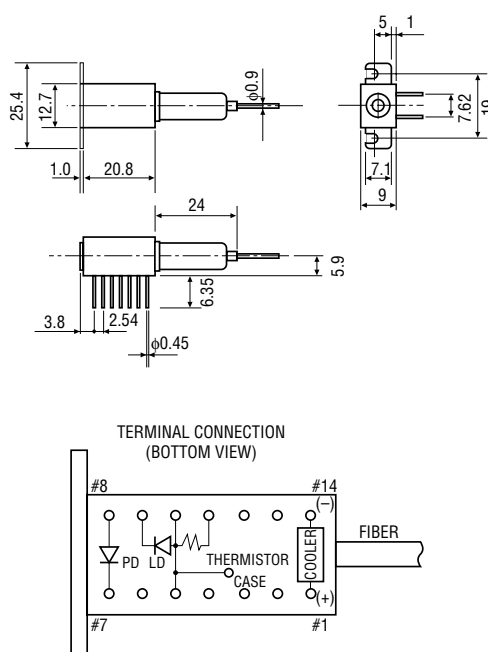
- High output power: $P_f=5\text{ mW}$
- Single-mode fiber
- Hermetically-sealed, 14-pin Dual-In-line Package (DIP)
- Includes thermoelectric cooler and monitor photodiode for temperature and power control

APPLICATIONS

- Line transmission systems
- Subscriber loops
- Optical measuring instruments

PACKAGE DIMENSIONS (Unit: mm)

• OL5200N-5



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	Pf	Ta=25°C	7	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	I _c		1.2	A
Operating Temperature	T _{opr}	—	–20 to +65	°C
Storage Temperature	T _{stg}	—	–20 to +70	°C

OPTICAL AND ELECTRICAL CHARACTERISTICS

(T_{LD}=25°C)

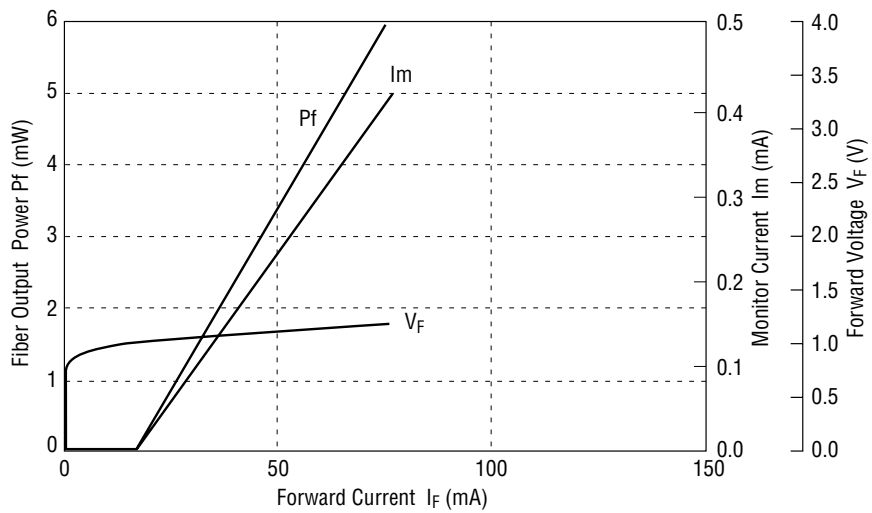
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I _{th}	—	—	30	45	mA
Operating Current	I _{op}	Pf=5 mW	—	100	140	mA
Center Wavelength	λ _c	Pf=5 mW	1520	1550	1580	nm
Spectral Half Width	Δλ	Pf=5 mW	—	3	10	nm
Rise Time	t _r	I _{bias} =I _{th}	—	0.3	0.5	ns
Fall Time	t _f	Pf=5 mW	—	0.5	0.8	ns
Forward Voltage	V _F	Pf=5 mW	—	—	2	V
PD Dark Current	I _{DARK}	V _R (PD)=5 V	—	—	1	μA
Monitor Current	I _m	Pf=5 mW	100	300	—	μA
PD Capacitance	C _t	V _R (PD)=5 V, f=1 MHz	—	15	—	pF
Cooler Capacity	ΔT	Pf=5 mW	40	—	—	°C
Cooler Current	I _c	ΔT=40°C	—	—	1.2	A
Cooler Voltage	V _c	ΔT=40°C	—	—	3	V
Thermistor Resistance	R _{th}	—	—	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

