

OKI electronic components

OL5201N-25, OL5204N-25

1.55 μm High-Power Laser-Diode DIP Module

GENERAL DESCRIPTION

The OL5201N-25 and OL5204N-25 are 1.55 μm , extremely high-power laser-diode DIP modules with single-mode fiber pigtailed. The Multi-Quantum-Well (MQW) structure laser diodes achieve a single-mode fiber output of over 25 mW. The modules are optimal light sources for optical measuring instruments and other systems that require high-power.

FEATURES

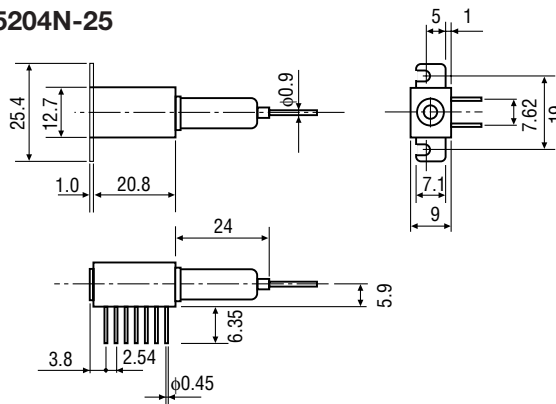
- High output power: Pf=25 mW
- Single-mode fiber
- Hermetically-sealed, 14-pin Dual-In-line Package (DIP)
- Includes thermoelectric cooler for temperature control
- Includes monitor photodiode for power control (OL5201N-25)

APPLICATIONS

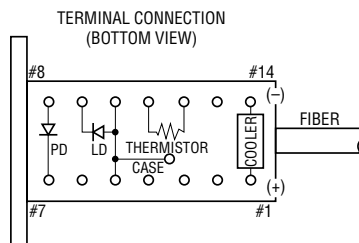
- Optical measuring instruments
- OTDRs

PACKAGE DIMENSIONS (Unit: mm)

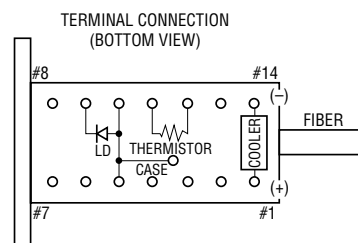
• OL5201N-25/OL5204N-25



• OL5201N-25



• OL5204N-25



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

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

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Conditions	Ratings	Unit
Fiber Output Power	P _f	T _a =25°C	30	mW
Forward Current	I _F		400	mA
Reverse Voltage	V _R		2	V
Cooler Current	I _c		1.2	A
Operating Temperature	T _{opr}	—	-20 to +45	°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}	—	—	55	75	mA
Fiber Output Power	P _f	I _F =400 mA (CW)	25	27	—	mW
Center Wavelength	λ _c	P _f =25 mW	1520	1550	1580	nm
Spectral Half Width	Δλ	P _f =25 mW	—	10	20	nm
Forward Voltage	V _F	I _F =400 mA	—	—	2.5	V
PD Dark Current *	I _{DARK}	V _R (PD)=5 V	—	—	1	μA
Monitor Current *	I _m	P _f =25 mW	50	—	—	μA
Cooler Capacity	ΔT	P _f =25 mW, T _c =45°C	20	—	—	°C
Cooler Current	I _c	ΔT=20°C	—	—	1.2	A
Cooler Voltage	V _c	ΔT=20°C	—	—	3	V
Thermistor Resistance	R _{th}	—	—	10	—	kΩ

* : OL5201N-25

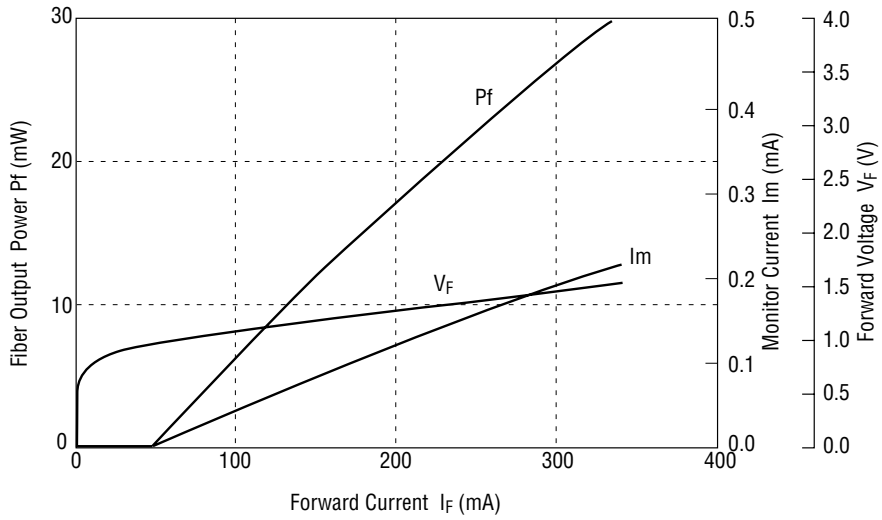
FIBER PIGTAIL SPECIFICATIONS

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

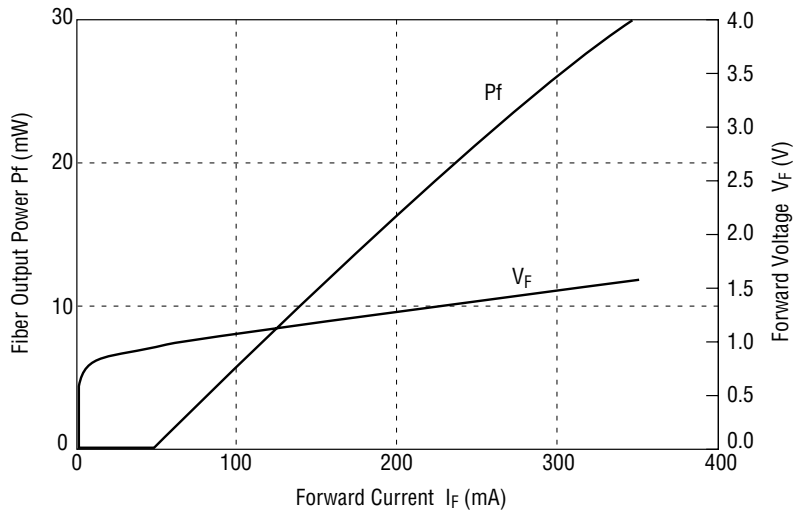
• OL5201N-25

Fiber Output Power vs. Forward Current



• OL5204N-25

Fiber Output Power vs. Forward Current



- OL5201N-25

Oscillation Spectrum

