

OKI electronic components

OL3201N-40, OL3204N-40

1.3 μ m High-Power Laser-Diode DIP Module

GENERAL DESCRIPTION

The OL3201N-40 and OL3204N-40 are extremely high power, 1.3 μ m laser-diode DIP modules with single-mode fiber pigtails. The OKI laser chips achieve single-mode fiber output of over 40 mW. These modules are optimal light sources for optical measuring instruments and other systems that require high power.

FEATURES

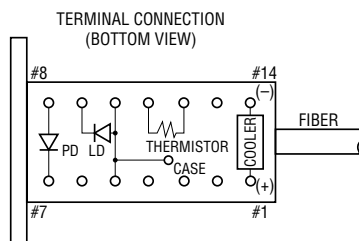
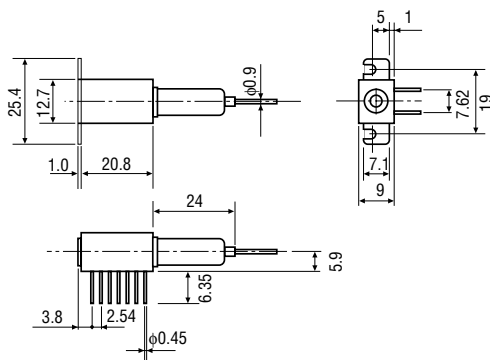
- High output power (single-mode fiber output): $P_f=40$ mW
- Single-mode fiber
- Hermetically-sealed, 14-pin Dual-In-line Package (DIP)
- Includes thermoelectric cooler for temperature control
- Includes monitor photodiode (OL3201N-40)

APPLICATIONS

- Optical measuring instruments
- OTDRs

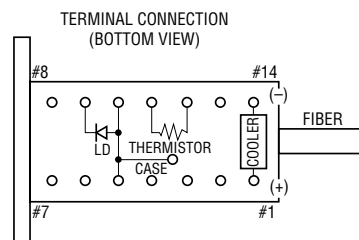
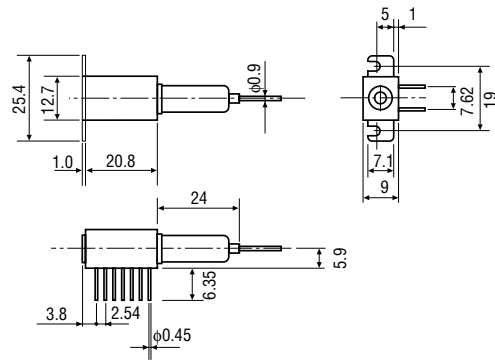
PACKAGE DIMENSIONS (Unit: mm)

• OL3201N-40



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

• OL3204N-40



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	Pf	Ta=25°C	60	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

(Ta=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Threshold Current	I _{th}	—	—	50	65	mA
Center Wavelength	λ _c	Pf=40 mW	1280	1310	1330	nm
Spectral Half Width	Δλ	Pf=40 mW	—	7	20	nm
Fiber Output Power	Pf	I _F =400 mA (CW)	40	50	—	mW
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	Pf=40 mW	50	—	—	μA
Cooler Capacity	ΔT	Pf=40 mW	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

* : OL3201N-40

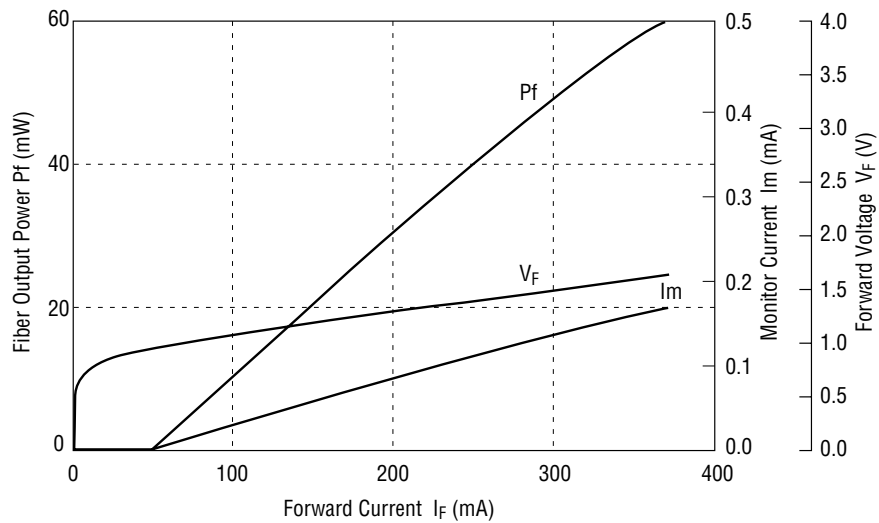
FIBER PIGTAIL SPECIFICATIONS

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

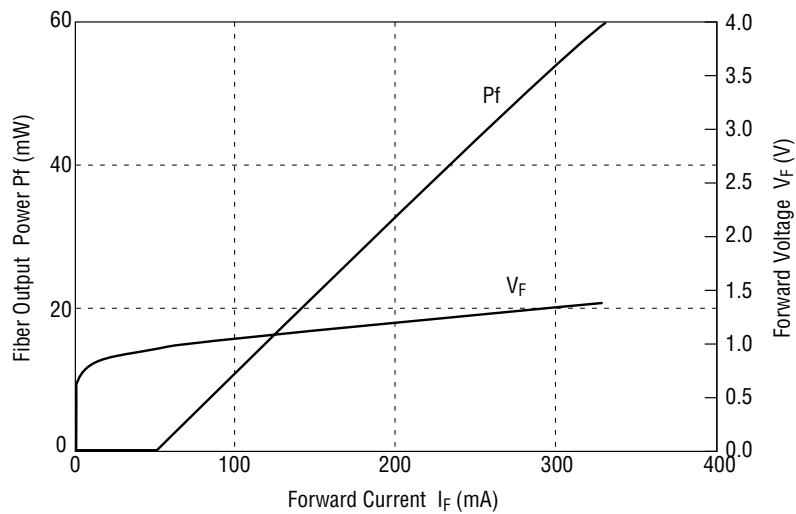
• OL3201N-40

Fiber Output Power vs. Forward Current



• OL3204N-40

Fiber Output Power vs. Forward Current



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Oscillation Spectrum