

OL5392L

1550nm MQW DFB Laser Diode Uncooled Module with Single Mode Fiber

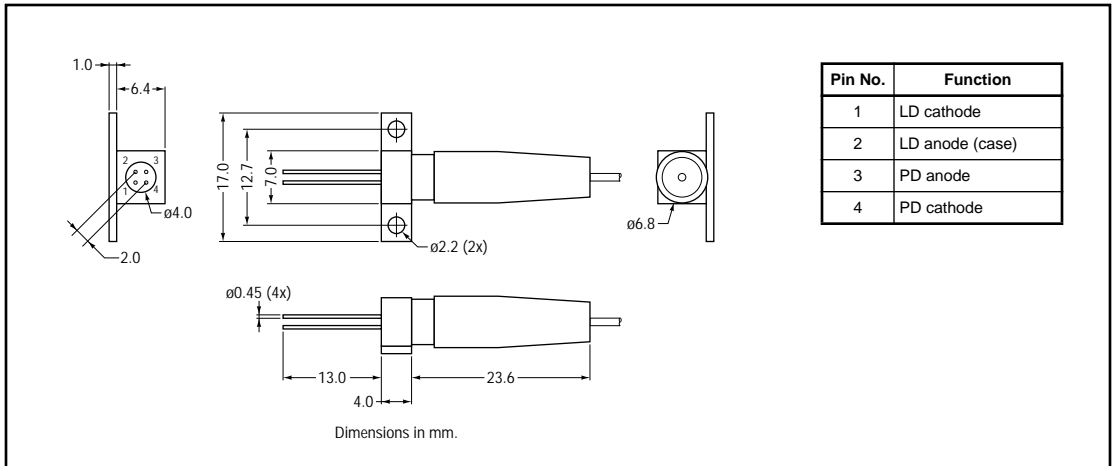
DESCRIPTION

The OKI OL5392L is a 1550nm DFB Laser Diode in a PCB mountable coaxial package with single mode fiber and without isolator.

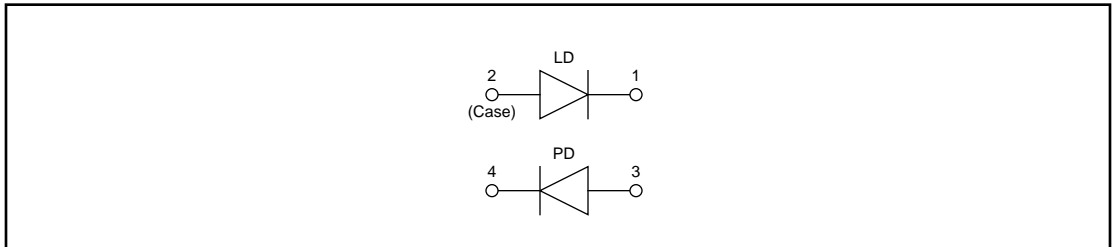
FEATURES

- SMF output: 1mW
- Wide operating temperature range
- MQW structure

OUTLINE DIMENSIONS



CIRCUIT



ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings [1]

Parameter	Symbol	Rating	Unit
Fiber Output Power	P_f	2.4	mW
Laser Diode Forward Current	$I_f(\text{LD})$	150	mA
Laser Diode Reverse Voltage	$V_r(\text{LD})$	2	V
Photo Diode Forward Current	$I_f(\text{PD})$	10	mA
Photo Diode Reverse Voltage	$V_r(\text{PD})$	15	V
Operating Temperature	T_{opr}	0 to +65	°C
Storage Temperature	T_{stg}	-40 to +85	°C

1. Permanent device damage may occur if ABSOLUTE MAXIMUM RATINGS are exceeded. Functional operation should be restricted to the conditions as detailed in the operational sections of this data sheet. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Recommended Operating Conditions ($T_A = 25\text{ °C}$)

Parameter	Symbol	Condition	Rated Value			Unit
			Min	Typ	Max	
Threshold current	I_{th}	–	–	20	40	mA
Fiber output power	P_f	$I_f = I_{\text{th}} + 30\text{ mA}$	1	–	–	mW
Forward voltage	V_f	$I_f = 30\text{ mA}$	–	1.0	1.5	V
Peak wavelength	λ_p	$P_f = 1\text{ mW}$	1530	1550	1570	nm
Side mode suppression ratio	SMSR	$P_f = 1\text{ mW}$	30	–	–	dB
Relative intensity noise	RIN	$f = 1\text{ GHz}, P_f = 1\text{ mW}$	–	–	-120	dB/Hz
Rise time	τ_r	$I_{\text{bias}} = I_{\text{th}}$	–	0.3	–	ns
Fall time	τ_f	$P_f = 1\text{ mW}, 10\text{-}90\%$	–	0.5	–	ns
PD Dark current	I_{dark}	$V_r(\text{PD}) = 5\text{ V}$	–	–	1	μA
Monitor current	I_m	$P_f = 1\text{ mW}, V_r(\text{PD}) = 5\text{ V}$	70	–	–	μA
PD capacitance	C_t	$V_r(\text{PD}) = 5\text{ V}, f = 1\text{ MHz}$	–	15	–	pF

Fiber Pigtail Specifications

Parameter	Rated Value	Unit
Type	SM	–
Mode Field Diameter	10 ± 1	μm
Cladding Diameter	125 ± 2	μm
Jacket Diameter	900	μm
Length	1 (Min.)	m
Connector	FC	–