

## OL5392L

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

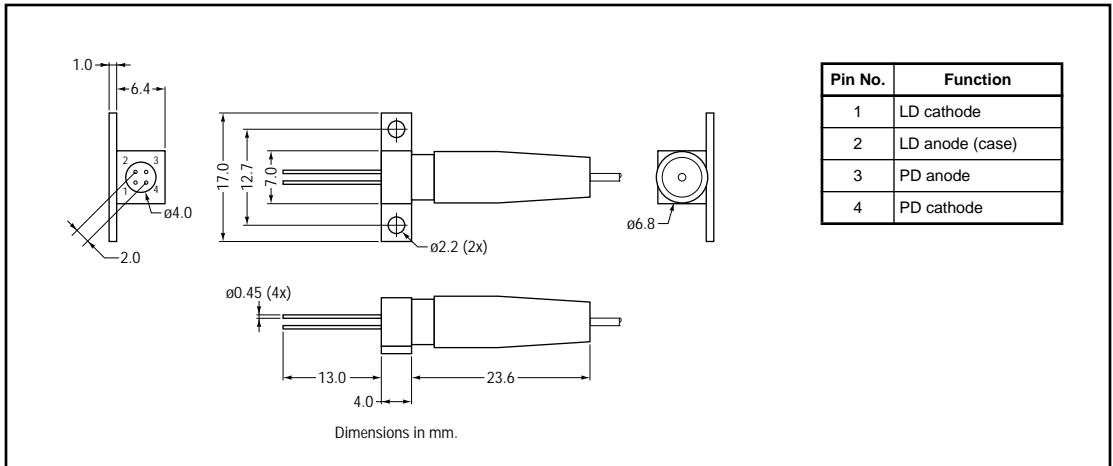
#### DESCRIPTION

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

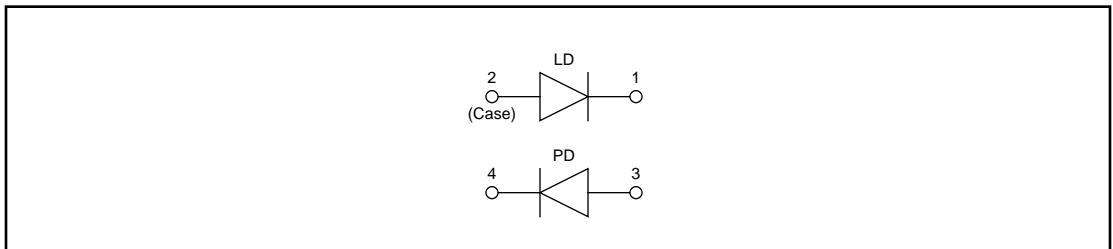
#### FEATURES

- 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	$T_{\text{opr}}$	0 to +65	°C
Storage Temperature	$T_{\text{stg}}$	-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	$I_{\text{th}}$	–	–	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	$\lambda_p$	$P_f = 1\text{ mW}$	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	$\tau_r$	$I_{\text{bias}} = I_{\text{th}}$	–	0.3	–	ns
Fall time	$\tau_f$	$P_f = 1\text{ mW}, 10\text{-}90\%$	–	0.5	–	ns
PD Dark current	$I_{\text{dark}}$	$V_r(\text{PD}) = 5\text{ V}$	–	–	1	$\mu\text{A}$
Monitor current	$I_m$	$P_f = 1\text{ mW}, V_r(\text{PD}) = 5\text{ V}$	70	–	–	$\mu\text{A}$
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	$10 \pm 1$	$\mu\text{m}$
Cladding Diameter	$125 \pm 2$	$\mu\text{m}$
Jacket Diameter	900	$\mu\text{m}$
Length	1 (Min.)	m
Connector	FC	–