

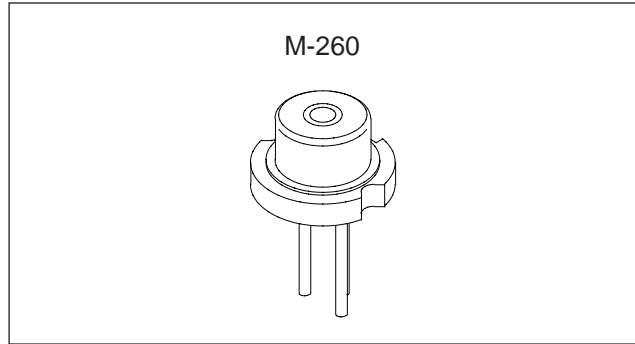
**Index-Guided High Power AlGaAs Laser Diode**

**Description**

The SLD234VL is a high power index-guided AlGaAs laser diode.

**Features**

- High power
- Low power consumption
- Low astigmatism
- Small package ( $\phi 5.6\text{mm}$ )



**Applications**

Pickups for optical discs

**Structure**

- AlGaAs quantum well-structured laser diode
- PIN photodiode for optical power output monitor

**Recommended Operating Optical Power Output**

50mW

**Absolute Maximum Ratings (Tc = 25°C)**

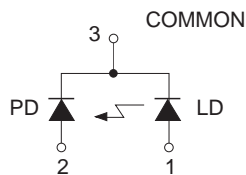
- Optical power output  $P_o$ 

50	mW (CW)
80	mW (Pulse)

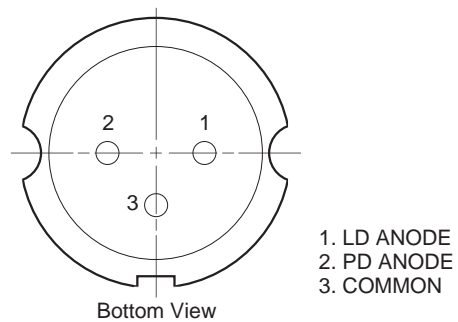
Pulse period of 1 $\mu$ s or less  
Duty of 50% or less
- Reverse voltage  $V_R$ 

LD	2	V
PD	15	V
- Operating temperature  $T_{opr}$     -10 to +60    °C
- Storage temperature  $T_{stg}$        -40 to +85    °C

**Connection Diagram**



**Pin Configuration**



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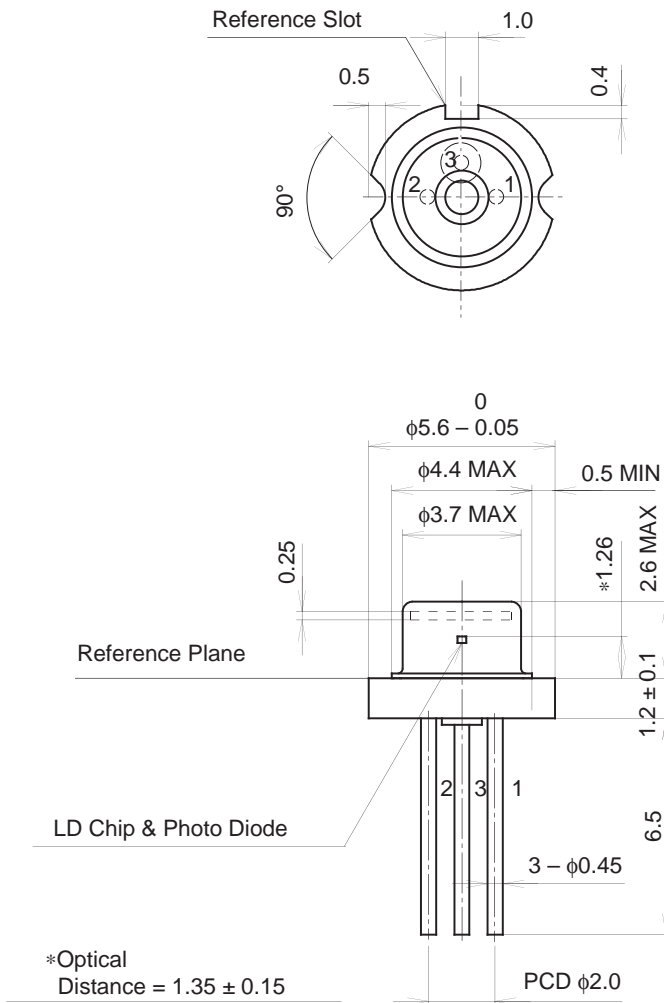
Optical and Electrical Characteristics (T<sub>c</sub> = 25°C)T<sub>c</sub>: Case temperature

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Threshold current	I <sub>th</sub>	CW	15	20	30	mA	
Operating current	I <sub>op</sub>	CW, P <sub>o</sub> = 50mW	60	70	85	mA	
Operating voltage	V <sub>op</sub>	CW, P <sub>o</sub> = 50mW	—	2.0	2.5	V	
Oscillation wavelength	λ <sub>p</sub>	CW, P <sub>o</sub> = 50mW	775	785	795	nm	
Differential efficiency	η <sub>D</sub>	CW, P <sub>o</sub> = 50mW	0.8	1.0	1.3	mW/mA	
Radiation angle	Parallel	θ <sub>//</sub>	CW, P <sub>o</sub> = 50mW	7	8.5	10	degree
	Perpendicular	θ <sub>⊥</sub>	CW, P <sub>o</sub> = 50mW	19	22	27	degree
Astigmatism	As	CW, P <sub>o</sub> = 50mW	—	—	-6	μm	
Monitor current	I <sub>m</sub>	CW, P <sub>o</sub> = 50mW, VR (PIN) = 5V	—	0.05	—	mA	
Positional accuracy	Angle	Δφ <sub>//</sub>	CW, P <sub>o</sub> = 50mW	—	—	±2.0	degree
		Δφ <sub>⊥</sub>	CW, P <sub>o</sub> = 50mW	—	—	±3.0	degree
	Position	ΔX, ΔY, ΔZ		—	—	±80	μm

Package Outline

Unit: mm

M-260



SONY CODE	M-260
EIAJ CODE	_____
JEDEC CODE	_____

PACKAGE WEIGHT	0.3g
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