

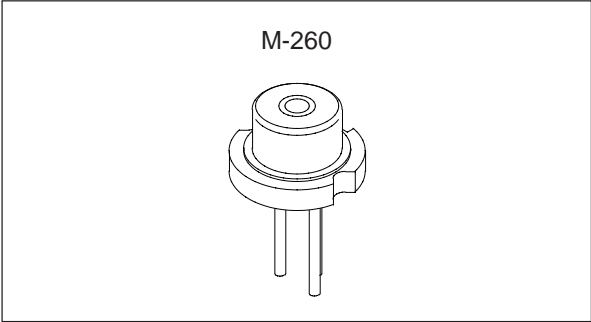
Index-Guided High Power AlGaAs Laser Diode

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 ($T_c = 25^\circ\text{C}$)

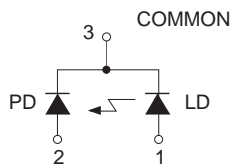
- Optical power output P_o

50	mW (CW)
80	mW (Pulse)

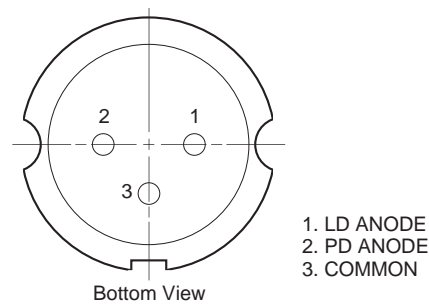
Pulse period of $1\mu\text{s}$ or less
Duty of 50% or less
- Reverse voltage V_R

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

Connection Diagram



Pin Configuration



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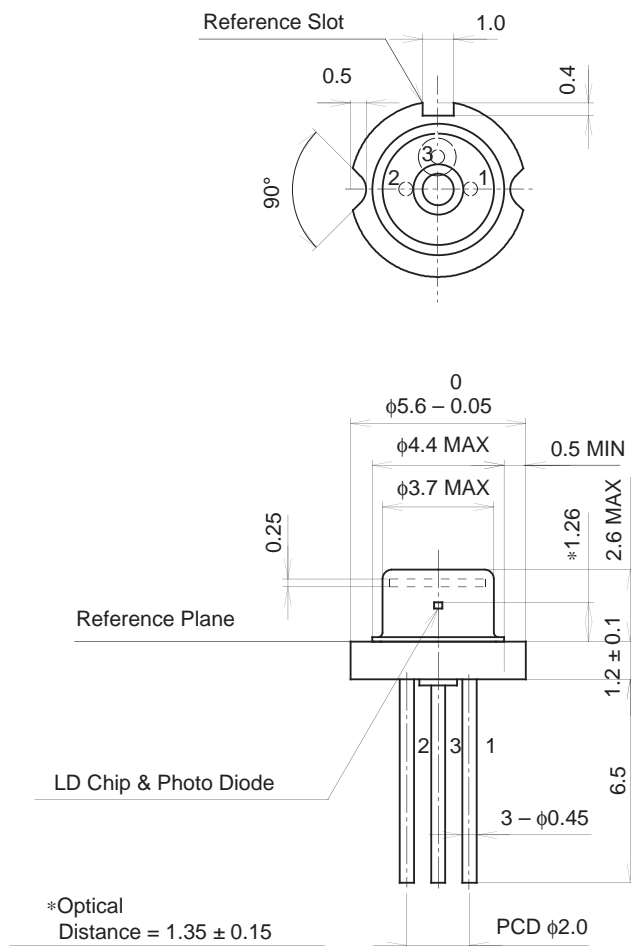
Optical and Electrical Characteristics ($T_c = 25^\circ\text{C}$)T_c: Case temperature

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Threshold current	I _{th}	CW	15	20	30	mA	
Operating current	I _{op}	CW, P _o = 50mW	60	70	85	mA	
Operating voltage	V _{op}	CW, P _o = 50mW	—	2.0	2.5	V	
Oscillation wavelength	λ _p	CW, P _o = 50mW	775	785	795	nm	
Differential efficiency	η _D	CW, P _o = 50mW	0.8	1.0	1.3	mW/mA	
Radiation angle	Parallel	θ _{//}	CW, P _o = 50mW	7	8.5	10	degree
	Perpendicular	θ _⊥	CW, P _o = 50mW	19	22	27	degree
Astigmatism	As	CW, P _o = 50mW	—	—	-6	μm	
Monitor current	I _m	CW, P _o = 50mW, VR (PIN) = 5V	—	0.05	—	mA	
Positional accuracy	Angle	Δφ _{//}	CW, P _o = 50mW	—	—	±2.0	degree
		Δφ _⊥	CW, P _o = 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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