

GaAlAs Laser Diode

Description

The SLD104AV is a low noise GaAlAs laser diode developed for CD.

Features

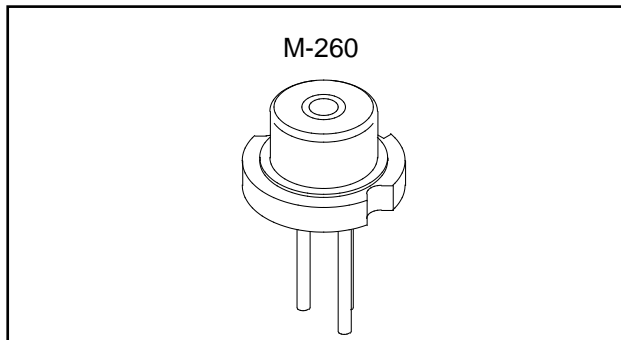
- High temperature operation
- Low noise
- Small package (ϕ 5.6 mm)

Applications

- Pickup for CD players

Structure

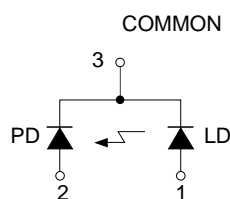
- GaAlAs double hetero structured laser diode
- Pin photodiode for optical power output monitor



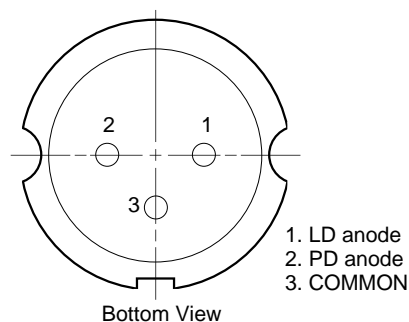
Absolute Maximum Ratings (Ta=25 °C)

• Optical power output	Po	5	mW
• Reverse voltage	VR	LD 2	V
		PD 15	V
• Operating temperature	Topr	-10 to +60	°C
• Storage temperature	Tstg	-40 to +85	°C

Connection Diagram



Pin Configuration



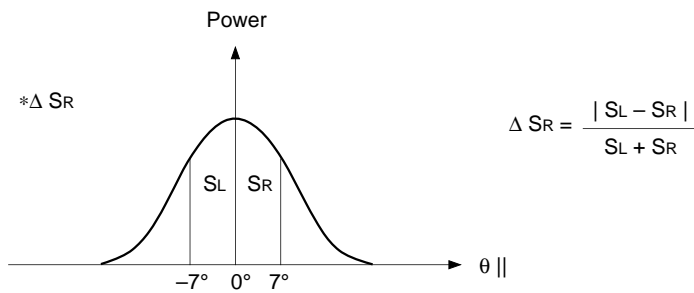
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Optical and Electrical Characteristics

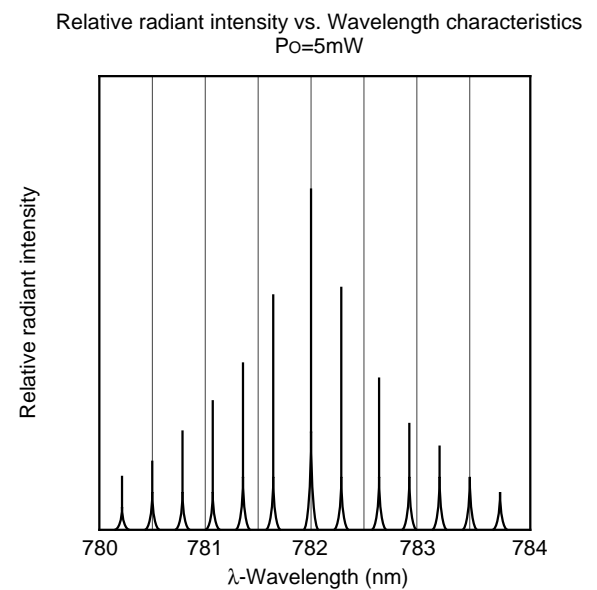
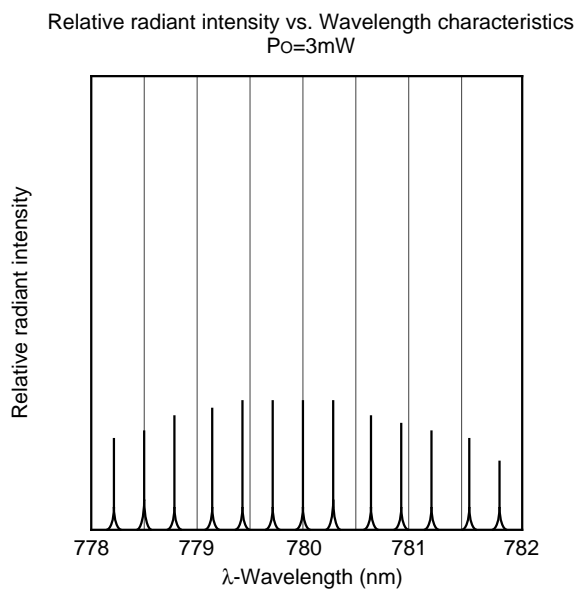
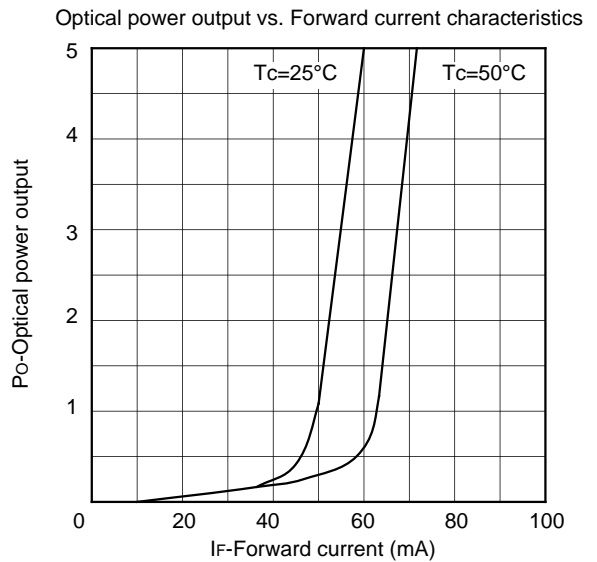
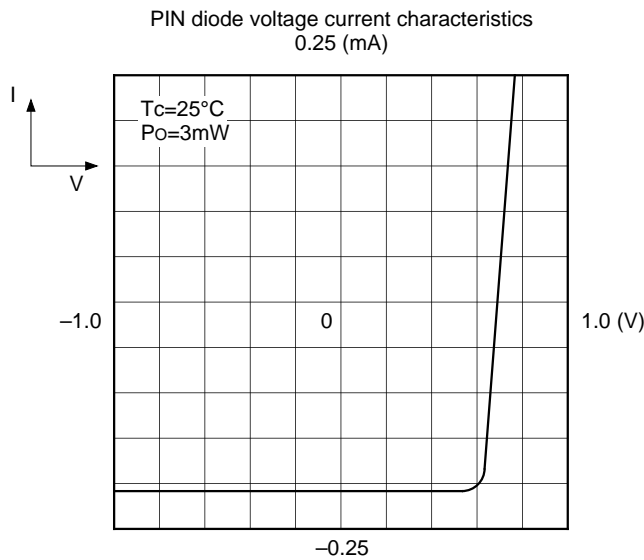
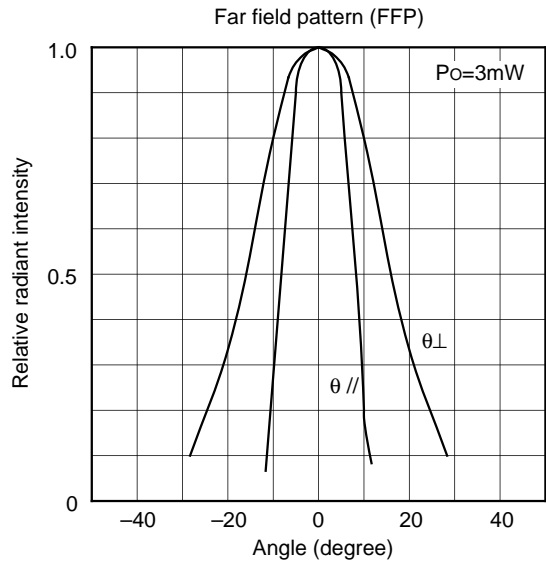
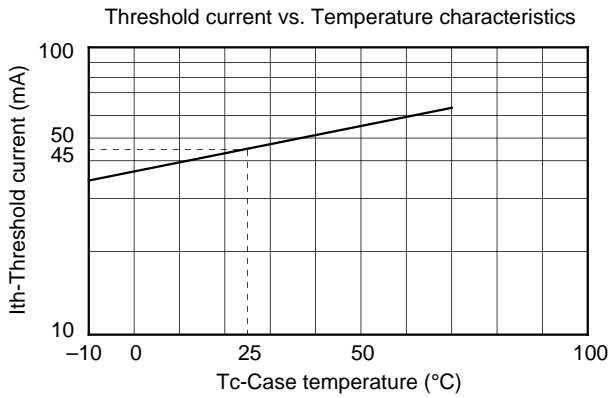
(T_c=25 °C)

T_c : Case temperature

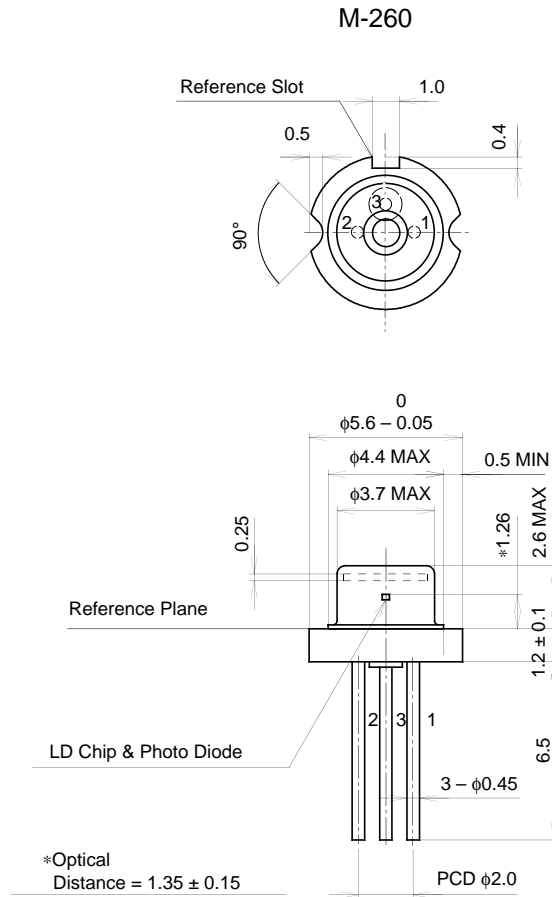
Item	Symbol	Conditions (T _c =25 °C)	Min.	Typ.	Max.	Unit
Threshold current	I _{th}			45	60	mA
Operating current	I _{op}	P _o =3 mW		52	65	mA
Operating voltage	V _{op}	P _o =3 mW	1.7	1.9	2.5	V
Oscillation wavelength	λ	P _o =3 mW	760	780	800	nm
Monitor current	I _m	P _o =3 mW V _r (P _{in})=5 V	0.08	0.15	0.4	mA
Parallel radiation angle	θ //	P _o =3 mW	9	18	25	deg
Perpendicular radiation angle	θ ⊥		20	35	45	deg
Parallel radiation angle symmetry	ΔS _R *1	P _o =3 mW			20	%
Perpendicular radiation angle accuracy	Δ α	CW, P _o =3 mW			±3	deg
Positional accuracy	ΔX, ΔY, ΔZ				±150	μm
Differential efficiency	η _D	P _o =3 mW	0.2	0.45	0.7	mW/mA
Astigmatism	A _s	P _o =3 mW	-34	-27	-20	μm
S/N ratio	S/N	f _c =720 kHz Δf=30 kHz P _o =4 mW		88		dB
PD dark current	I _D	V _r (P _{in})=5 V			150	nA
PD capacitance between pins	C _r	V _r (P _{in})=5 V, f=1 MHz			30	pF



Example of Representative Characteristics



Package Outline Unit : mm



SONY CODE	M-260
EIAJ CODE	_____
JEDEC CODE	_____

PACKAGE WEIGHT	0.3g
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