

SONY

Octa-Beam AlGaAs Laser Diode

SLD266ZS

Description

SLD266ZS is a common-anode 8beam AlGaAs laser diode for printers.

(Applications : Laser printer)

Features

8beam array (beam pitch 30 μ m)

Applications

- ◆ Digital copier
- ◆ Laser beam printer

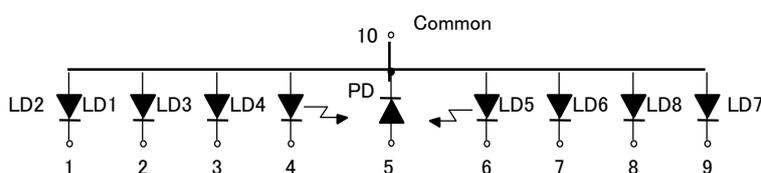
Recommended Operating Optical Power Output

10 mW

Absolute Maximum Ratings

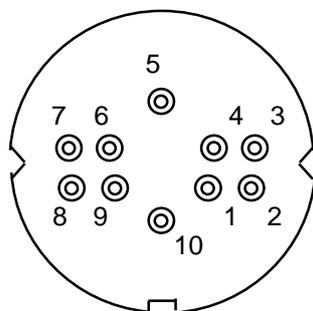
◆ Optical power output	Pomax	15	mW
◆ Reverse voltage	V _R LD	2	V
	PD	30	V
◆ Operating temperature	Topr	-10~+60	°C
◆ Storage temperature	Tstg	-40~+85	°C

Connection diagram



- 1. LD2 cathode
- 2. LD1 cathode
- 3. LD3 cathode
- 4. LD4 cathode
- 5. PD anode
- 6. LD5 cathode
- 7. LD6 cathode
- 8. LD8 cathode
- 9. LD7 cathode
- 10. Common

Pin configuration



Bottom View

Electrical and Optical Characteristics

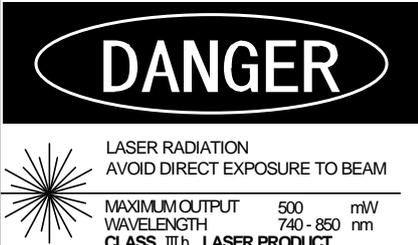
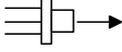
(Tc = 25 °C unless otherwise noted Tc : Case temperature)

Item	Symbol	Conditions	Min.	Typ.	Max.	Diff.	Unit	
Threshold current	Ith		2	4	6	2	mA	
Operating current	Iop	Po = 10 mW	—	20	35	—	mA	
Operating voltage	Vop	Po = 10 mW	1.6	1.8	2.3	—	V	
Differential efficiency	η	$8\text{mW}/(I(10\text{mW})-I(2\text{mW}))$	0.5	0.7	0.9	—	mW/mA	
Monitor current	I _m	Po = 10mW, Vr = 5V	0.50	0.8	1.20	20%	mA	
Radiation angle	Parallel	$\theta_{//}$	Po = 10 mW	9	12	16	2	deg
	Perpendicular	θ_{\perp}		23	27	31	3	deg
		$\theta_{//} + \theta_{\perp}$		36	39	43.5	—	deg
Deviation angle		$\Delta\theta_{//}$		—	—	±2	—	deg
		$\Delta\theta_{\perp}$		—	—	±3	—	deg
Polarization	Pol			-10	—	10	10	deg
Emitting points Position accuracy	$\Delta X, \Delta Y$	Center among beams	—	—	±50	—	μm	
	ΔZ		—	—	±50	3	μm	
Wavelength	λ_p	Po = 10 mW	785	790	800	1.5	nm	

Notes on Operation

Care should be taken for the following points when using this product.

1. This product corresponds to a Class 3B product under IEC 60825-1.

 <p>DANGER</p> <p>LASER RADIATION AVOID DIRECT EXPOSURE TO BEAM</p> <p>MAXIMUM OUTPUT 500 mW WAVELENGTH 740 - 850 nm CLASS IIIb LASER PRODUCT</p>	<p>LASER DIODE</p>  <p>AVOID EXPOSURE Laser radiation is emitted from this aperture.</p>	<p>SONY LASER DIODE</p> <p>This product complies with 21 CFR Part 1040.10 and 1040.11</p> <p>Sony Corporation 1-7-1 Konan, Minato-ku, Tokyo 108-0075 Japan</p>
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2. Eye protection against laser beams
Take care not to allow laser beams to enter your eyes under any circumstances.
For observing laser beams always use safety goggles that block laser beams. Usage of IR scopes, IR cameras and fluorescent plates is also recommended for monitoring laser beams safely.
3. Gallium Arsenide
This product uses gallium arsenide (GaAs). This is not a problem for normal use, but GaAs vapors may be potentially hazardous to the human body. Therefore, never crush, heat to the maximum storage temperature or higher, or place the product in your mouth.
In addition, the following disposal methods are recommended when disposing of this product.
 - (1) Engaging the services of a contractor certified in the collection, transport and intermediate treatment of items containing arsenic.
 - (2) Managing the product through to final disposal as specially managed industrial waste which is handled separately from general industrial waste and household waste.
4. Prevention of surge current and electrostatic discharge
Laser diodes are most sensitive to electrostatic discharge among semiconductors. When a large current is passed through the laser diode for even an extremely short time, the strong light emitted from the laser diode promotes deterioration and then destruction of the laser diode. Therefore, note that surge current should not flow to the laser diode driving circuit from switches and others. Also, if the laser diode is handled carelessly, it may be destroyed instantly because electrostatic discharge is easily applied by a human body. Therefore, be extremely careful about over current and electrostatic discharge.
Also, use the power supply that was designed not to exceed the optical power output specified at the absolute maximum ratings.
5. Use for special applications
This product is not designed or manufactured for use in equipment used under circumstances where failure may pose a risk to life and limb, or result in significant material damage, etc.
Consult your Sony sales representative when investigating use for medical, vehicle, nuclear power control or other special applications
6. "Environment-related Substances to be Controlled"
No substances classified at Level 1 (immediate ban) of Sony Technical Standard, SS-00259, "Management regulations for the Environment- related Substances to be Controlled". The excerpt from SS-00259 is introduced on following URL.
<http://www.sony.net/SonyInfo/procurementinfo/ss00259/>

Package outline

(Unit: mm)

