

LNCQ10PS

AlGaInP-Red Laser Diode

■ Features

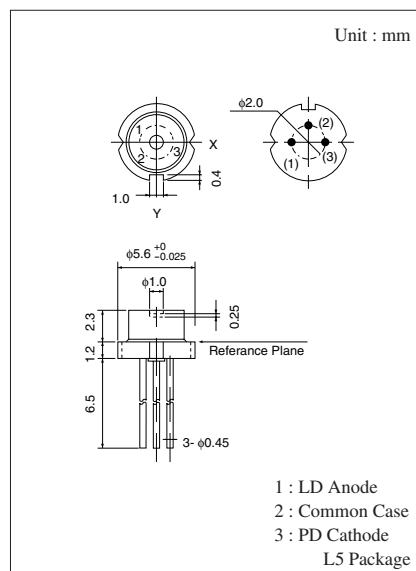
- Oscillation wavelength: 657 nm
- Radiant power: 50 mW (with 140 mW pulse)
- Small package: $\phi 5.6$ mm

■ Applications

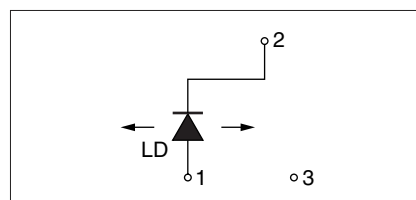
- DVD write/read

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter		Symbol	Rating	Unit
Radiant power	CW	P_O	50	mW
	Pulse	P_O	140	mW
Reverse voltage	Laser	V_R	1.5	V
	PIN	$V_{R(PIN)}$	30	V
Power dissipation		$P_{D(PIN)}$	60	mW
Operating ambient temperature		T_{opr}	-10 to +70	$^\circ\text{C}$
Storage temperature		T_{stg}	-40 to +80	$^\circ\text{C}$



Internal Connection



■ Electro-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Threshold current		I_{th}	CW	20	35	50	mA
Operating current		I_{OP}	CW, $P_O = 50$ mW	65	95	110	mA
Operating voltage		V_{OP}		2.0	2.5	3.0	V
Oscillation wavelength		λ_L		653	657	660	nm
Differential efficiency		η	CW, $P_O = 45/I_{OP} (50 \text{ mW}) - I_{OP} (5 \text{ mW})$	0.85	1.00	1.2	W/A
Beam radiation angle	Horizontal	$\theta_{//}$	CW, $P_O = 50$ mW	7.0	9.0	11.0	$^\circ$
	Vertical	$\theta_{\perp}$		15	17	20	$^\circ$
Optical axis accuracy	X direction	θ_X		-1.5	—	+1.5	$^\circ$
	Y direction	θ_Y		-2.5	—	+2.5	$^\circ$
Astigmatism difference		As	CW, $P_O = 3$ mW	—	2	10	μm
Accuracy of emission point			Δ_X	-60	—	+60	μm
			Δ_Y	-60	—	+60	μm
			Δ_Z	-60	—	+60	μm

Caution for Safety

 **DANGER**

■ This product contains Gallium Arsenide (GaAs).

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

■ Do not touch or look into the laser beam directly.

The laser beam may cause injury to the eye or skin, or loss of eyesight.

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