

# LNCQ03PS

## Red Light Semiconductor Laser

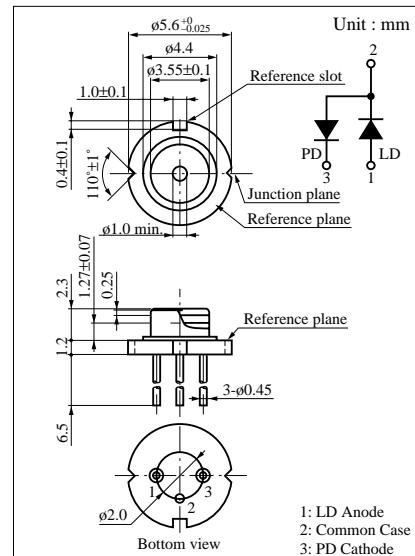
For optical control systems

### ■ Features

- High output operations with oscillating wavelength of 660nm : 35mW
- Low threshold current
- Stable single horizontal mode oscillation
- Space saved by miniaturization
- Low astigmatic difference facilitates good concentrated light spot, production.

### ■ Applications

- DVD-Ram
- Pointer



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

Parameter	Symbol	Ratings	Unit
Radiant power	$P_O$	35	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 +60	°C
Storage temperature	$T_{stg}$	-40 to +85	°C

### ■ Electro-Optical Characteristics ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Threshold current	$I_{th}$	CW	20	50	70	mA
Operating current	$I_{OP}$	CW $P_O = 30\text{mW}$	50	95	120	mA
Operating voltage	$V_{OP}$	CW $P_O = 30\text{mW}$	2.0	2.5	3.0	V
Resistance between electrodes	$R_S$	CW $P_O = 30\text{mW}$	3.0	5.0	10	Ω
Oscillation wavelength	$\lambda_L$	CW $P_O = 30\text{mW}$	635	660	675	nm
Slope efficiency	SE	CW $P_O = 30\text{mW}$	0.5	0.7	1.1	W/A
Radiation angle	Horizontal direction $\theta_{//}$	CW $P_O = 30\text{mW}$	7.5	8.5	10.5	deg.
	Vertical direction $\theta_{\perp}$	CW $P_O = 30\text{mW}$	17	22	26.5	deg.
Optical axis accuracy	X direction $\theta_X$	CW $P_O = 30\text{mW}$	-2.0		+2.0	deg.
	Y direction $\theta_Y$	CW $P_O = 4\text{mW}$	-3.0		+3.0	deg.
Astigmatic difference	$As^{*2}$	CW $P_O = 4\text{mW}$		5.0	10	μm

\*1  $\theta_{//}$  and  $\theta_{\perp}$  are the angles where the optical intensity is a half of its max. value.( half full angle )

\*2 Reference to package axis.

\*3 Guaranteed value in design.

