

# LNC707PS

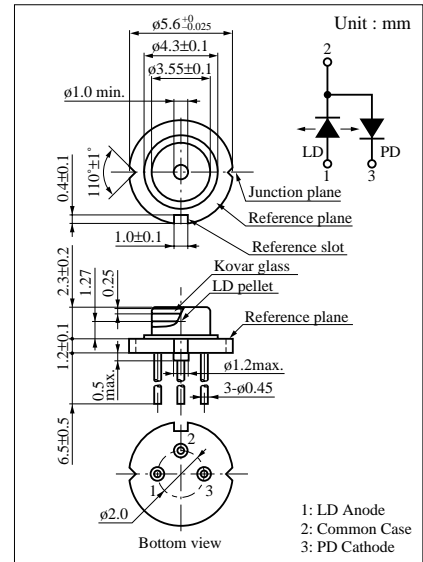
## High Power Output Semiconductor Laser

### Overview

The LNC707PS is a near infrared GaAlAs laser diode which provides continuous oscillation in single mode and is stable at low operating current. LNC707PS uses a small package, and is capable of operating continuously at high temperatures with high output (60 mW). It can be used in a wide range of applications as a light source for optical disk memory and optical information devices. In particular, it can be used in making equipment portable due to its low current operations.

### Features

- Low current operations : 70 mA (with 60 mW output)
- High power output : 60 mW
- Stable single horizontal mode oscillation
- Small size package



### Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rated	Unit
Radiant power	P <sub>O</sub>	60	mW
Reverse voltage	Laser V <sub>R</sub>	2	V
	PIN V <sub>R</sub> (PIN)	30	V
Power dissipation	P <sub>d</sub> (PIN)	100	mW
Operating ambient temperature	T <sub>opr</sub>	-10 to +60	°C
Storage temperature	T <sub>stg</sub>	-40 to +80	°C

### Electro-Optical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Threshold current	I <sub>th</sub>	CW	15	25	35	mA
Operating current	I <sub>OP</sub>	P <sub>O</sub> = 60mW	70	100	130	mA
Operating voltage	V <sub>OP</sub>	P <sub>O</sub> = 60mW		2.0	2.5	V
Oscillation wavelength	λ <sub>L</sub>	P <sub>O</sub> = 60mW	778	784	790	nm
Radiation angle	Horizontal direction θ <sub>//</sub> *	P <sub>O</sub> = 60mW	7	10	13	deg.
	Vertical direction θ <sub>⊥</sub> *	P <sub>O</sub> = 60mW	17	21	25	deg.
Differential efficiency	η	P <sub>O</sub> = 55mW/I(60mW - 5mW)	0.7	0.9	1.2	mW/mA
Reverse current (DC)	I <sub>R</sub>	V <sub>R</sub> (PIN) = 5V			0.1	μA
PIN photo current	I <sub>P</sub>	P <sub>O</sub> = 60mW, V <sub>R</sub> (PIN) = 5V		0.2		mA
Optical axis accuracy	X direction θ <sub>X</sub>	P <sub>O</sub> = 60mW	-2.0		+2.0	deg.
	Y direction θ <sub>Y</sub>	P <sub>O</sub> = 50mW	-3.0		+3.0	deg.
Oscillation mode	Single horizontal mode					

\* θ<sub>//</sub> and θ<sub>⊥</sub> are the angles where the optical intensity is a half of its max. value. (half full angle)

