

LNC707PS

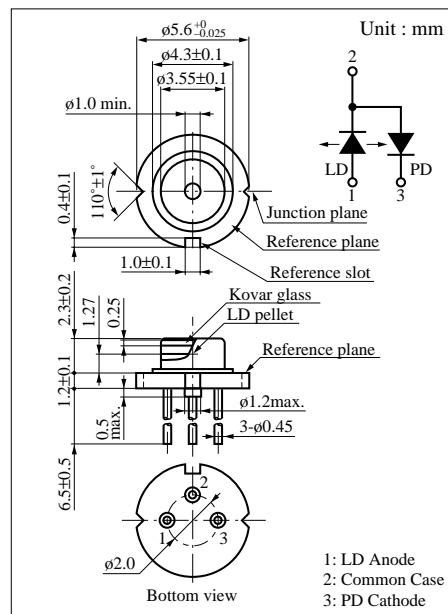
High Power Output Semiconductor Laser

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 _O	60	mW
Reverse voltage	Laser	V _R	V
	PIN	V _R (PIN)	30
Power dissipation	P _d (PIN)	100	mW
Operating ambient temperature	T _{opr}	-10 to +60	°C
Storage temperature	T _{stg}	-40 to +80	°C

Electro-Optical Characteristics (Ta = 25°C)

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

* θ_{//} and θ_⊥ are the angles where the optical intensity is a half of its max. value. (half full angle)

