

# LNC702PS

## GaAlAs Semiconductor Laser

### Features

- Low threshold current
- Stable single horizontal mode oscillation
- Low drooping

### Applications

- Optical data processing devices
- Laser beam printers

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

Parameter	Symbol	Ratings	Unit
Radiant power	$P_O$	5	mW
Reverse voltage	Laser	$V_R$	2 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

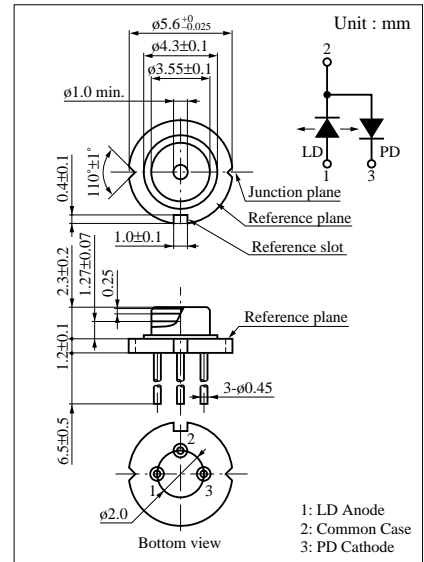
### Electro-Optical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit	
Threshold current	$I_{th}$	CW	15	25	40	mA	
Operating current	$I_{OP}$	CW $P_O = 5mW$	20	35	50	mA	
Operating voltage	$V_{OP}$	CW $P_O = 5mW$		1.9	2.5	V	
Oscillation wavelength	$\lambda_L^{*2}$	CW $P_O = 5mW$	780	795	810	nm	
Radiation angle	Horizontal direction	$\theta_{//}^{*1}$	CW $P_O = 5mW$	8	12	15	deg.
	Vertical direction	$\theta_{\perp}^{*1}$	CW $P_O = 5mW$	20	33	45	deg.
PIN photo current	$I_P$	CW $P_O = 5mW$ , $V_R$ (PIN) = 5V	0.3	0.8	1.6	mA	
Reverse current (DC)	$I_R$	$V_R$ (PIN) = 15V			0.1	$\mu A$	
Optical axis accuracy	X direction	$\theta_X$	CW $P_O = 5mW$	-2.0		+2.0	deg.
	Y direction	$\theta_Y$	CW $P_O = 5mW$	-3.0		+3.0	deg.

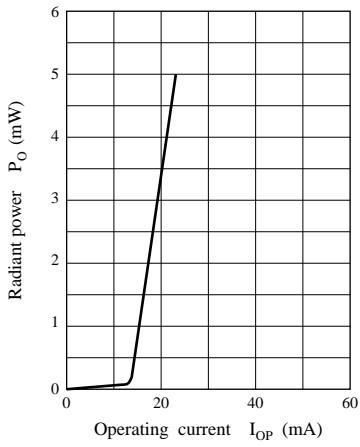
\*1 The radiation angle is indicated as half full angle.

\*2 Sampling inspections are to be performed.

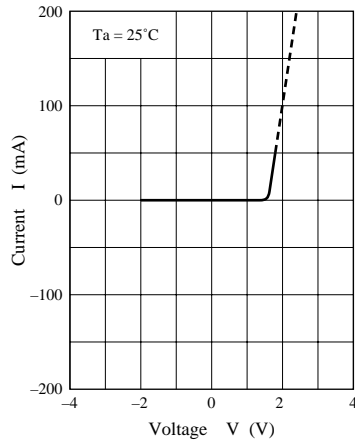
On each wafer, n = 10 samplings are to be performed, with an evaluation criterion of zero rejects.



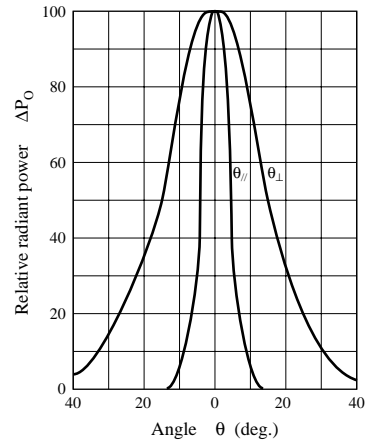
$P_O - I_{OP}$



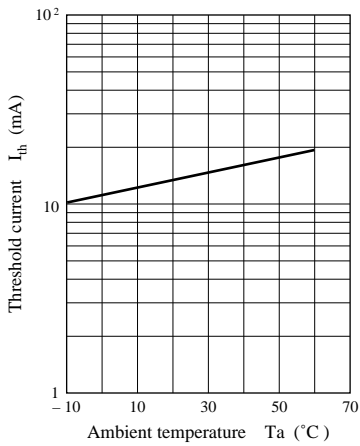
$I - V$



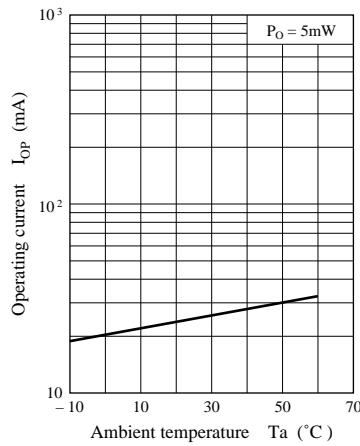
Far field pattern



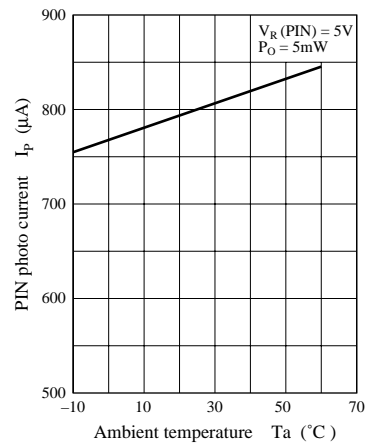
$I_{th} - T_a$



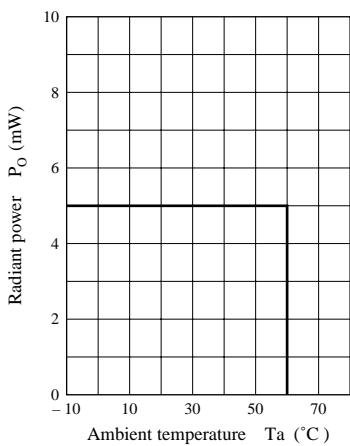
$I_{OP} - T_a$



$I_p - T_a$



$P_O - T_a$



$I_d - T_a$

