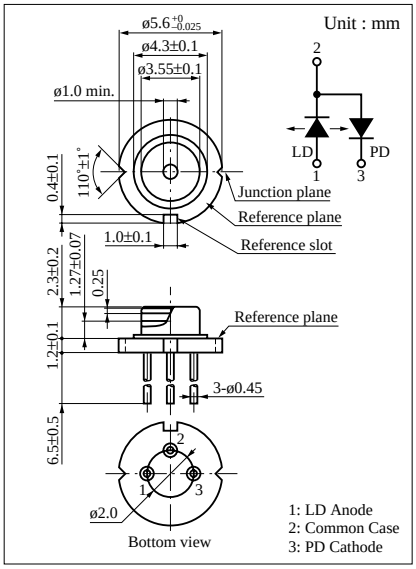
LNC704PS

GaAlAs Semiconductor Laser



Features

- Low threshold current
- Stable single horizontal mode oscillation
- Long lifetime, high reliability

Applications

- Optical data processing devices
- Optical disk memory
- Optical measuring equipment

Absolute Maximum Ratings (Ta = 25˚C)

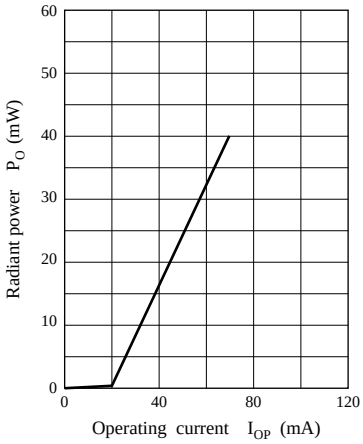
Parameter		Symbol	Ratings	Unit
Radiant power		P_O	40	mW
Reverse voltage	Laser	V_R	2	V
	PIN	V_R (PIN)	30	V
Power dissipation		P_d (PIN)	100	mW
Operating ambient temperature		T_{opr}	–10 to +60	˚C
Storage temperature		T_{stg}	– 40 to +80	˚C

Electro-Optical Characteristics (Ta = 25˚C)

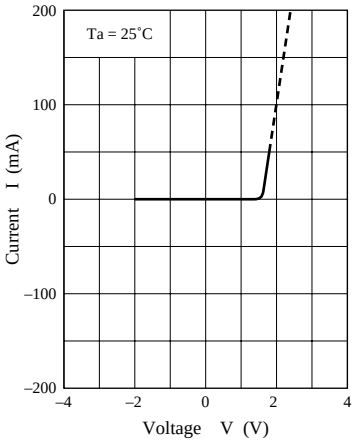
Parameter		Symbol	Conditions	min	typ	max	Unit
Threshold current		I_{th}	CW	10	20	35	mA
Operating current		I_{OP}	CW P_O = 32mW	30	70	90	mA
Operating voltage		V_{OP}	CW P_O = 32mW		2.0	2.5	V
Oscillation wavelength		λ_L	CW P_O = 32mW	770	785	805	nm
Radiation angle	Horizontal direction	$\theta_{//}$ *1	CW P_O = 32mW	7	9	13	deg.
	Vertical direction	$\theta_{\perp}$ *1	CW P_O = 32mW	20	25	30	deg.
Differential efficiency		η	CW P_O = 29mW/I(32mW – 3mW)	0.7	0.9	1.2	W/A
PIN photo current		I_P	CW P_O = 32mW, V_R (PIN) = 5V		0.4		mA
Reverse current (DC)		I_R	V_R (PIN) = 15V			0.1	μA
Optical axis accuracy	X direction	θ_X	CW P_O = 32mW	–2.0		+2.0	deg.
	Y direction	θ_Y	CW P_O = 32mW	–3.0		+3.0	deg.

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

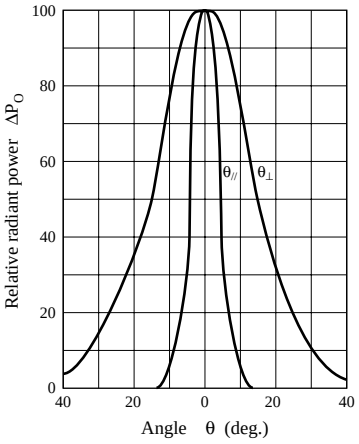
P_O — I_{OP}



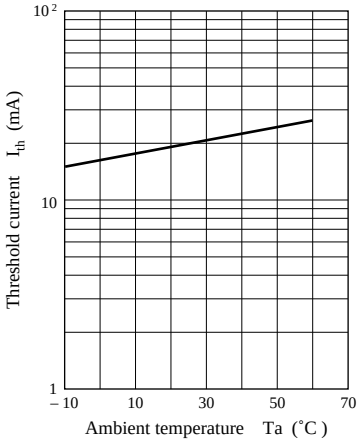
I — V



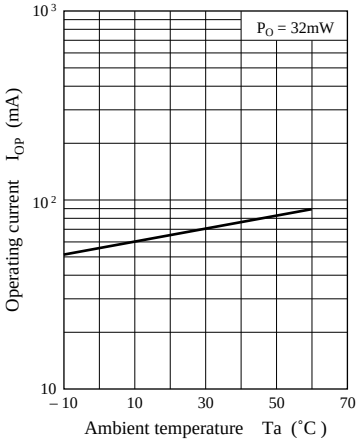
Far field pattern



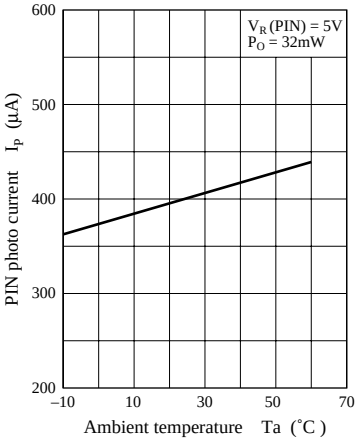
I_{th} — Ta



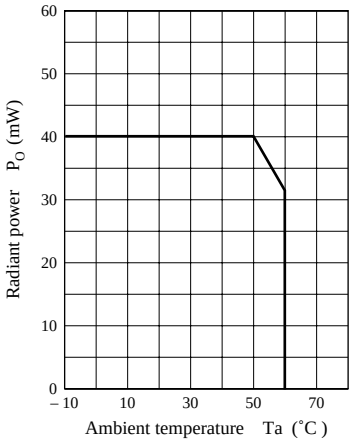
I_{OP} — Ta



I_P — Ta



P_O — Ta



I_d — Ta