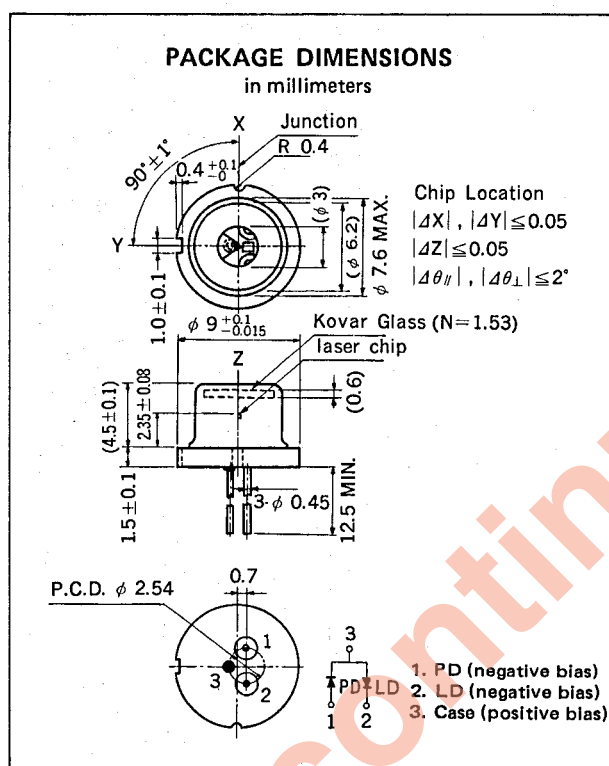


LASER DIODE NDL3000

DAD,VD APPLICATION AlGaAs DOUBLE HETEROSTRUCTURE LASER DIODE

DESCRIPTION

NDL3000 laser diode is developed for DAD(Digital Audio Disk), Video Disk optical head and non impact laser printer. The PCW(Piano Convex Waveguide) structure can achieve stable single-mode operation both longitudinal and transverse mode.



FEATURES

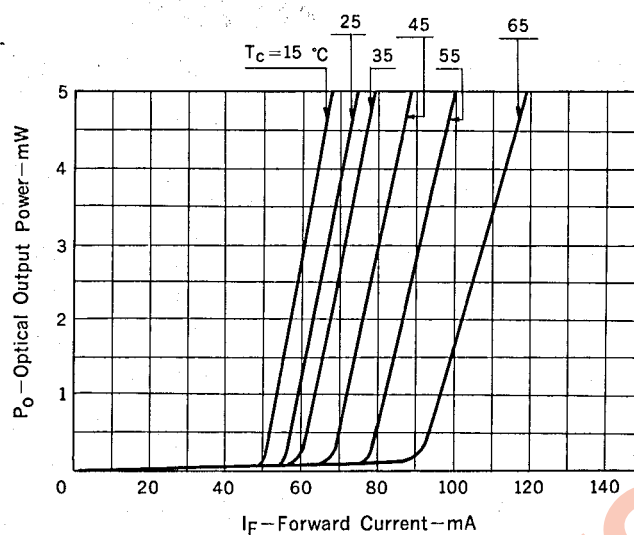
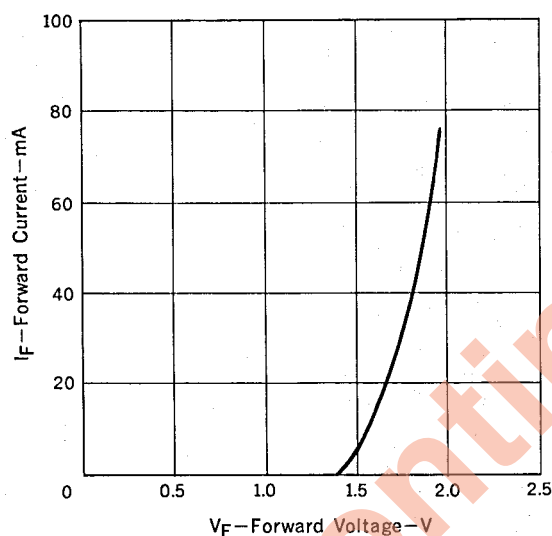
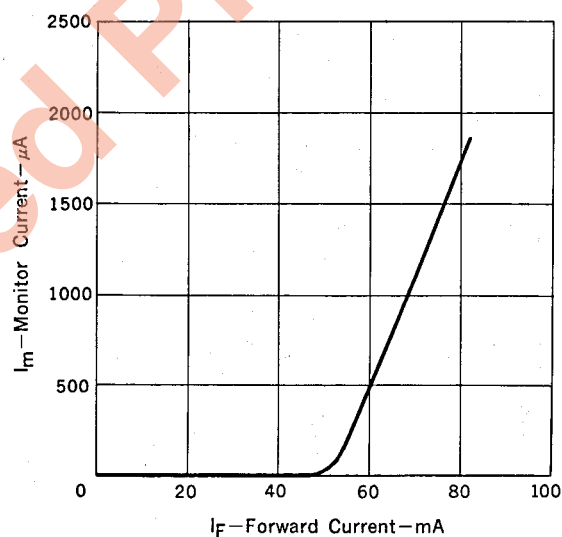
- Accurate chip location.
- Visible wavelength, $\lambda_0 = 780$ nm.
- Internal PIN detector.
- Single mode.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Optical Output Power	P_O	8.0	mW
Reverse Voltage	V_R	2.0	V
Operating Temperature	T_{opt}	-10 to +70	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$
Monitor PD			
Reverse Voltage	V_R	30	V
Forward Current	I_F	100	mA

ELECTRO-OPTICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_F		1.9	2.5	V	$I_F = I_{th} + 20$ mA
Threshold Current	I_{th}		50	80	mA	
Optical Output Power	P_O	3.0	5.0		mW	$I_F = I_{th} + 20$ mA
Monitor Current	I_m	0.5	1.0	2.0	mA	$P_O = 3.0$ mW, $V_R = 15$ V
Center Wavelength	λ_0	760	780	800	nm	$P_O = 3.0$ mW
Half Power Spectral Width	$\Delta\lambda$			1.0	nm	$P_O = 3.0$ mW
Beam Spread (Vertical)	$2\theta_{\perp}$		40	50	Deg.	
Beam Spread (Lateral)	$2\theta_{\parallel}$	10	12		Deg.	
Terminal Capacitance of Monitor PD	C_t		5	10	pF	$V_R = 15$ V
Dark Current of Monitor PD	I_D			100	nA	$V_R = 15$ V

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)OPTICAL OUTPUT POWER vs.
FORWARD CURRENTFORWARD CURRENT vs.
FORWARD VOLTAGEMONITOR CURRENT vs.
FORWARD CURRENT

INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM

OUTPUT POWER.....mW MAX.

WAVELENGTH.....nm

CLASS IIIb LASER PRODUCT

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