

# NDL3220, NDL3220S

## 670 nm BAR CODE READER, POINTER APPLICATION AlGaInP MQW VISIBLE LASER DIODE

### DESCRIPTION

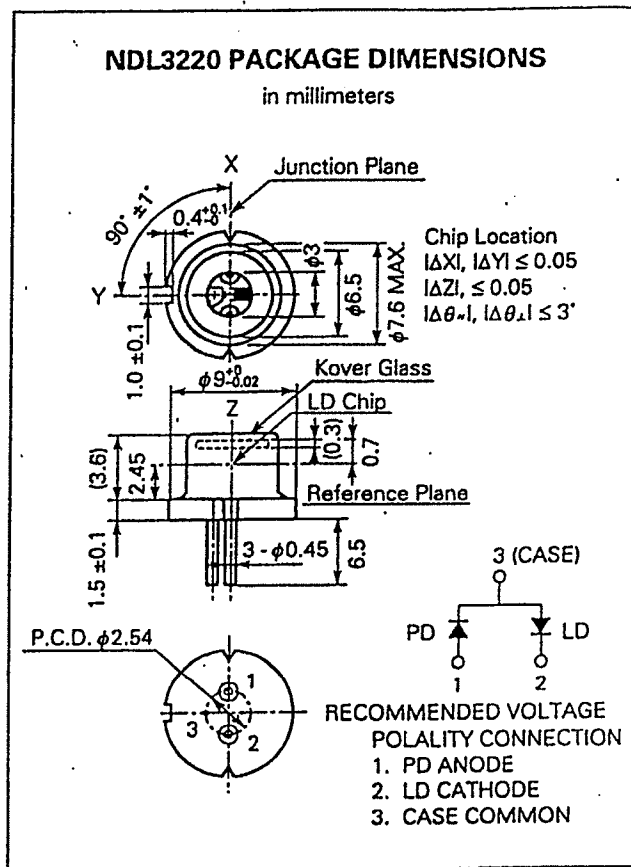
NDL3220 is an AlGaInP 670 nm visible laser diode and especially developed for Bar Code Reader and Pointer.

### FEATURES

- Low Operating Current ( $I_{op} = 30$  mA TYP.)
- Low Operating Voltage ( $V_{op} = 2.1$  V TYP.)
- Wide Operating Case Temperature  
( $T_c = -10$  to  $+60$  °C)
- Peak Emission Wavelength ( $\lambda = 670$  nm TYP.)
- Fundamental Transverse Mode

### ABSOLUTE MAXIMUM RATINGS ( $T_c = 25$ °C)

Optical Output Power	$P_o$	6.0	mW
Reverse Voltage	$V_R$	2.0	V
Operating Case Temperature	$T_c$	-10 to +60	°C
Storage Temperature	$T_{stg}$	-40 to +85	°C
Monitor PD			
Reverse Voltage	$V_R$	30	V
Forward Current	$I_f$	20	mA



### RECOMMENDED OPERATING CONDITIONS ( $T_c = 25$ °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Optical Output Power	$P_o$			5.0	mW

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

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Operating Voltage	$V_{op}$		2.1	2.3	V	$P_o = 5.0\text{ mW}$
Threshold Current	$I_{th}$		20	30	mA	CW
Operating Current	$I_{op}$		30	40	mA	$P_o = 5.0\text{ mW}$
Monitor Current NDL3220	$I_m$	0.05	0.1	0.2	mA	$P_o = 5.0\text{ mW}$ $V_R = 5\text{ V}$
Monitor Current NDL3220S	$I_m$	0.1	0.3	0.5	mA	$P_o = 5.0\text{ mW}$
Peak Emission Wavelength	$\lambda_p$	660	670	680	nm	$P_o = 5.0\text{ mW}$
Vertical Beam Angle	$\theta_L$	25	30	35	deg.	$P_o = 5.0\text{ mW}$ , FAHM*
Lateral Beam Angle	$\theta_H$	6	8	10	deg.	$P_o = 5.0\text{ mW}$ , FAHM*

\* FAHM: Full Angle at Half Maximum

NDL3220S PACKAGE DIMENSIONS  
in millimeters

