PRELIMINARY DATA SHEET

NEC

VISIBLE LASER DIODE

NDL3325ST,NDL3325SU

5 mW, 650 nm VISIBLE LASER DIODE
HIGH OPERATING TEMPERATURE

DESCRIPTION

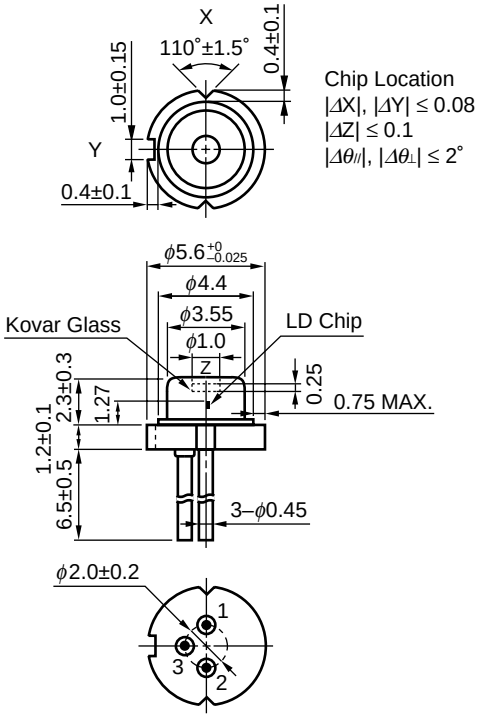
The NDL3325ST and NDL3325SU are AlGaInP 650 nm visible laser diodes and especially developed for DVD applications. The newly developed Multiple Quantum Well (MQW) LD chip, can achieve low operating current and high operating temperature.

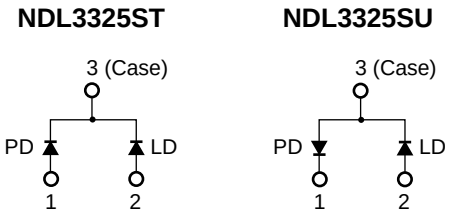
FEATURES

- Optical output power P_o = 5.0 mW
- Low threshold current I_{th} = 40 mA TYP.
- Low operating current I_{op} = 50 mA TYP.
- Low operating voltage V_{op} = 2.1 V TYP.
- High operating temperature T_C = –20 to +80 °C
- Peak emission wavelength λ_p = 650 nm TYP.
- Fundamental transverse mode

PACKAGE DIMENSIONS

in millimeters





PIN CONNECTIONS

NDL3325ST	NDL3325SU
1. PD Anode	1. PD Cathode
2. LD Anode	2. LD Anode
3. Case Ground	3. Case Ground

The information in this document is subject to change without notice.

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ABSOLUTE MAXIMUM RATINGS (T_C = 25 °C, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Optical Output Power	P_o	8.0	mW
Reverse Voltage of LD	V_R	2.0	V
Forward Current of PD	I_F	20	mA
Reverse Voltage of PD	V_R	30	V
Operating Case Temperature	T_C	–20 to +80	°C
Storage Temperature	T_{stg}	–40 to +85	°C

RECOMMENDED OPERATING CONDITIONS (T_C = 25 °C)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Optical Output Power	P_o			5.0	mW

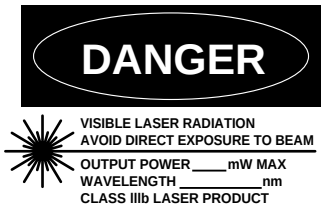
ELECTRO-OPTICAL CHARACTERISTICS (T_C = 25 °C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating Voltage	V_{op}	P_o = 5.0 mW		2.1	2.7	V
Threshold Current	I_{th}	CW		40	65	mA
Operating Current	I_{op}	P_o = 5.0 mW		50	80	mA
Monitor Current	I_m	V_R = 5 V, P_o = 5.0 mW	0.1	0.3	0.5	mA
Peak Emission Wavelength	λ_p	P_o = 5.0 mW	645	650	657	nm
Vertical Beam Angle	$\theta_\perp$	P_o = 5.0 mW, FAHM [*1]	25	30	35	deg.
Lateral Beam Angle	$\theta_{//}$	P_o = 5.0 mW, FAHM [*1]	6	8	10	deg.

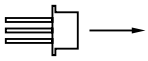
***1** FAHM: Full Angle at Half Maximum

CAUTION

Within this device there exists GaAs (Gallium Arsenide) material which is a harmful substance if ingested. Please do not under any circumstances break the hermetic seal.



SEMICONDUCTOR LASER



AVOID EXPOSURE-Visible Laser Radiation is emitted from this aperture

NEC Corporation
NEC Building, 7-1, Shiba 5-chome, Minato-ku, Tokyo 108-01, Japan
Type number: _____
Manufactured: _____
Serial Number: _____
This product conforms to FDA regulations as applicable to standards 21 CFR Chapter 1. Subchapter J.

Warning on Handling

To prevent health hazards, avoid looking directly or through lenses at beams from the operating laser diode.

Exceeding absolute maximum ratings' value may cause destruction or degradation of the device.

M4 96.5