



Blue Laser Diode

# NDB7B77

## Features

- Multi Transverse Mode
- Can Type:  $\phi 9.0$  mm Floating Mounted with Protection device

## Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Ratings	Unit
Forward Current ( $T_c=25^\circ\text{C}$ )	$I_f$	2.2	A
Allowable Reverse Current ( $T_c=25^\circ\text{C}$ )	$I_r$ (LD)	85	mA
Storage Temperature	$T_{stg}$	-10~85	$^\circ\text{C}$
Operating Case Temperature	$T_c$	0~70	$^\circ\text{C}$

## Initial Electrical/Optical Characteristics

( $T_c=25^\circ\text{C}$ )

Item	Condition	Symbol	Min	Typ.	Max	Unit
Optical Output Power	$I_f=2.0\text{A}$	$P_o$	-	(2.3)	-	W
Dominant Wavelength	$I_f=2.0\text{A}$	$\lambda_d$	440	-	455	nm
Threshold Current	CW	$I_{th}$	150	-	350	mA
Slope Efficiency	CW	$\eta$	1.0	-	2.2	W/A
Operating Voltage	$I_f=2.0\text{A}$	$V_{op}$	3.7	-	5.2	V
Beam Divergence*	Parallel	$I_f=2.0\text{A}$	$\theta_{//}$	5	(14)	$^\circ$
	Perpendicular	$I_f=2.0\text{A}$	$\theta_{\perp}$	35	(45)	$^\circ$

( ) are reference figures.

\* Full angle at  $1/e^2$  from peak intensity

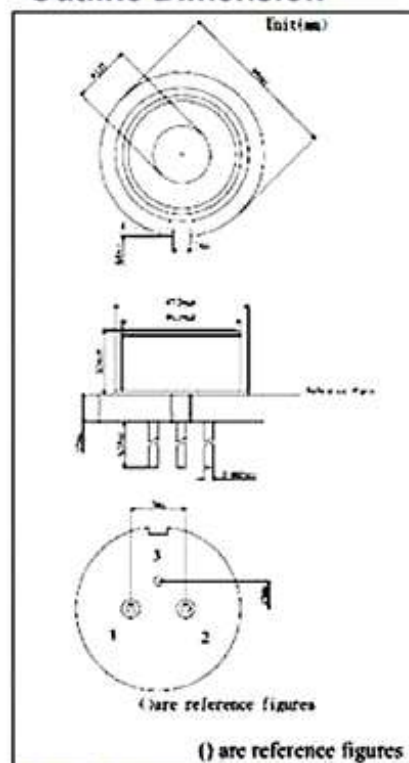
All figures in this specification are measured by Nichia's method and may contain measurement deviations.

The above specifications are for reference purpose only and subjected to change without prior notice.

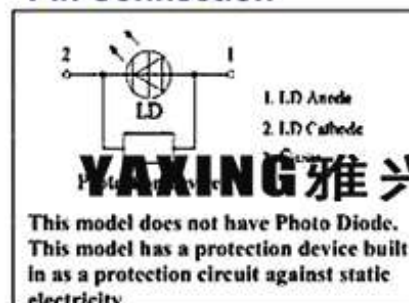
## Safety of Laser light

- Laser Light can damage the human eyes and skin. Do not expose the eye or skin to any laser light directly and/or through optical lens. When handling the LDs, wear appropriate safety glasses to prevent laser light, even any reflections from entering to the eye. Focused laser beam through optical instruments will increase the chance of eye hazard.
- These LDs are classified in Class 4 of IEC60825-1 and 21 CFR Part 1040.10 Safety Standards. It is absolutely necessary to take overall safety measures against User's modules, equipment and systems into which Nichia LDs are incorporated and/or integrated.

## Outline Dimension



## Pin Connection



## NICHIA CORPORATION

### ◆ HEADQUARTERS

491 Oka, Kaminaka-Cho, Anan-Shi, TOKUSHIMA 774-8601, JAPAN  
PHONE: +81-884-22-2311 FAX: +81-884-21-0148

### ◆ CONTACT

TOKYO SALES OFFICE

13F Tamachi Center Building 34-7, Shiba 5-Chome, Minato-Ku, TOKYO 108-0014, JAPAN  
PHONE: +81-3-3456-3108 FAX: +81-3-5440-7330



This product is comply with 21 CFR Part 1040.10

Manufactured by NICHIA HDP

**NICHIA**

BEI ORA KAMINAKA CHO ANAN, TOKUSHIMA 774-8601 JAPAN