

# Preliminary

## LL-1003BD1H-001

### DATA SHEET

QC :

ENG :

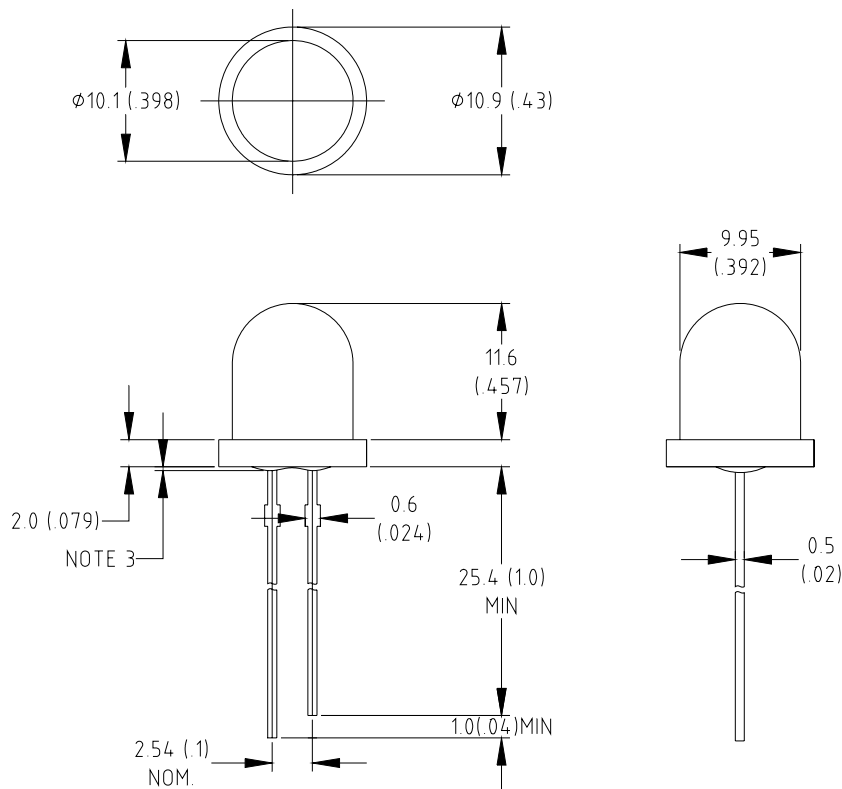
Prepared By:

Part No.	LL-1003BD1H-001	Spec No.	S/N-03111313D	Page	1 of 4
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## Features:

- ◆ High intensity
- ◆ Normal 10mm diameter package
- ◆ General purpose leads
- ◆ Reliable and rugged

## Package Dimensions:



Part NO.	Chip Material	Lens Color	Source Color
LL-1003BD1H-001	GaInN	Blue Diffused	Super Bright Blue

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}$  (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. Precautions for ESD:  
 STATIC SHIELD Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
7. This data-sheet only valid for six months.

## Absolute Maximum Ratings at Ta=25

Parameter	MAX.	Unit
Power Dissipation	120	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	30	mA
Derating Linear From 50	0.4	mA/
Reverse Voltage	5	V
Operating Temperature Range	-40 to +80	
Storage Temperature Range	-40 to +80	
Lead Soldering Temperature [4mm(.157") From Body]	260 for 5 Seconds	

## Electrical Optical Characteristics at Ta=25

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	$I_v$	100	210	460	mcd	$I_f=20\text{mA}$ (Note 1)
Viewing Angle	$2_{1/2}$	60	70	80	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_p$	463	468	473	nm	$I_f=20\text{mA}$
Dominant Wavelength	$\lambda_d$	460	470	480	nm	$I_f=20\text{mA}$ (Note 3)
Spectral Line Half-Width		20	25	30	nm	$I_f=20\text{mA}$
Forward Voltage	$V_f$	2.8	3.5	4.0	V	$I_f=20\text{mA}$
Reverse Current	$I_R$	---	---	100	$\mu\text{A}$	$V_R=5\text{V}$

### Notes:

- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2.  $_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

**Typical Electrical / Optical Characteristics Curves**  
 (25 Ambient Temperature Unless Otherwise Noted)

