

**LL-1003UC1L-001**

**DATA SHEET**

QC :

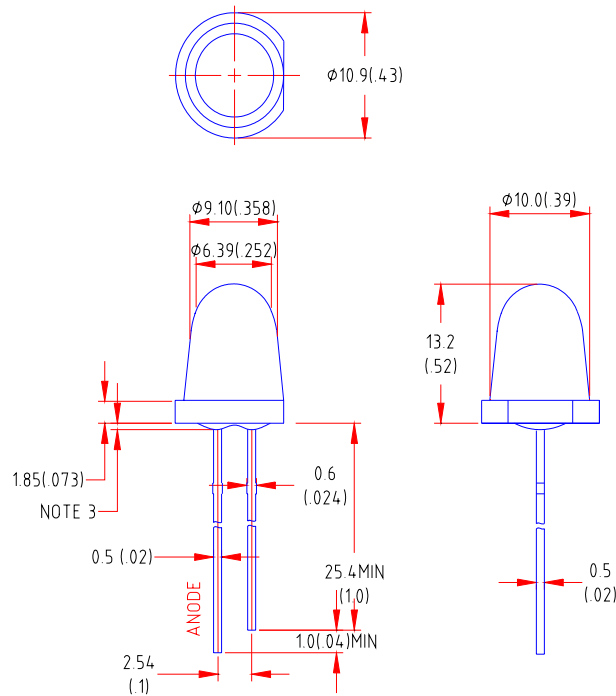
ENG :

Prepared By:

## Features

- ◆ High intensity
- ◆ 10mm diameter bullet head package
- ◆ Wide viewing angle
- ◆ General purpose leads
- ◆ Reliable and rugged

## Package Dimension:



Part NO.	Lens Color	Source Color
LL-1003UC1L-001	Water Clear	Ultra Red

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25 (.010)$  mm unless otherwise noted.
3. Protruded resin under flange is  $1.0 \text{ mm} (.04)$  max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice

### Absolute Maximum Ratings at Ta=25

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	40	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

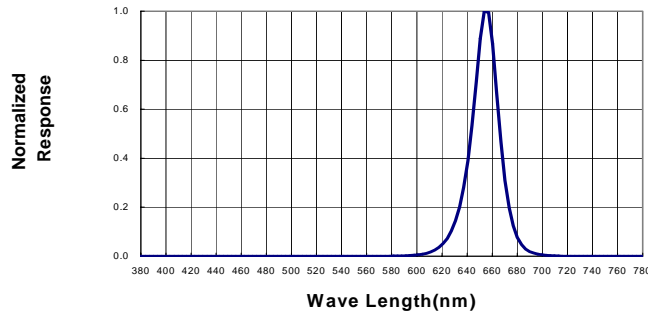
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I <sub>v</sub>	2500	5400	9000	mcd	I <sub>F</sub> =20mA (Note 1)
Viewing Angle	2 <sub>1/2</sub>	5	10	15	Deg	(Note 2)
Peak Emission Wavelength	λ	652	656	660	nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>	630	636	642	nm	I <sub>F</sub> =20mA (Note 3)
Spectral Line Half-Width		20	25	30	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	1.6	2.0	2.6	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	--	---	100	μA	V <sub>R</sub> =5V

#### Note:

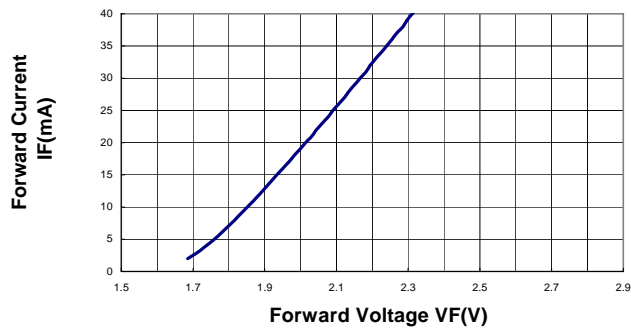
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. <sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength ( λ<sub>d</sub> ) is derived from the CIE 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)

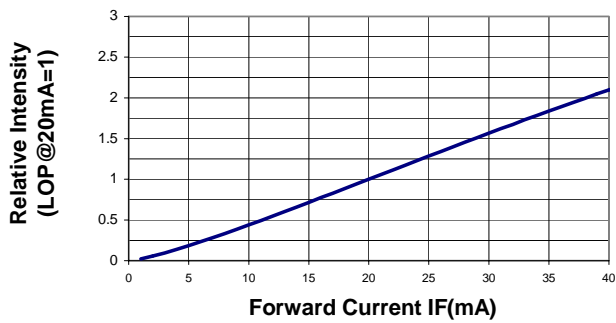
Spectral Radiance (Peak @ 656nm)



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern

