

**LL-509VBC2E-002**

**DATA SHEET**

QC :

ENG :

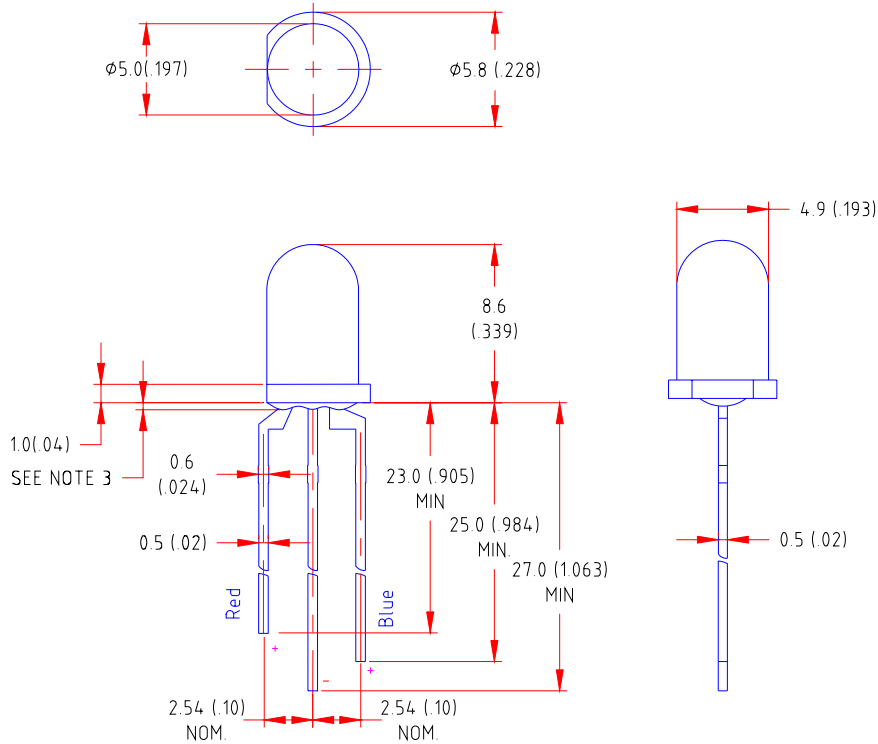
Prepared By:

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## Features

- ◆ Standard T-1 3/4 package
- ◆ Wide viewing angle
- ◆ General purpose leads
- ◆ Reliable and rugged

## Package Dimension:



Part NO.	Lens Color	Source Color
LL-509VBC2E-002	Water Clear	Red & Blue

### 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 1.0mm (.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	20	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

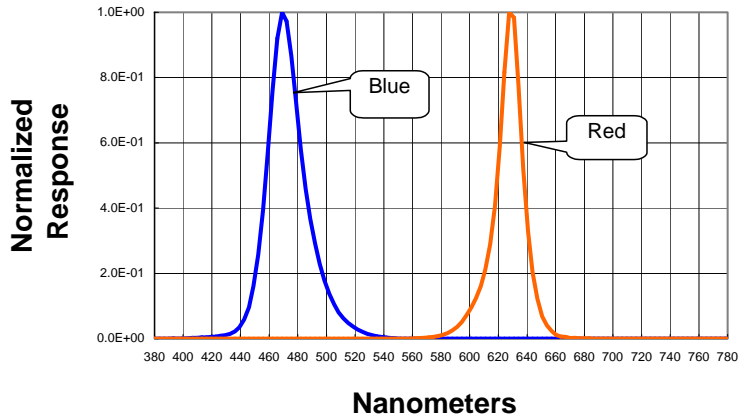
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I <sub>v</sub>	Blue	---	500	---	mcd	I <sub>F</sub> =20mA Note 1
		Red	---	800	---		
Viewing Angle	2 <sub>1/2</sub>	Blue	---	30	---	Deg	Note 2
		Red	---	30	---		
Peak Emission Wavelength	p	Blue	---	468	---	nm	I <sub>F</sub> =20mA
		Red	---	630	---		
Dominant Wavelength	d	Blue	465	470	475	nm	I <sub>F</sub> =20mA Note 3
		Red	615	620	625		
Spectral Line Half-Width		Blue	---	26	---	nm	I <sub>F</sub> =20mA
		Red	---	25	---		
Forward Voltage	V <sub>F</sub>	Blue	2.8	3.60	4.50	V	I <sub>F</sub> =20mA
		Red	1.8	2.05	2.50		
Reverse Current	I <sub>R</sub>	Blue	---	---	100	μA	V <sub>R</sub> =5V
		Red					

Note:

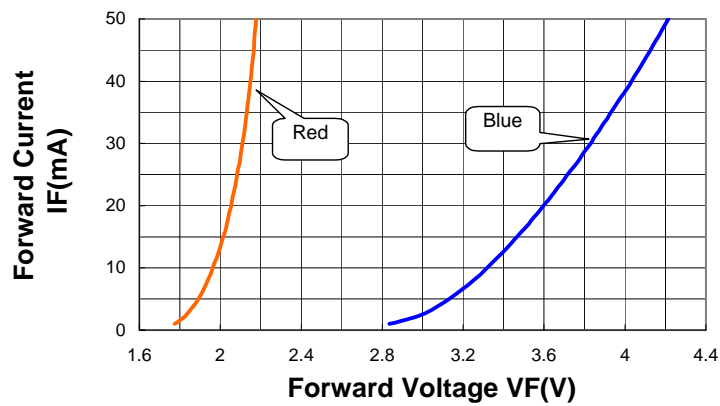
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. <sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength ( d) is derived from the CIE chromaticity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

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

**Spectral Radiance** Blue Peak @ 468nm  
 Red Peak @ 630nm



**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**

