

# **LL-503VC2E-V1-2BC**

## **DATA SHEET**

QC:

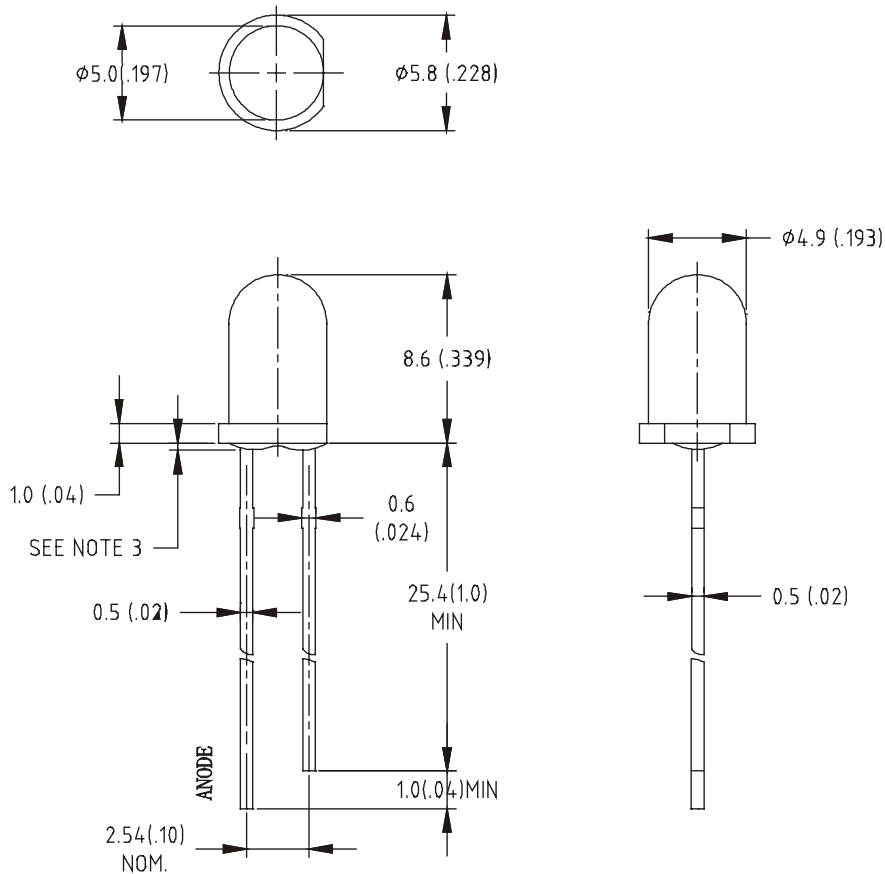
ENG:

Prepared By:

## Features

- ◆ High intensity
- ◆ Standard T-1 3/4 diameter package
- ◆ Small viewing angle
- ◆ General purpose leads
- ◆ Reliable and rugged

## Package Dimension:



Part NO.	Chip Material	Lens Color	Source Color
LL-503VC2E-V1-2BC	AlGaInP	Water Clear	Super Bright 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°C**

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	35	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-40°C to +80°C	
Storage Temperature Range	-40°C to +80°C	
Lead Soldering Temperature [4mm(.157") From Body]	260°C for 5 Seconds	

**Electrical Optical Characteristics at Ta=25°C**

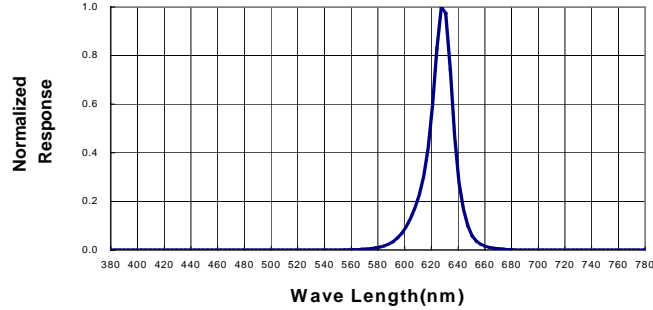
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I <sub>v</sub>	3000	4000	---	mcd	I <sub>F</sub> =20mA (Note 1)
Viewing Angle	2θ <sub>1/2</sub>	15	20	25	Deg	(Note 2)
Peak Emission Wavelength	λ <sub>p</sub>	627	632	637	nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>	615	620	625	nm	I <sub>F</sub> =20mA (Note 3)
Spectral Line Half-Width	Δλ	15	20	25	nm	I <sub>F</sub> =20mA
Forward Voltage	V <sub>F</sub>	1.6	2.05	2.6	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	---	---	100	μA	V <sub>R</sub> =5V

**Note:**

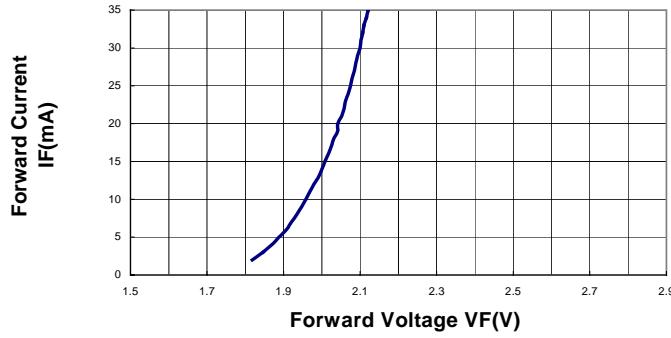
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- θ<sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength (λ<sub>d</sub>) is derived from the CIE chromaticity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

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

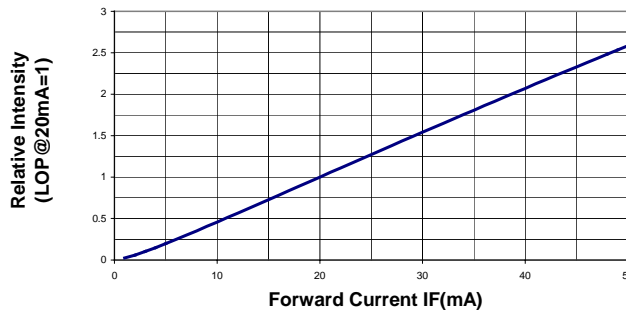
**Spectral Radiance (Peak @ 632nm)**



**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**



**Beam Pattern**

