

# Preliminary

## R50AZC2E-006

## LED12V-GN

### DATA SHEET



QC:楊艷玲

ENG:李冰紅

Prepared By:陳結佩

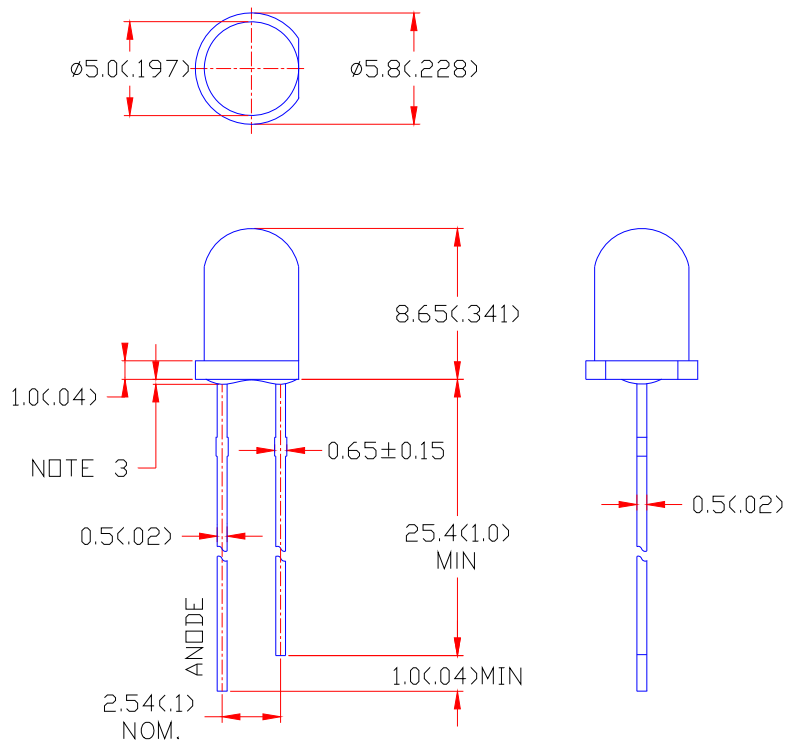
Part No.	R50AZC2E-006	Spec No.	S/N-21111610	Page	1 of 4
----------	--------------	----------	--------------	------	--------

Version:1.0

## Features:

- ◆ High intensity
- ◆ Standard 5mm diameter package
- ◆ General purpose leads
- ◆ Pb-free

## Package Dimensions:



Part NO.	Chip Material	Lens Color	Emission Color
R50AZC2E-006	InGaN	Water Clear	Super Bright True Green

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$ 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 electricity and surge can 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°C

Parameter	MAX.	Unit
Power Dissipation	156	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	12	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Electrostatic Discharge (ESD)	2000	V
Operating Temperature Range	-30°C to +80°C	
Storage Temperature Range	-40°C to +100°C	
Lead Soldering Temperature [4mm(.157") From Body]	255 ± 5°C for 5 Seconds	
Wave Soldering Temperature	Peak Temperature 245°C~260°C for 10 Seconds	

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	$I_V$	13000	30000		mcd	$I_F=10\text{mA}$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	8	13	18	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_p$	515	520	525	nm	$I_F=10\text{mA}$
Dominant Wavelength	$\lambda_d$	518	523	528	nm	$I_F=10\text{mA}$ (Note 3)
Spectral Line Half-Width	$\Delta\lambda$	27	32	37	nm	$I_F=10\text{mA}$
Forward Voltage	$V_F$		11	13	V	$I_F=10\text{mA}$
Reverse Current	$I_R$			10	$\mu\text{A}$	$V_R=5\text{V}$

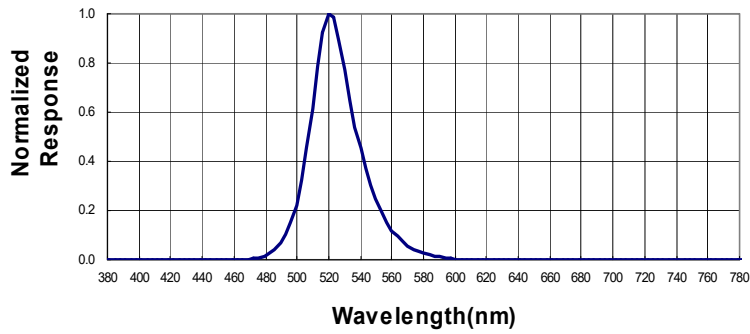
#### Notes:

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
- Forward voltage measurement allowance is  $\pm 0.1\text{V}$
- Luminous Intensity Measurement Allowance is  $\pm 10\%$
- Dominant Wavelength measurement allowance is  $\pm 1\text{nm}$ .

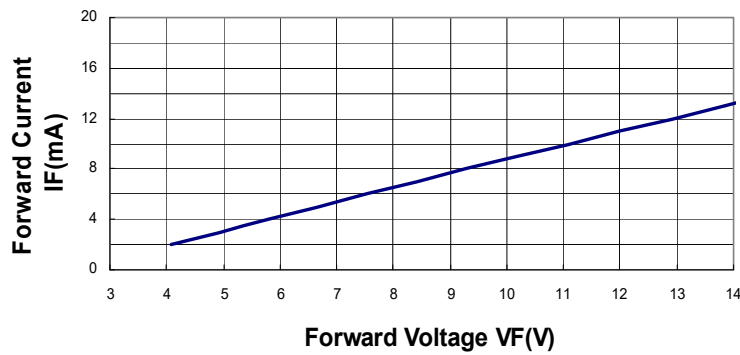
1.0  
0.8

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

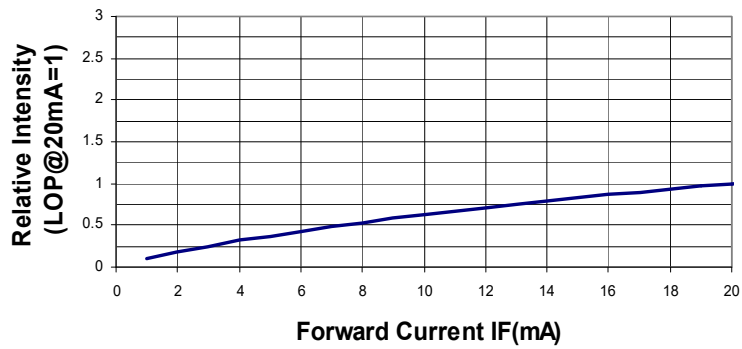
**Spectral Radiance ( Peak @520 nm)**



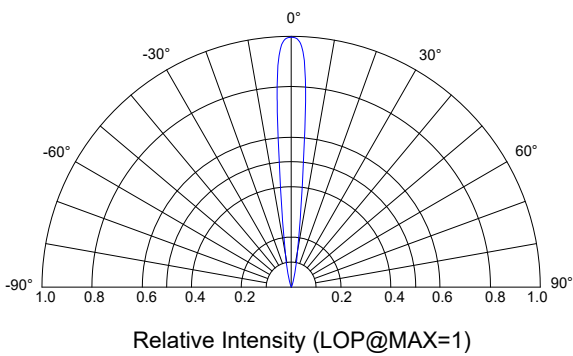
**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**



**Beam Pattern**



**Forward Current Derating Curve**

