

# Preliminary

## LL-U47Z1C-013

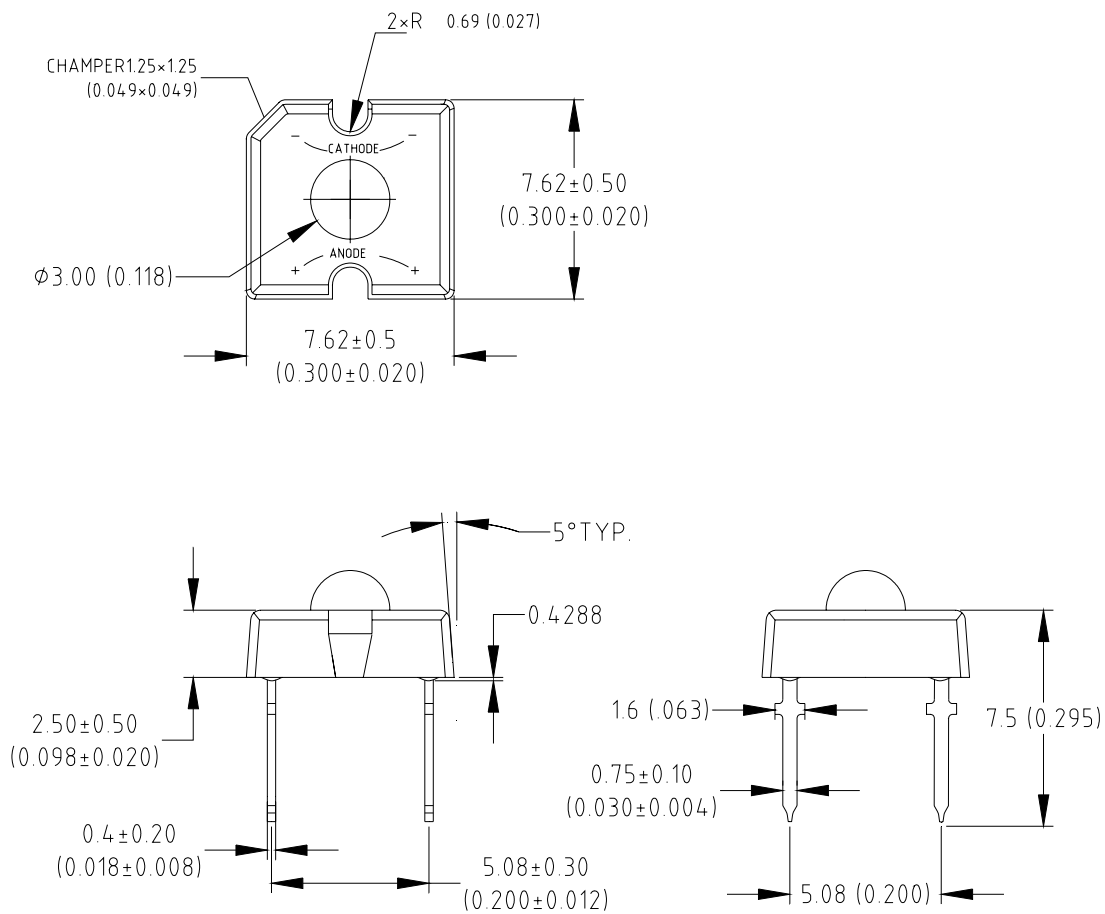
### DATA SHEET

QC:

ENG:

Prepared By:

## Package Dimensions:



Part NO.	Chip Material	Lens Color	Source Color
LL-U47Z1C-013	InGaN	Water Clear	Super Bright True Green

### Notes:

- All dimensions are in millimeters (inches).
- Tolerance is  $\pm 0.25\text{mm}$  (.010") unless otherwise noted.
- Protruded resin under flange is 1.0mm (.04") max.
- Lead spacing is measured where the leads emerge from the package.
- Specifications are subject to change without notice.
- 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.
- 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	-30 to +80	
Storage Temperature Range	-40 to +100	
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	$I_v$	690	1500	---	mcd	$I_F=20\text{mA}$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	45	55	65	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_p$	520	525	530	nm	$I_F=20\text{mA}$
Dominant Wavelength	$\lambda_d$	520	530	540	nm	$I_F=20\text{mA}$ (Note 3)
Spectral Line Half-Width	$\lambda$	30	35	40	nm	$I_F=20\text{mA}$
Forward Voltage	$V_f$	2.8	3.2	4.0	V	$I_F=20\text{mA}$
Reverse Current	$I_R$	---	---	100	$\mu\text{A}$	$V_R=5\text{V}$

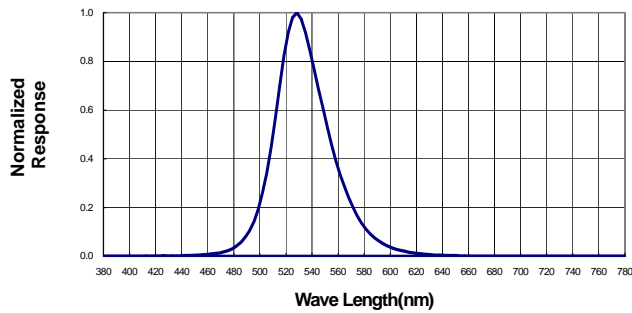
**Notes:**

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2.  $\theta_{1/2}$  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.

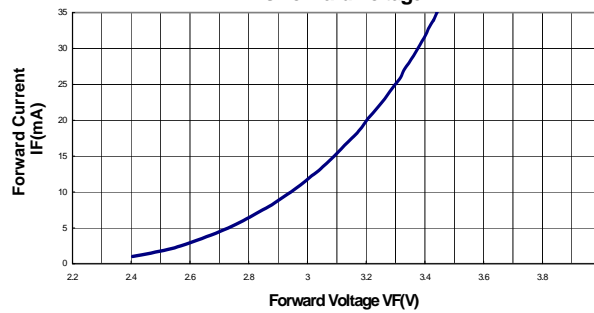
### Typical Electrical / Optical Characteristics Curves

(25 Ambient Temperature Unless Otherwise Noted)

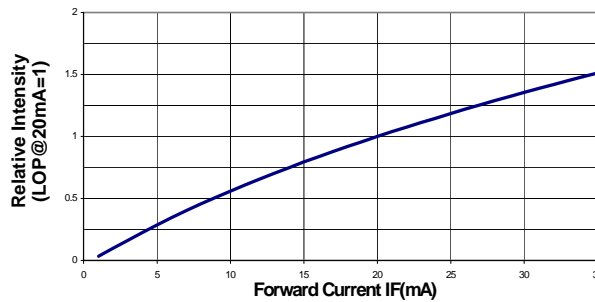
**Spectral Radiance (Peak @525nm)**



**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**



**Beam Pattern**

