

# Preliminary

## LL-U18B1C-003

### DATA SHEET



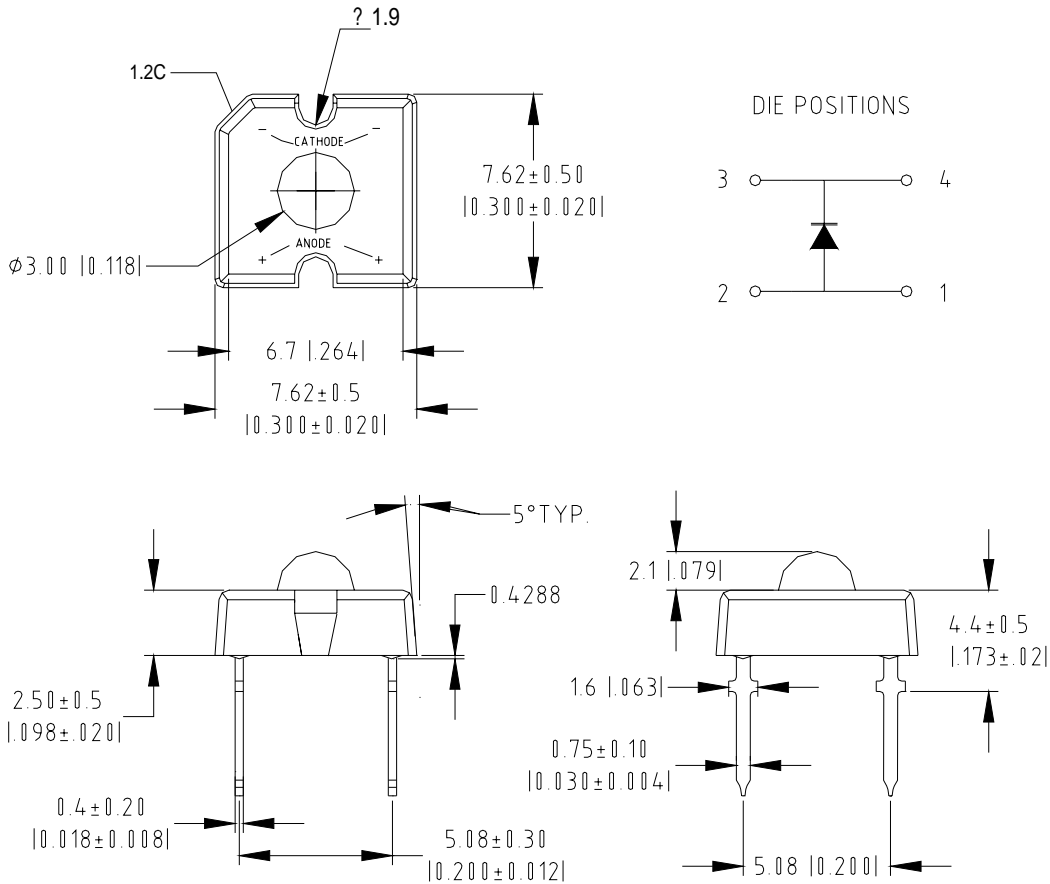
QC: 王士光

ENG: 謝岳銳

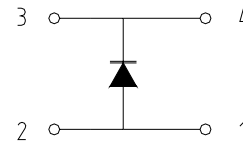
Prepared By: 楊銀花

Part No.	LL-U18B1C-003	Spec No.	S/N-05101110	Page	1 of 4
----------	---------------	----------	--------------	------	--------

## Package Dimensions:



DIE POSITIONS



Part NO.	Chip Material	Lens Color	Emission Color
LL-U18B1C-003	InGaN	Water Clear	Super Bright Blue

### Notes:

- All dimensions are in millimeters (inches).
- Tolerance is  $\pm 0.25$ 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	80	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
Electrostatic Discharge (ESD)	150	V
Operating Temperature Range	-20 to +80	
Storage Temperature Range	-30 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	$I_v$	1000	2200		mcd	$I_F=20\text{mA}$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	25	30	35	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_p$	463	468	473	Nm	$I_F=20\text{mA}$
Dominant Wavelength	$\lambda_d$	460	470	480	Nm	$I_F=20\text{mA}$ (Note 3)
Spectral Line Half-Width	$\lambda$	20	25	30	Nm	$I_F=20\text{mA}$
Forward Voltage	$V_F$	2.8	3.5	4.0	V	$I_F=20\text{mA}$
Reverse Current	$I_R$			50	$\mu\text{A}$	$V_R=5\text{V}$

#### Notes:

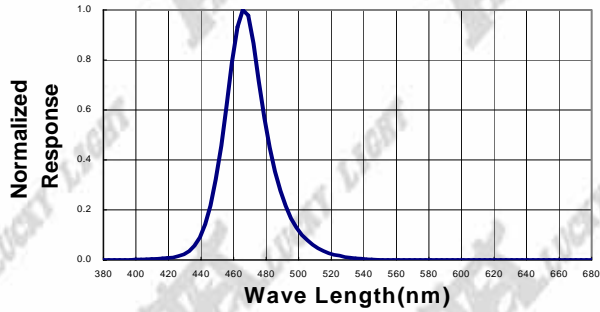
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity 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  $\pm 10\%$



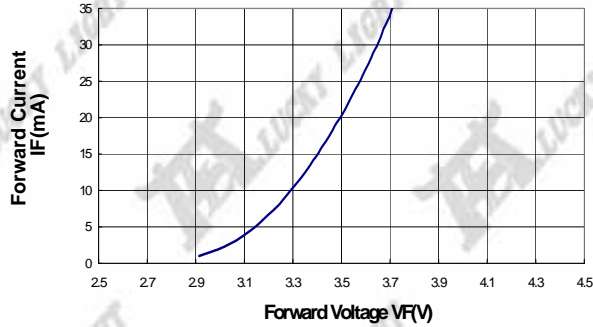
### Typical Electrical / Optical Characteristics Curves

(25 Ambient Temperature Unless Otherwise Noted)

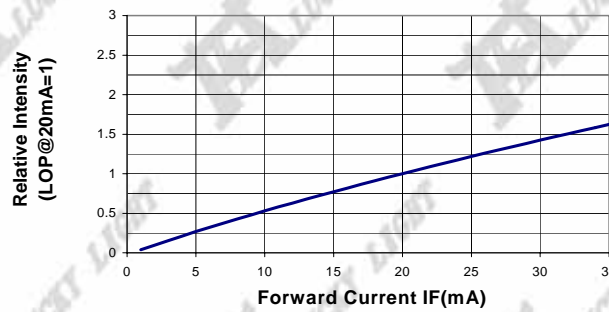
**Spectral Radiance (Peak @ 468nm)**



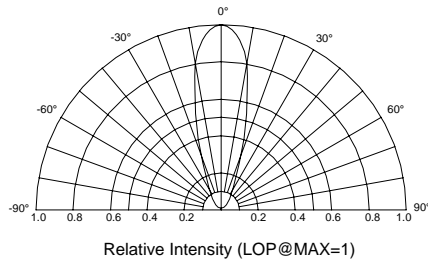
**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**



**Beam Pattern**



**Forward Current Derating Curve**

