

Preliminary

LL-U18Z1C-001

DATA SHEET



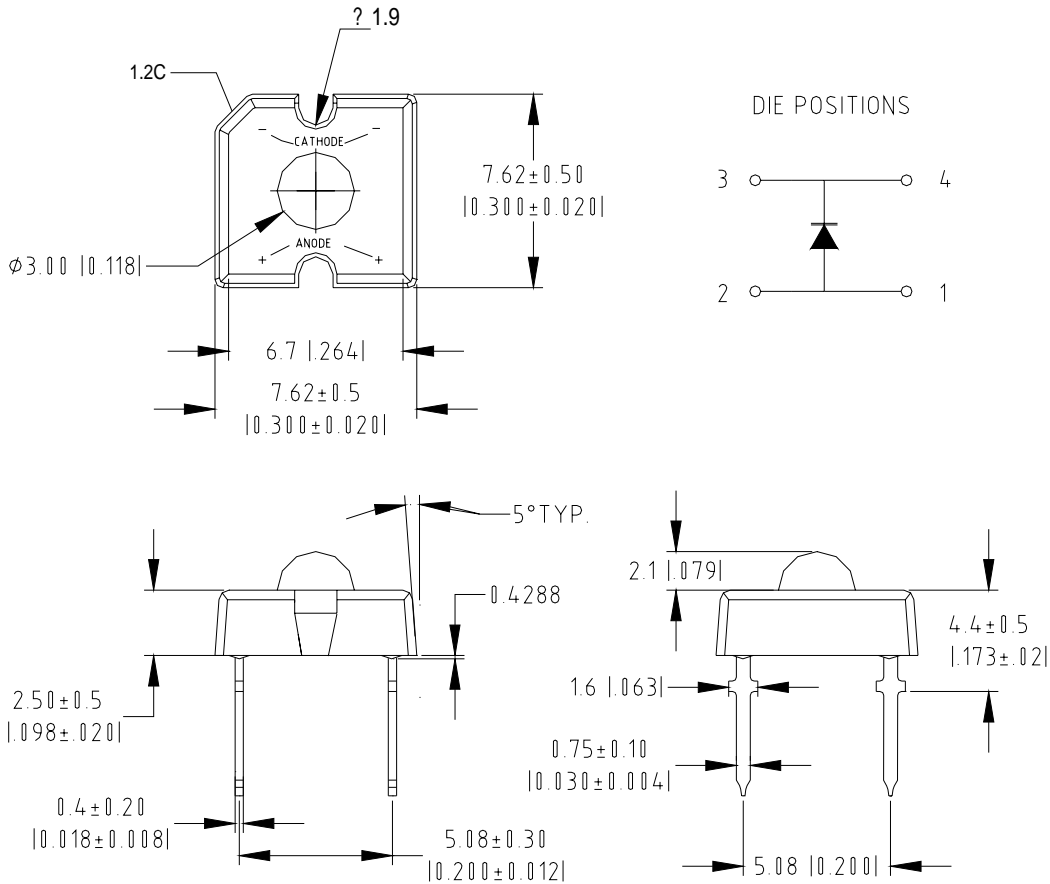
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Package Dimensions:



Part NO.	Chip Material	Lens Color	Emission Color
LL-U18Z1C-001	InGaN	Water Clear	Super Bright True Green

Notes:

- All dimensions are in millimeters (inches).
- Tolerance is ± 0.25 mm ($.010$ "") unless otherwise noted.
- Protruded resin under flange is 1.0 mm ($.04$ "") 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	4000	8500		mcd	$I_F=20\text{mA}$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	25	30	35	Deg	(Note 2)
Peak Emission Wavelength	λ_p	515	520	525	Nm	$I_F=20\text{mA}$
Dominant Wavelength	λ_d	520	525	530	Nm	$I_F=20\text{mA}$ (Note 3)
Spectral Line Half-Width	λ	30	35	40	Nm	$I_F=20\text{mA}$
Forward Voltage	V_F	2.8	3.3	4.0	V	$I_F=20\text{mA}$
Reverse Current	I_R			50	μA	$V_R=5\text{V}$

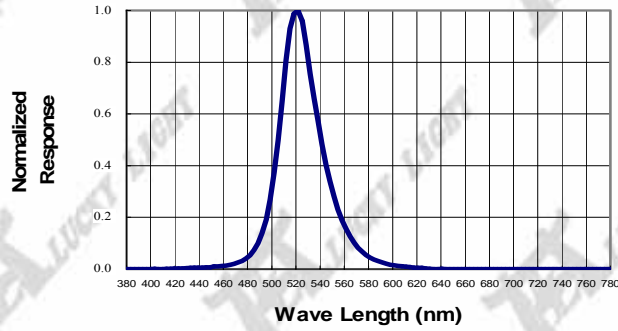
Notes:

- 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 (λ_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 $\pm 10\%$

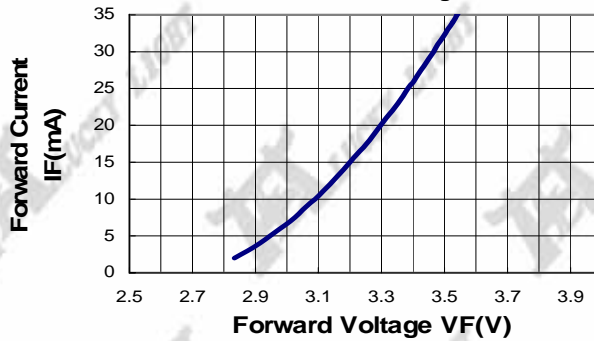


Typical Electrical / Optical Characteristics Curves
 (25 Ambient Temperature Unless Otherwise Noted)

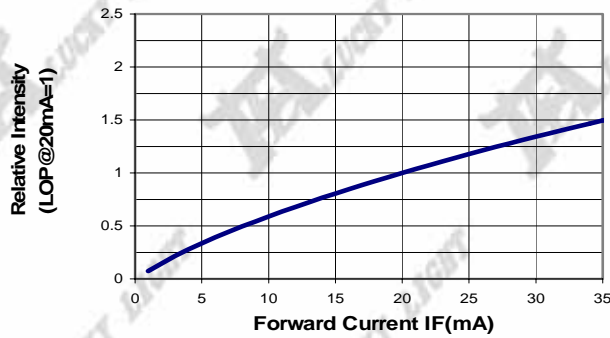
Spectral Radiance (Peak @ 520nm)



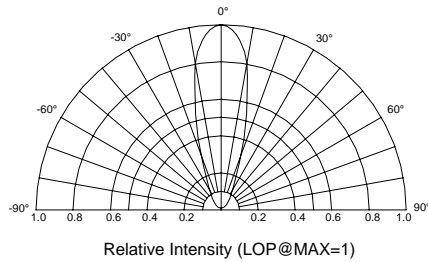
Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern



Forward Current Derating Curve

