

Preliminary

LL-U18Y1C-003

DATA SHEET



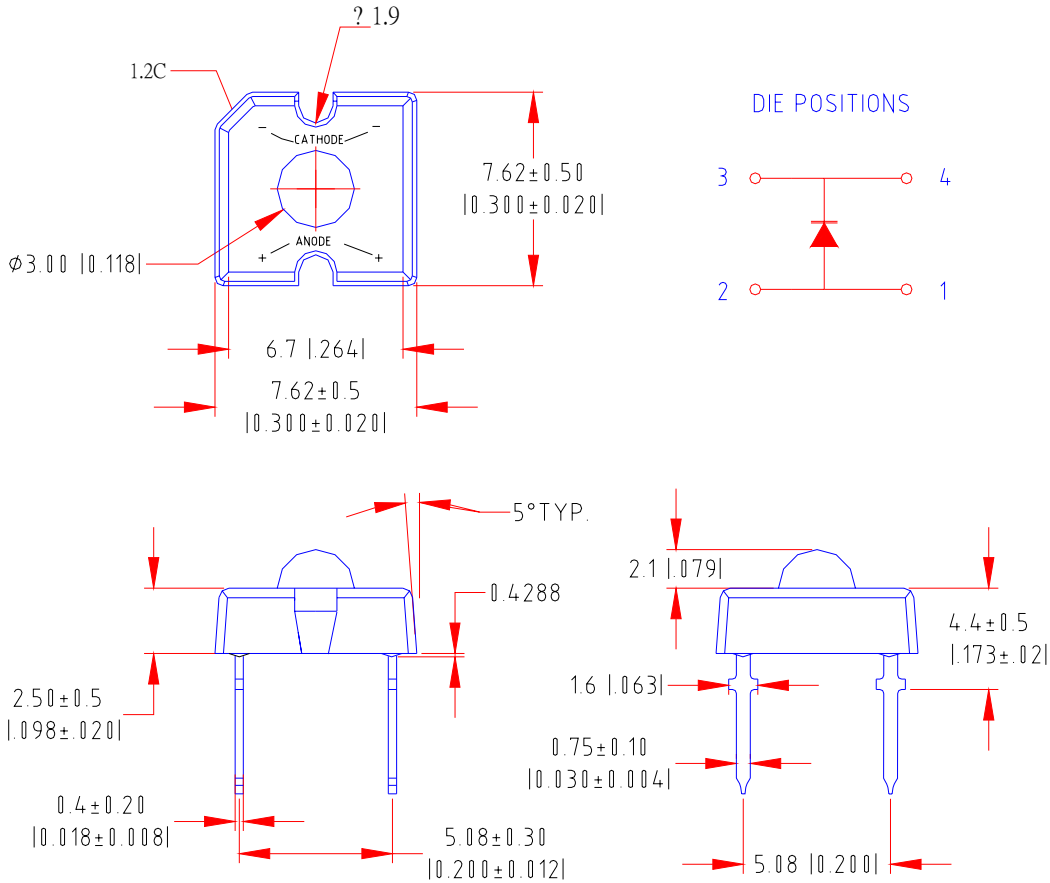
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Package Dimensions:



Part NO.	Chip Material	Lens Color	Emission Color
LL-U18Y1C-003	InGaN	Water Clear	Super Bright Yellow

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°C

Parameter	MAX.	Unit
Power Dissipation	90	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
Electrostatic Discharge (ESD)	150	V
Operating Temperature Range	-20°C to +80°C	
Storage Temperature Range	-30°C to +100°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_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	λ_p	587	592	597	Nm	$I_f=20\text{mA}$
Dominant Wavelength	λ_d	586	591	596	Nm	$I_f=20\text{mA}$ (Note 3)
Spectral Line Half-Width	$\Delta\lambda$	15	20	25	Nm	$I_f=20\text{mA}$
Forward Voltage	V_f	1.8	2.1	2.5	V	$I_f=20\text{mA}$
Reverse Current	I_R			50	μA	$V_R=5\text{V}$

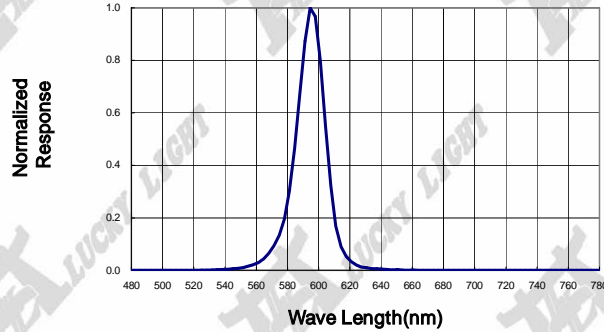
Notes:

- 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 $\pm 10\%$

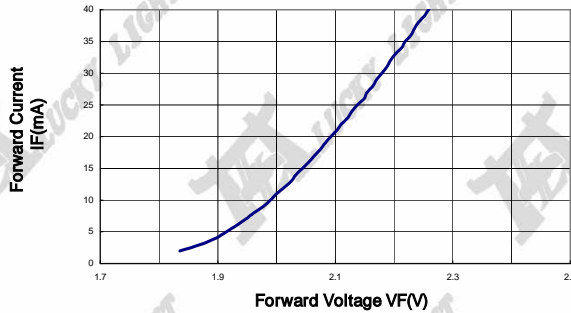


Typical Electrical / Optical Characteristics Curves
 (25°C Ambient Temperature Unless Otherwise Noted)

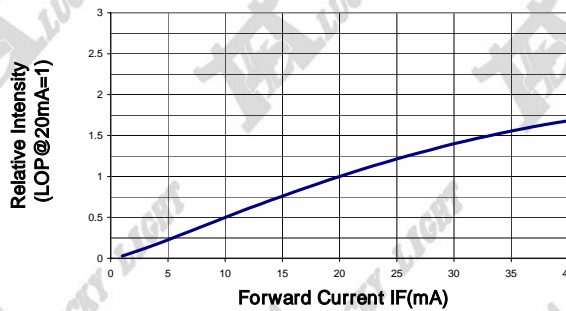
Spectral Radiance (Peak @ 592 nm)



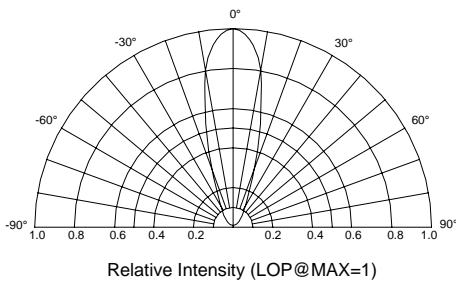
Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern



Forward Current Derating Curve

