LUCKY LIGHT

Preliminary

LL-309YGM2E-003

DATA SHEET

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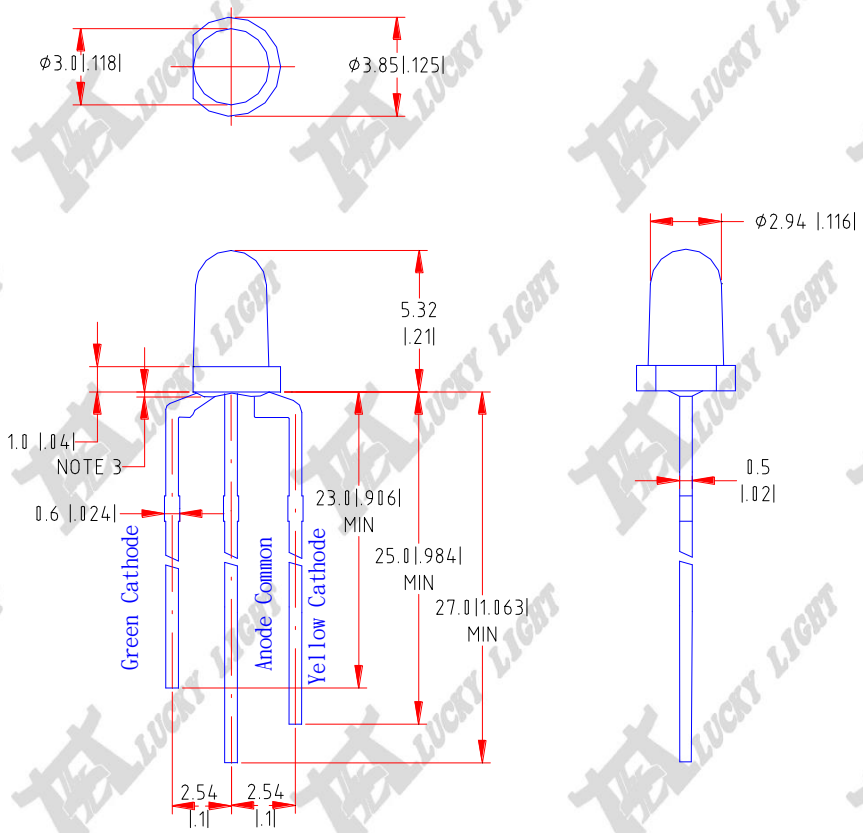
Features:

- Standard 3mm diameter package
- General purpose leads
- Pb-free

Package Dimensions:



Part NO.	Chip Material		Lens Color	Emission Color
LL-309YGM2E-003	Yellow	Green	White Diffused	Yellow & Green
	GaAsP	GaP		

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.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.

Absolute Maximum Ratings at Ta=25°C

Parameter	MAX.		Unit
Power Dissipation	Yellow	90	mW
	Green	130	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100		mA
Continuous Forward Current	Yellow	35	mA
	Green	50	
Derating Linear From 50°C	0.4		mA/°C
Reverse Voltage	5		V
Operating Temperature Range	-30°C to +80°C		
Storage Temperature Range	-40°C to +100°C		
Lead Soldering Temperature [4mm(.157") From Body]	280°C for 5 Seconds		

Electrical Optical Characteristics at Ta=25℃

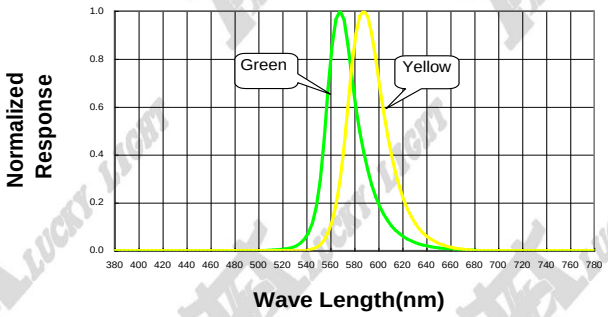
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	Green	2	6		mcd	I_F=20mA Note 1
		Yellow		3			
Viewing Angle	$2\theta_{1/2}$	Green	55	65	75	Deg	Note 2
		Yellow	55	65	75		
Peak Emission Wavelength	λp	Green	563	568	573	nm	Measurement @Peak
		Yellow	583	588	593		
Dominant Wavelength	λd	Green	565	570	575	nm	Note 3
		Yellow	585	590	595		
Spectral Line Half-Width	△λ	Green	25	30	35	nm	
		Yellow	30	35	40		
Forward Voltage	V_F	Green	1.7	2.2	2.6	V	I_F=20mA
		Yellow	1.6	2.1	2.6		
Reverse Current	I_R	Green			10	μA	V_R=5V
		Yellow					

Note:

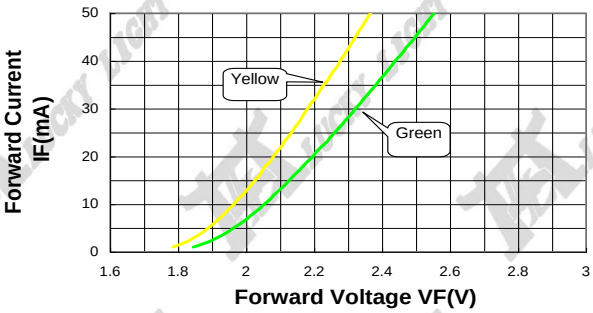
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λd) is derived from the CIE chromaticity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

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

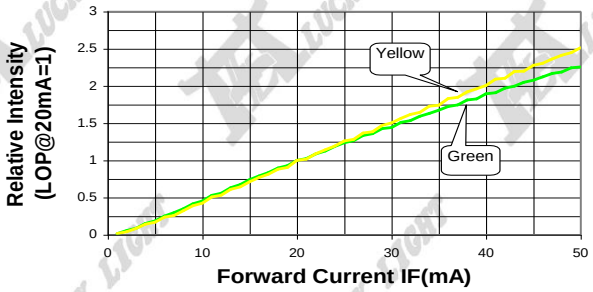
Spectral Radiance Green Peak @ 568nm
Yellow Peak @ 588nm



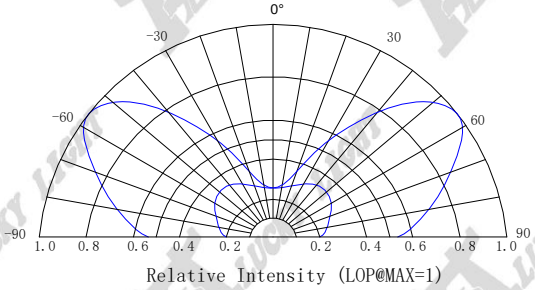
Forward Current
vs Forward Voltage



Relative Luminous Intensity
vs Forward Current



Beam Pattern



Forward Cureent
Derating Curve