LUCKY LIGHT

Preliminary

LL-309IGM2E-001

DATA SHEET

RoHS Compliant

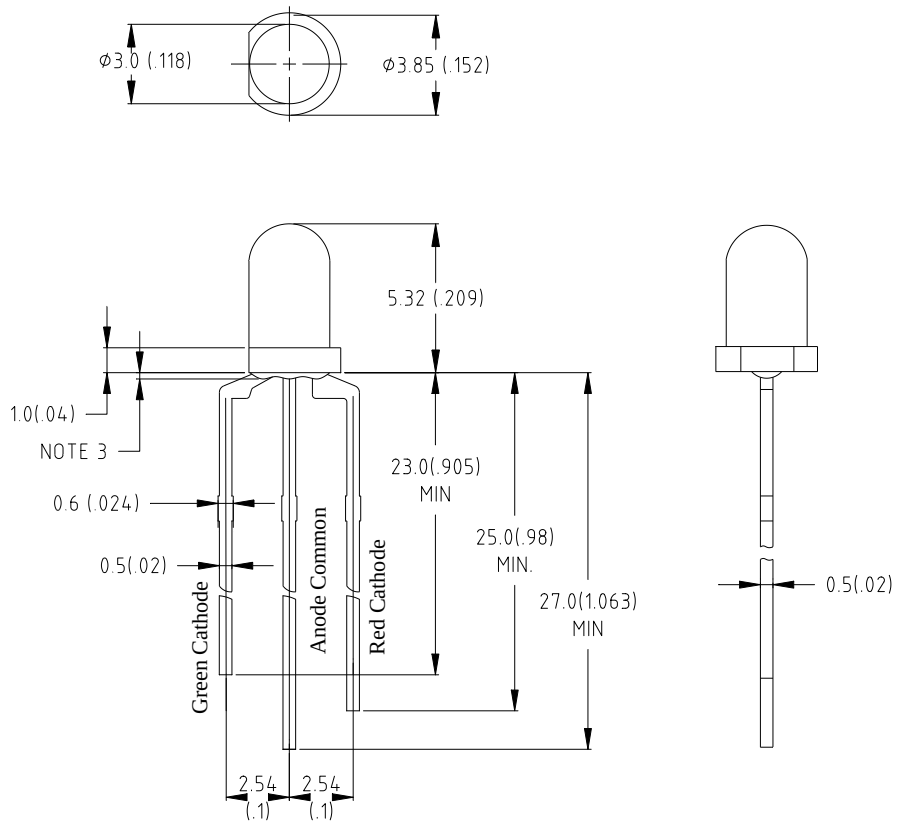
佳光電子(台山)有限公司 受控文件

QC: 王士光 ENG: 鄭文斌 Prepared By: 劉姿金

Features:

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

Package Dimensions:



Part NO.	Chip Material		Lens Color	Emission Color
LL-309IGM2E-001	Red	Green	White Diffused	Red & Green
	GaAsP	GaP		

Notes:

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

Parameter	MAX.		Unit
	Red	Green	
Power Dissipation	90	120	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	100	mA
Continuous Forward Current	35	50	mA
Derating Linear From 50℃	0.4	0.4	mA/℃
Reverse Voltage	5	5	V
Operating Temperature Range	-30℃ to +80℃		
Storage Temperature Range	-40℃ to +100℃		
Lead Soldering Temperature [4mm(.157") From Body]	280℃ for 5 Seconds		

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v	Green	2	6		mcd	I_F=20mA Note 1
		Red	1	4			
Viewing Angle	$2\theta_{1/2}$	Green	85	95	105	Deg	Note 2
		Red	85	95	105		
Peak Emission Wavelength	λp	Green	563	568	573	nm	Measurement @Peak
		Red	635	640	645		
Dominant Wavelength	λd	Green	565	572	576	nm	Note 3
		Red	625	630	635		
Spectral Line Half-Width	$\triangle\lambda$	Green	25	30	35	nm	
		Red	35	40	45		
Forward Voltage	V_f	Green	1.7	2.2	2.6	V	I_F=20mA
		Red	1.5	2.0	2.5		
Reverse Current	I_R	Green			10	μA	V_R=5V
		Red					

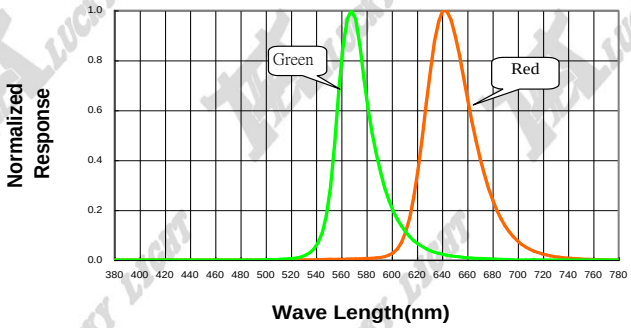
Notes:

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 (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%.

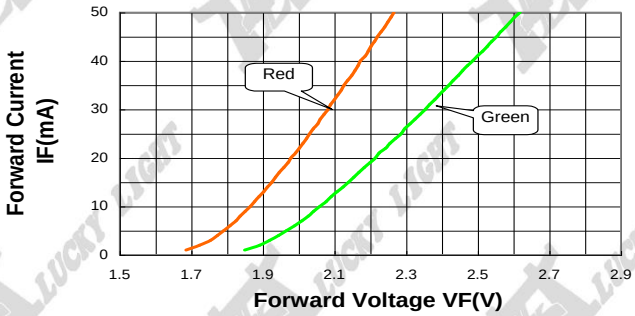
Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

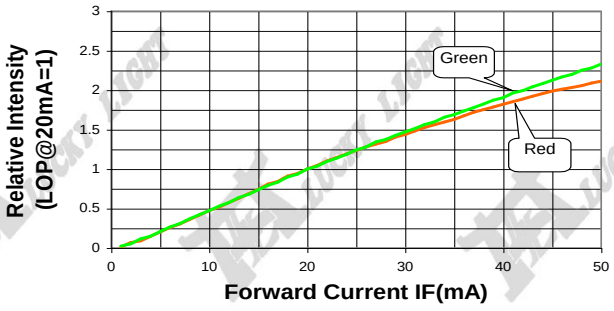
Spectral Radiance **Green Peak @ 568nm**
Red Peak @ 640nm



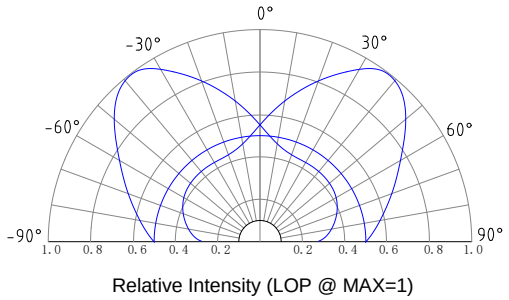
Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern



Relative Intensity (LOP @ MAX=1)

Forward Cureent Derating Curve