Preliminary

LL-509YGC2E-009

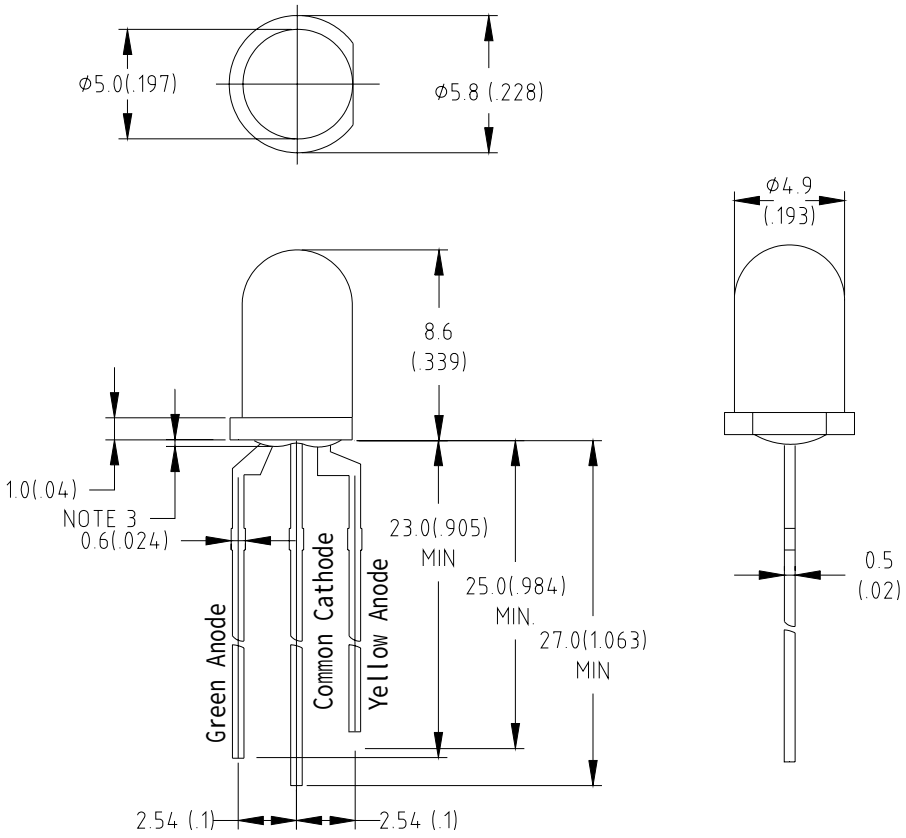
DATA SHEET

QC: ENG: Prepared By:

Features:

- Standard T-1 3/4 diameter package
- General purpose leads
- Reliable and rugged

Package Dimensions:



Part NO.	Chip Material		Lens Color	Source Color
LL-509YGC2E-009	Green	Yellow	Water Clear	Yellow & Green
	GaP	GaAsP		

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.
6. This data-sheet only valid for six months.

Absolute Maximum Ratings at Ta=25℃

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	35	mA
Derating Linear From 50℃	0.4	mA/℃
Reverse Voltage	5	V
Operating Temperature Range	-40℃ to +80℃	
Storage Temperature Range	-40℃ to +80℃	
Lead Soldering Temperature [4mm(.157") From Body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

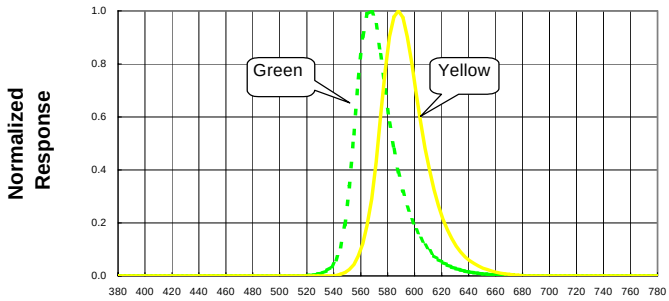
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v	Green	94	140	310	mcd	I_f=20mA Note 1
		Yellow	28	63	140		
Viewing Angle	$2\theta_{1/2}$	Green	10	15	20	Deg	Note 2
		Yellow	10	15	20		
Peak Emission Wavelength	λp	Green	563	568	573	nm	Measurement @Peak
		Yellow	583	588	593		
Dominant Wavelength	λd	Green	565	570	575	nm	Note 3
		Yellow	585	590	595		
Spectral Line Half-Width	$\triangle\lambda$	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	2.5		
Reverse Current	I_R	Green	---	---	100	μA	V_R=5V
		Yellow					

Notes:

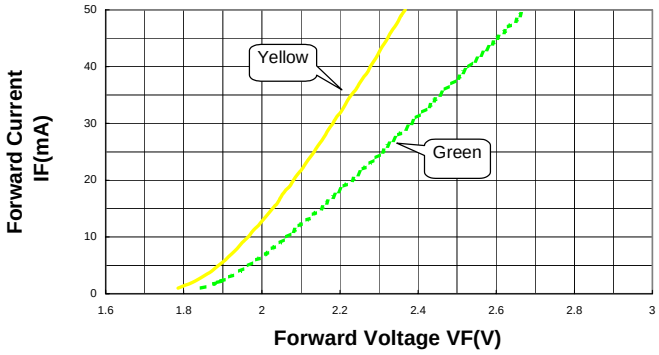
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

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

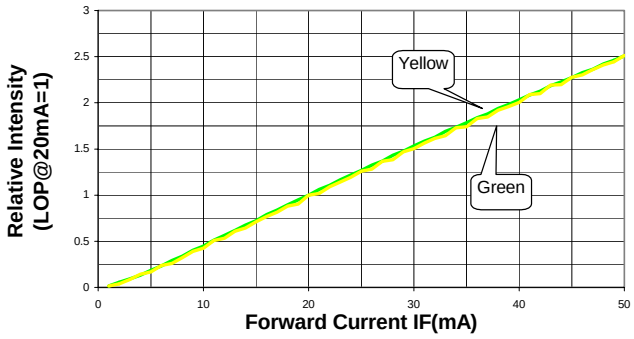
Spectral Radiance Green Peak @ 568nm
Yellow Peak @ 588nm



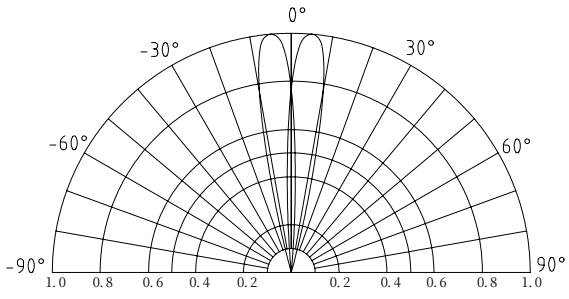
Forward Current
vs Forward Voltage



Relative Luminous Intensity
vs Forward Current



Beam Pattern



Relative Intensity (LOP @ MAX=1)