Preliminary

LL-304SGM2E-001

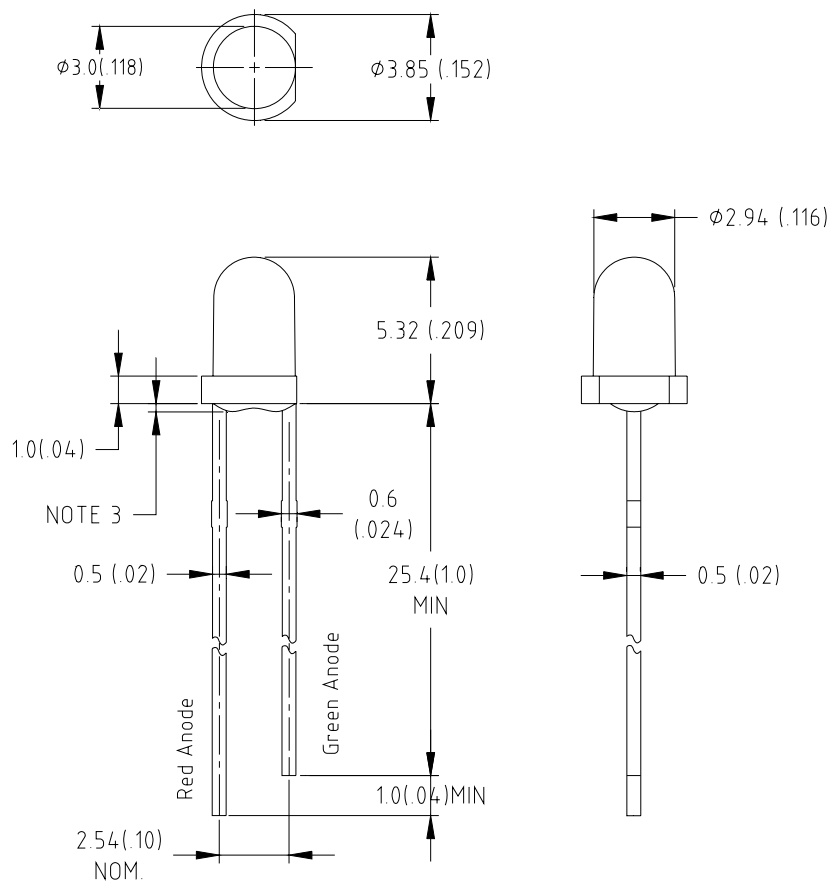
DATA SHEET

QC: ENG: Prepared By:

Features:

- High intensity
- Standard T-1 diameter package
- General purpose leads
- Reliable and rugged

Package Dimensions:



Part NO.	Chip Material		Lens Color	Source Color
LL-304SGM2E-001	Red	Green	White Diffused	Red & Green
	AlGaAs	GaP		

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2 5 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℃

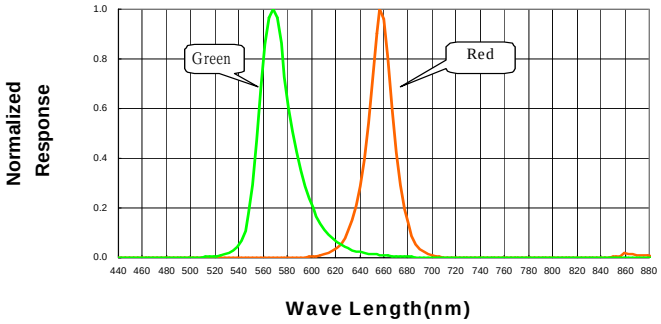
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v	Green	23	65	110	mcd	I_f=20mA Note 1
		Red	20	40	95		
Viewing Angle	$2\theta_{1/2}$	Green	50	60	70	Deg	Note 2
		Red	50	60	70		
Peak Emission Wavelength	λp	Green	563	568	573	nm	I_f=20mA
		Red	655	660	665		
Dominant Wavelength	λd	Green	565	570	575	nm	I_f=20mA Note 3
		Red	635	640	645		
Spectral Line Half-Width	$\triangle\lambda$	Green	25	30	35	nm	I_f=20mA
		Red	20	25	30		
Forward Voltage	V_f	Green	1.7	2.2	2.6	V	I_f=20mA
		Red	1.5	1.85	2.4		
Reverse Current	I_R	Green	---	---	100	μA	V_R=5V
		Red					

Notes:

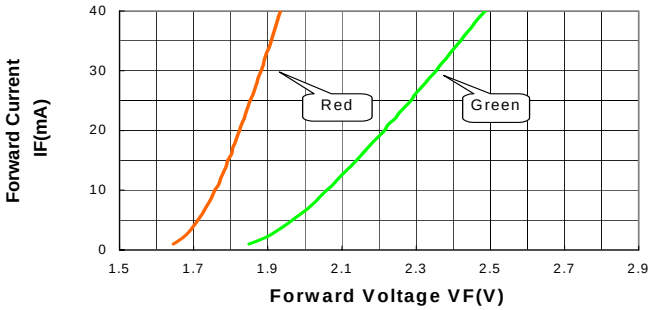
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λd) is derived from the CIE chromaticity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

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

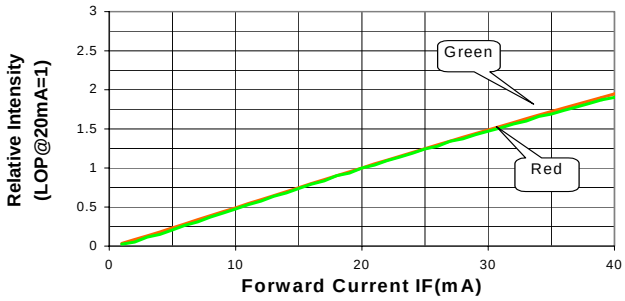
Spectral Radiance Green Peak @ 568nm
Red Peak @ 660nm



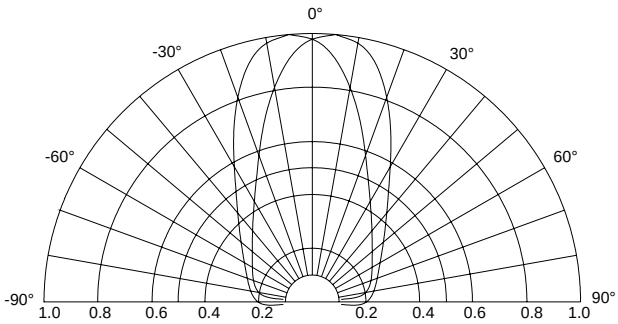
Forward Current
vs Forward Voltage



Relative Luminous Intensity
vs Forward Current



Beam Pattern



Relative Intensity (LOP@MAX=1)