

LL-589RGBM2A-009

DATA SHEET

QC :

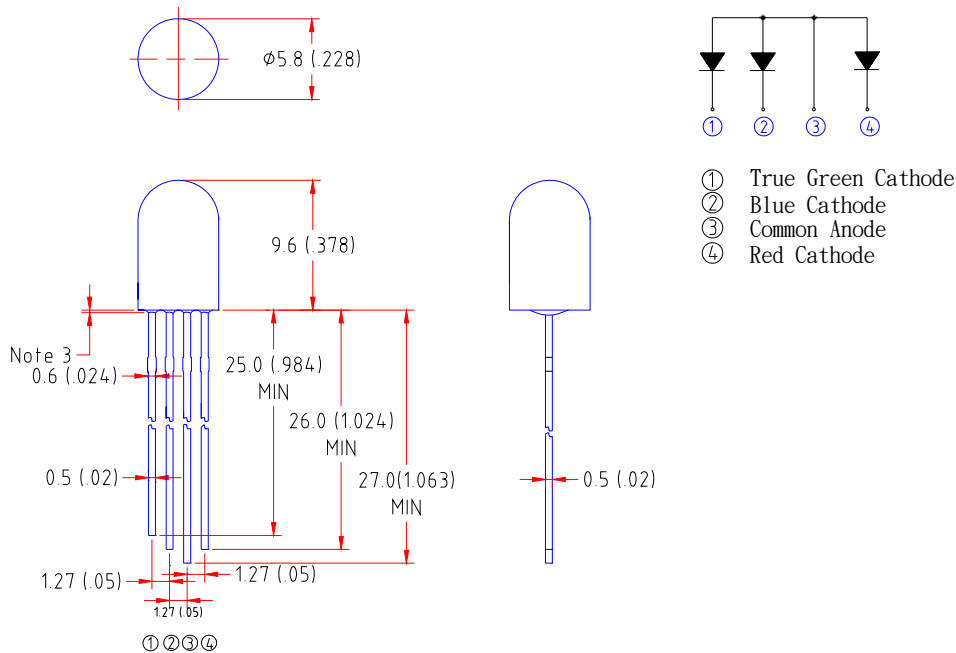
ENG :

Prepared By :

Features:

- ◆ High intensity
- ◆ 5.8mm diameter no flange package
- ◆ General purpose leads
- ◆ Reliable and rugged.

Package Dimensions:



Part NO.	Chip Material			Lens Color	Source Color
	Red	True Green	Blue		
LL-589RGBM 2A-009	AlGaAs	InGaN	InGaN	White Diffused	Red & True Green & Blue

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}(.010'')$ unless otherwise noted.
3. Protruded resin under flange is $1.0\text{mm}(.04'')$ max
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice
6. Precautions for ESD:
STATIC SHIELD Electricity and surge 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.
7. This data-sheet only valid for six months.

Absolute Maximum Ratings at Ta=25°C

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	30	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-40°C to +80°C	
Storage Temperature Range	-40°C to +80°C	
Lead Soldering Temperature [4mm(.157") From Body]	260°C for 5 Seconds	

Electrical Optical Characteristics at Ta=25°C

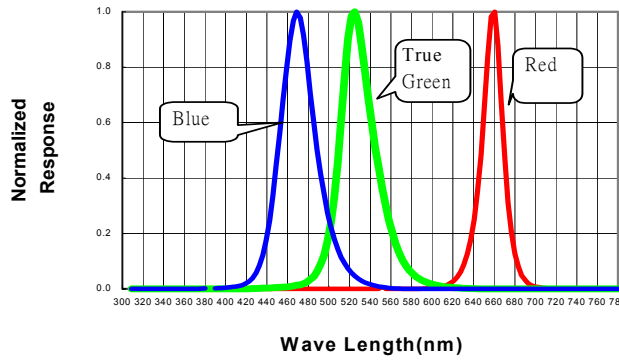
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v	Red	70	150	300	mcd	$I_f=20mA$ Note 1
		True Green	300	600	1300		
		Blue	70	140	300		
Viewing Angle	$2\theta_{1/2}$	Red	80	90	100	Deg	Note 2
		True Green	80	90	100		
		Blue	80	90	100		
Peak Emission Wavelength	λ_p	Red	655	660	665	nm	Measurement @Peak
		True Green	520	525	530		
		Blue	463	468	473		
Dominant Wavelength	λ_d	Red	635	640	645	nm	Note 3
		True Green	530	535	540		
		Blue	460	470	480		
Spectral Line Half-Width	$\Delta\lambda$	Red	20	25	30	nm	
		True Green	30	35	40		
		Blue	20	25	30		
Forward Voltage	V_f	Red	1.6	2.0	2.6	V	$I_f=20mA$
		True Green	2.6	3.2	4.0		
		Blue	2.8	3.5	4.0		
Reverse Current	I_R	Red	---	---	100	μA	$V_R=5V$
		True Green					
		Blue					

Notes:

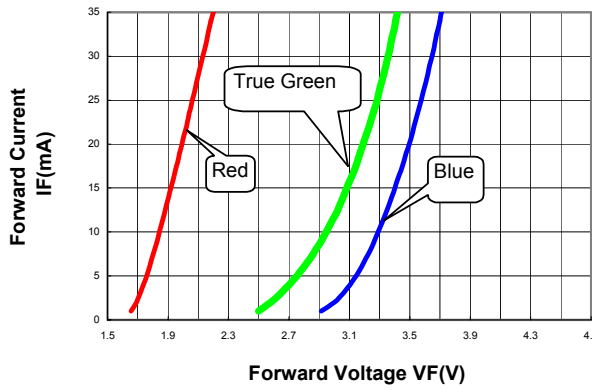
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λ_d) is derived from the CIE chromaticity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

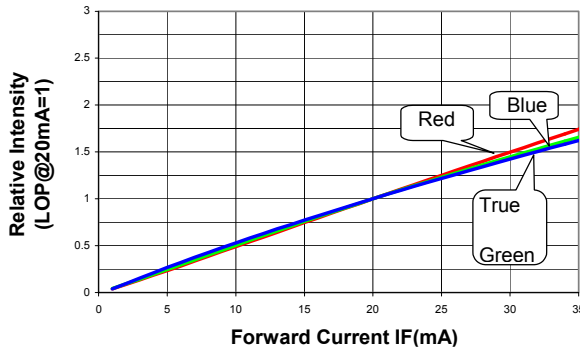
Spectral Radiance True Green Peak @ 525nm
 Red Peak @ 660nm
 Blue Peak @ 468nm



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern

