

LL-509UZM2E-002

DATA SHEET

QC :

ENG :

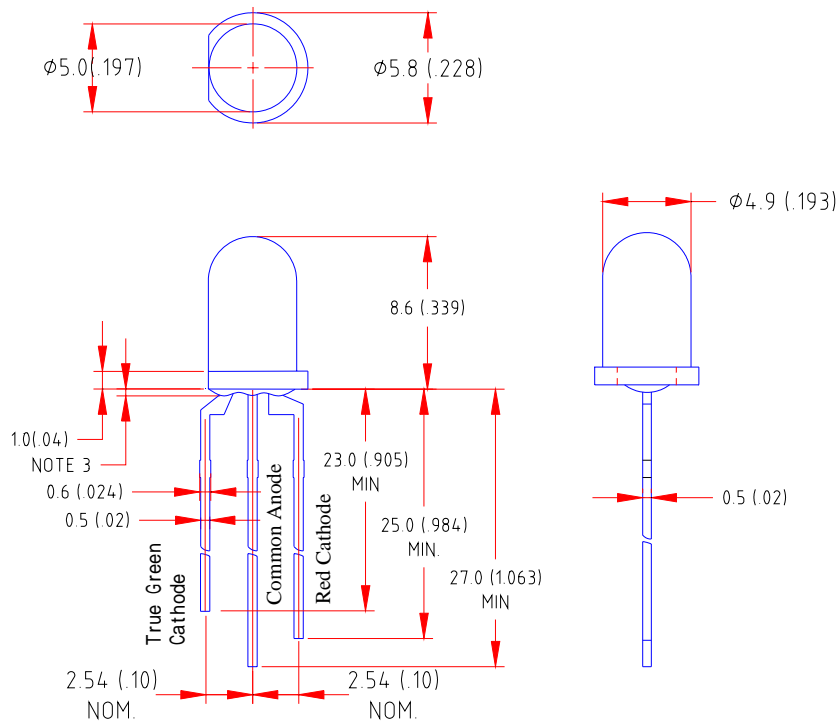
Prepared By:

Part No.	LL-509UZM2E-002	Spec No.	S/N-02080212D	Page	1 of 5
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Features:

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

Package Dimensions:



Part NO.	Chip Material		Lens Color	Source Color
	LL-509UZM2E-002	Red AlGaAs		

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. 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

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	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

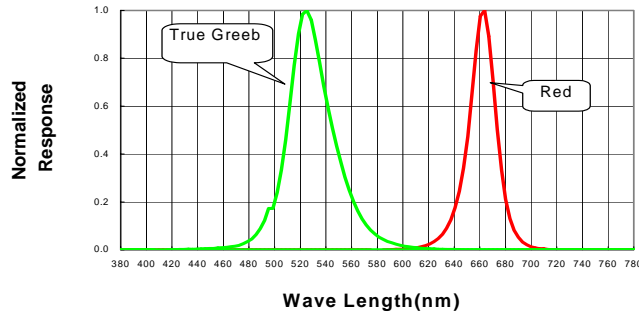
Parameter	Symbol	Emitting Color	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v	Red	200	450	1000	mcd	$I_f=20mA$ Note 1
		True Green	300	650	1500		
Viewing Angle	$2_{1/2}$	Red	35	40	45	Deg	Note 2
		True Green	35	40	45		
Peak Emission Wavelength	ρ	Red	655	660	665	nm	$I_f=20mA$
		True Green	520	525	530		
Dominant Wavelength	d	Red	635	640	645	nm	$I_f=20mA$ Note 3
		True Green	530	535	540		
Spectral Line Half-Width		Red	20	25	30	nm	$I_f=20mA$
		True Green	25	35	40		
Forward Voltage	V_f	Red	1.6	2.0	2.6	V	$I_f=20mA$
		True Green	2.8	3.2	4.0		
Reverse Current	I_R	Red	---	---	100	μA	$V_R=5V$
		True Green					

Notes:

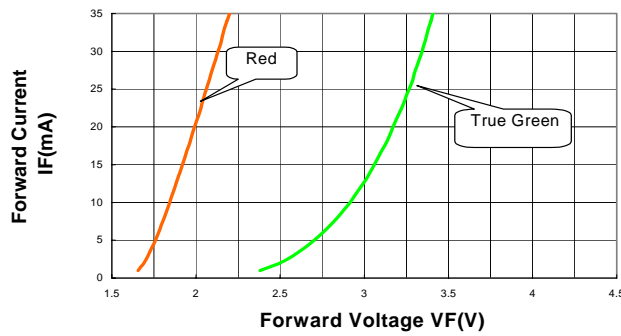
- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- 3.The dominant wavelength () is derived from the CIE chromaticity diagram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

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

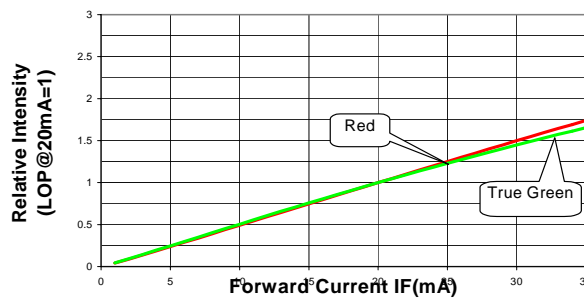
**Spectral Radiance Red Peak @ 660nm
 True Green Peak @ 525nm**



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Beam Pattern

