



M229RGW

Light Emitting Diode

Description

- Size: 3mm round (T-1) package.
- Lens color: White diffused.
- Emitting color: Two-color (red and green).
- Lead type: Radial leads.

Main Features

- Instant light less than 100ns turn on time.
- Superior resistance to moisture.
- Low drive current, recommend forward current: IF= 10- 20mA.
- Wide viewing angle.
- Cool beam, safe to touch.
- Reliable and rugged.
- Common anode type.

Absolute Maximum Rating TA=25℃					
Parameter	Symbol	Rating		Unit	Notice
Power Dissipation	Pd	RED	75	mW	IF = 20mA
		GREEN	75		
DC Forward Current	IF	RED	25	mA	----
		GREEN	25		
Pulse Forward Current	IF (PEAK)	RED	80	mA	Duty 1/10 @ 1KHz
		GREEN	80		
Derating Linear From 50℃	--	0.4		mA / ℃	----
Reverse Voltage	VR	5		V	Under 100uA
Operating Temperature Range	T OPR	-25 to +70		℃	----
Storage Temperature Range	T STG	-40 to +80		℃	Humidity should be under 50%
Lead Soldering Temperature	T SOL	260 +/-5		℃	4mm (0.157") from mold body Less then 5 Second



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Part Selection Electrical / Optical Characteristics At TA=25°C

Characteristic	Symbol	Test Condition	Color	Min.	Typ.	Max.	Unit.
Forward Voltage	V_F	$I_F = 20\text{mA}$	RED	1.80	2.00	2.70	V
			GREEN	1.80	2.00	2.70	
Reverse Current	I_R	$V_R = 5\text{V}$	RED	—	—	10	μA
			GREEN	—	—	10	
Luminous Intensity (Note 1)	I_v	$I_F = 20\text{mA}$	RED	2.70	5	10	mcd
			GREEN	2.70	5	10	
Peak Emission Wavelength	λ_p	$I_F = 20\text{mA}$	RED	635	640	645	nm
			GREEN	560	565	570	
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	RED	18	20	23	nm
			GREEN	20	22	25	
Dominant Wavelength (Note 2)	λ_d	$I_F = 20\text{mA}$	RED	625	630	635	nm
			GREEN	565	570	575	

Note 1 : Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

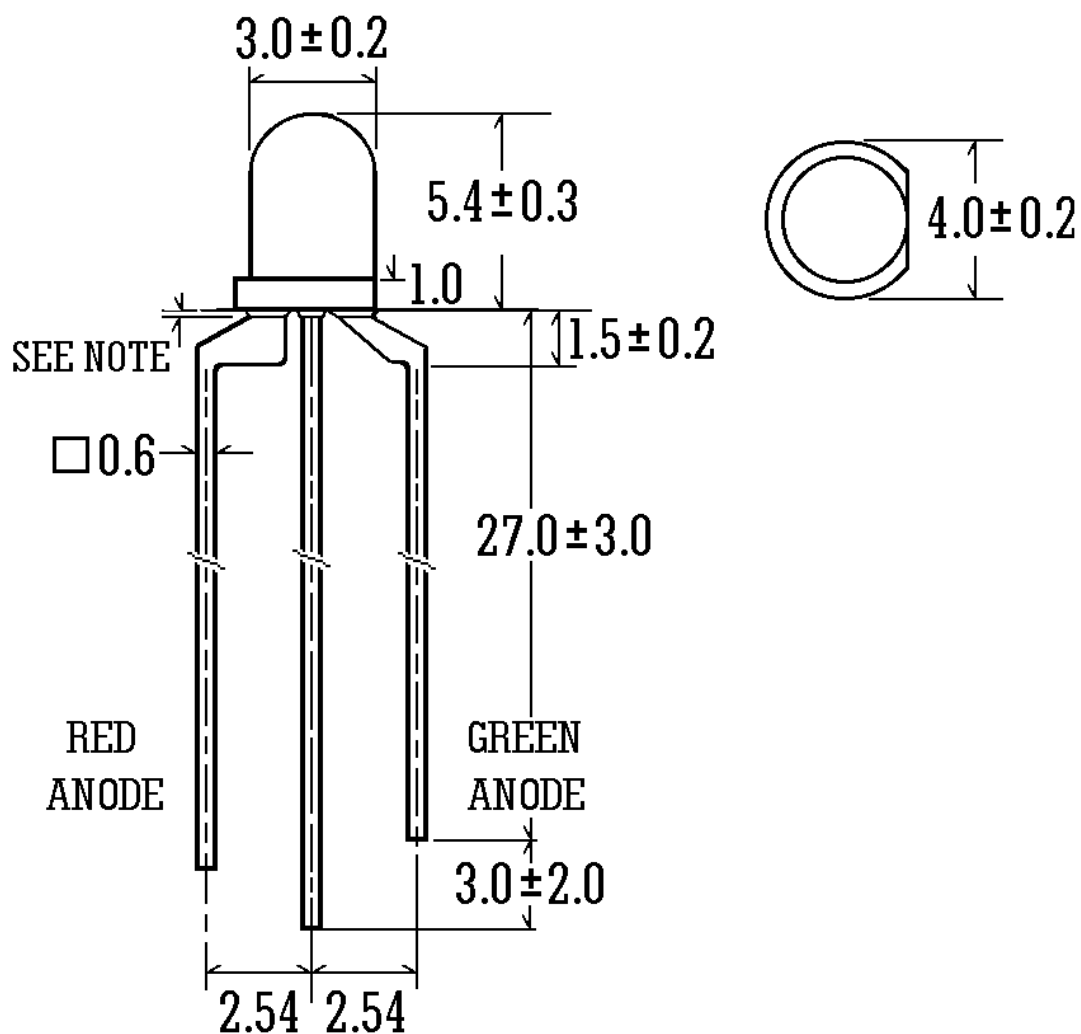
Note 2 : The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.



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Package Dimensions



Lens Color	White Diffused		Viewing Angle	70 +/- 5 Deg.	
Chips Material	Hi-Eff. Red	GaAsP	Emitting Color	Long lead	Red
	GREEN	GaP		Short lead	Green

NOTES:

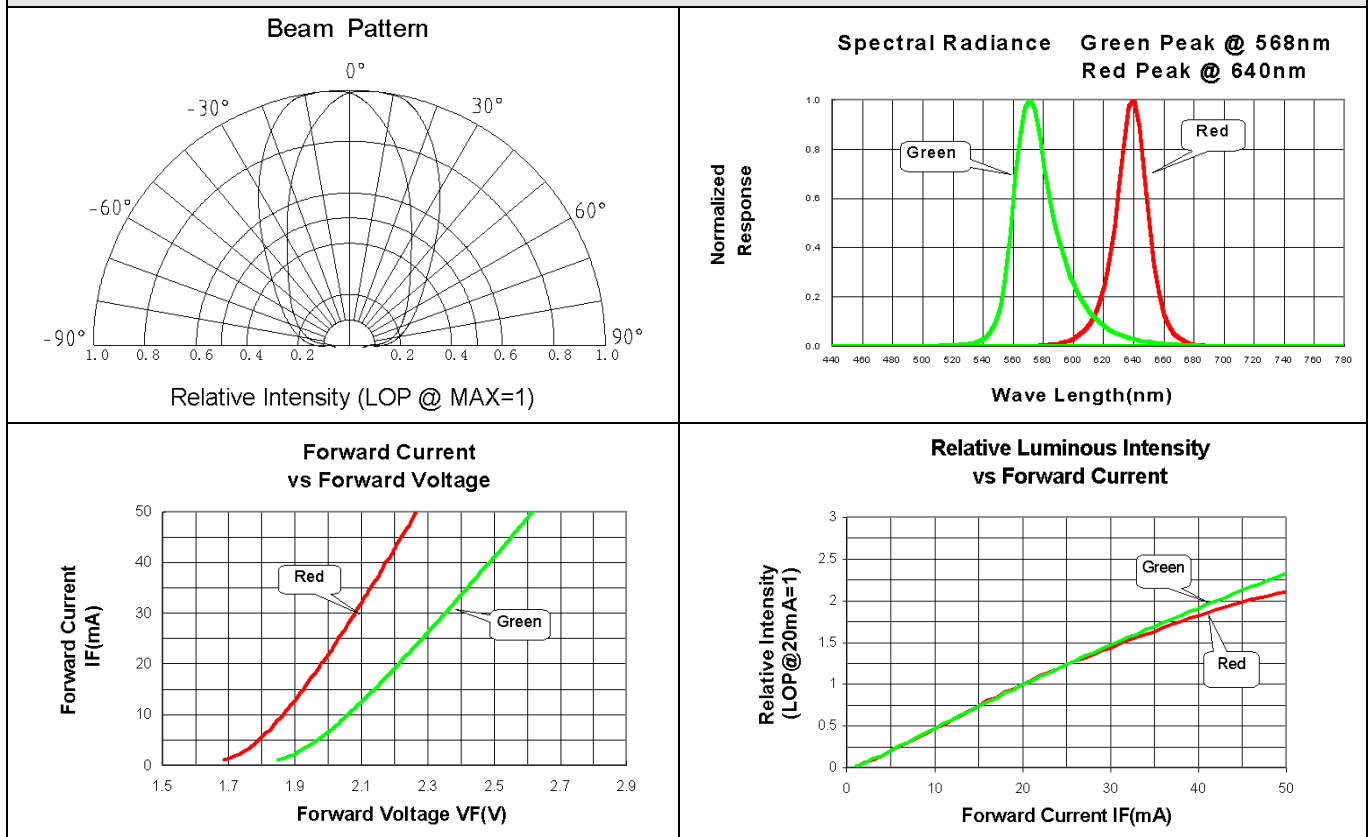
- All dimensions are in millimeters (inches).
- Tolerance is ± 0.25 mm (.010") unless otherwise noted.
- Protruded resin under flange is 1.0mm(.04") max
- Lead spacing is measured where the leads emerge from the package.
- Specifications are subject to change without notice.



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Typical Electrical / Optical Characteristic Curves At 25°C Ambient Temperature



NOTE:

- $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- Clean only in isopropanol, ethanol, Freon TF (or equivalent).
- When using this product, Please observe the absolute maximum rating and the instructions for use outlined from use of the product, which does not comply with the absolute maximum rating and the instructions included in these specification sheet.
- Q.A Outgoing inspection standard:
Major Defect 0.65 A.Q.L. Minor Defect 1.5 A.Q.L
- **Lead Forming:**
If forming is required, it must be done before soldering. Form pin leads by securing under 5mm from body and bedding with radio pliers or the equivalent to avoid pressure on resin. When the LED is mounted into a P.C.board, pitch spacing should be aligned to prevent cause any stress to the resin. Any unsuitable stress applied to resin may break bonding wire in LED, which will cause failure.
- Check at a distance of 30cm from the LED to the eye defects.
- **Over-current-proof:**
Customer must apply resistor for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).
- **Parallel connection:**
Customer must apply series resistor in **EACH LED** under parallel connection. Otherwise VF tolerance will cause LED array brightness uneven.
- Specifications are subject to change without notice.

