



M229RGC

Light Emitting Diode

DESCRIPTION

- Size: 3mm with two integral chips.
- Emitting color: Red / Green.
- Lens color: Water Clear.
- 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.
- Cool beam, safe to touch.
- Reliable and rugged.
- Pb-free.

Absolute Maximum Rating TA=25°C

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°C	--	0.4	mA / °C	----	
Reverse Voltage	VR	5	V	Under 100uA	
Operating Temperature Range	T OPR	-25 to +70	°C	----	
Storage Temperature Range	T STG	-40 to +80	°C	Humidity should be under 50%	
Lead Soldering Temperature	T SOL	260 +/-5	°C	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 =20mA	RED	1.80	2.00	2.70	V
			GREEN	1.80	2.00	2.70	
Reverse Current	I _R	V _R =5V	RED	—	—	10	uA
			GREEN	—	—	10	
Luminous Intensity (Note 1)	I _v	I _F =20mA	RED	30	60	110	mcd
			GREEN	30	50	100	
Peak Emission Wavelength	λ _p	I _F =20mA	RED	635	640	645	nm
			GREEN	560	565	570	
Spectral Line Half Width	Δλ	I _F =20mA	RED	18	20	23	nm
			GREEN	20	22	25	
Dominant Wavelength (Note 2)	λ _d	I _F =20mA	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.

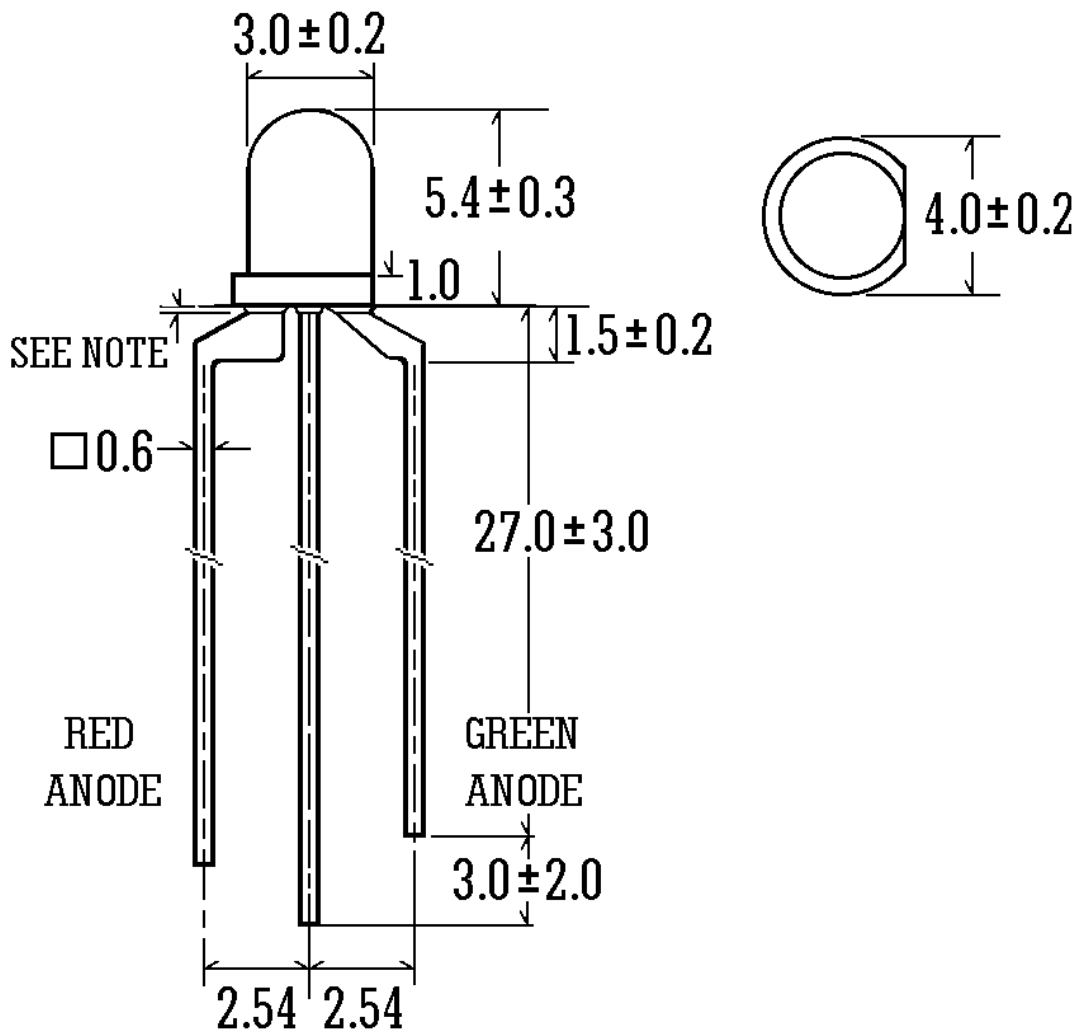
Note 2 : The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.



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Package Dimensions

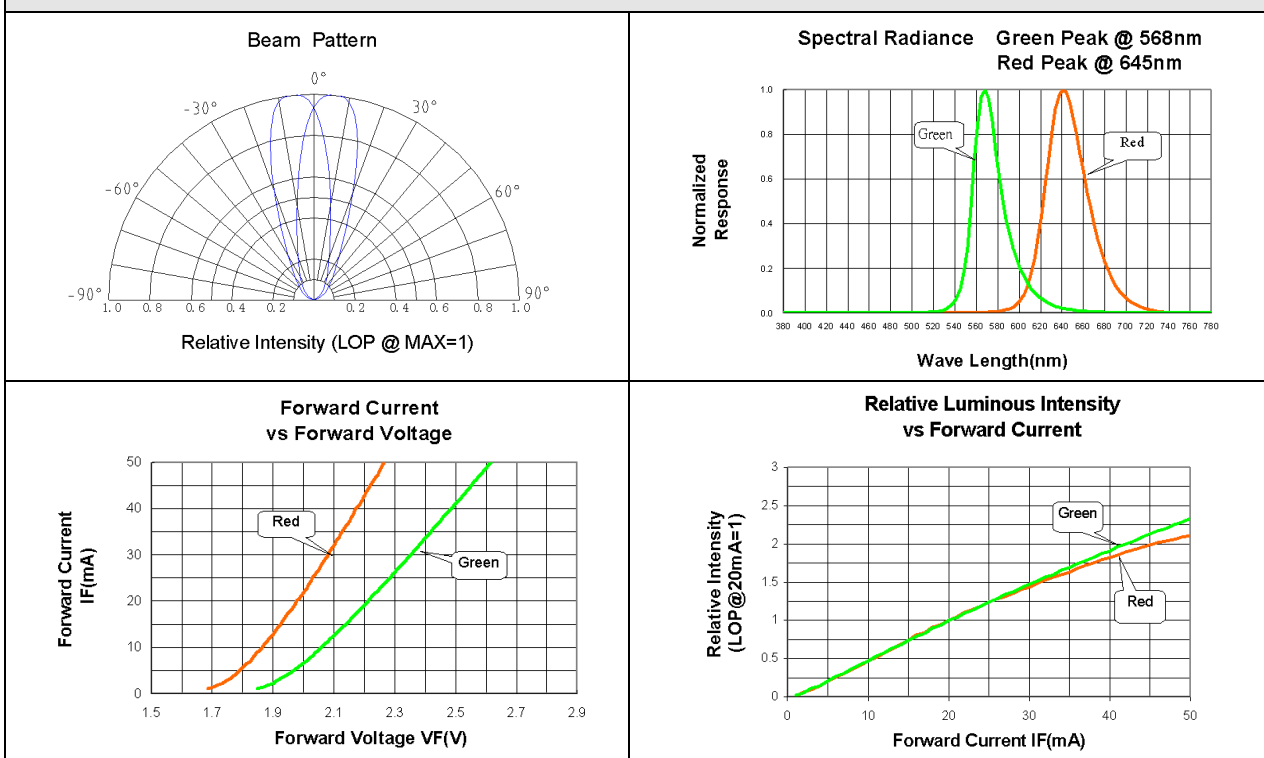


Lens Color	Water Clear		Source Color	Red / Green
Chips Material	Red	Green	Viewing Angle	30 +/- 5Deg.
	GaAsP	GaP		

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.

Typical Electrical / Optical Characteristic Curves



25°C Ambient Temperature unless Otherwise Noted

NOTE:

- Q.A. Outgoing inspection standard:
Major Defect 0.65 A.Q.L. Minor Defect 1.5 A.Q.L.
- The information contained herein is presented only as a guide for the application of our products. No responsibility is assumed by us for any infringements of intellectual property or other rights of the third parties which may result from its use.
- $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- All dimensions are in millimeters.
- Protruded resin under flange 1.5mm MAX..
- Clean only in isopropanol, ethanol, Freon TF (or equivalent).
- 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.

