

3mm Round Bi-Colour LED

Red/Green

multicomp PRO

Features

- Available on tape and reel
- Reliable and robust
- Pb free
- Lead Free

**RoHS
Compliant**

Applications

- TV set
- Monitor
- Telephone
- Computer

Specifications

Dice material	: AlGaInP / InGaN
Emmiting Colour	: Red / Green
Lens colour	: White Diffused
Luminous intensity	: 40mcd

Selection Guide

Part Number	Dice	Lens Type	Luminous intensity(mcd) @ 20mA			Viewing Angle
			Min	Typ	Max	
MP008294	(R) AlGaInP	White Diffused	15	40	-	2θ1/2 60
	(G) InGaN		20	40	-	

Note:

- 1.1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 2.The above luminous intensity measurement allowance tolerance $\pm 15\%$

Electrical and Optical Characteristics at Ta=25°C

Parameter	Device	Min.	Typ	Max	Units	Test conditions
Forward voltage	R	1.7	2	2.4	V	IF=20mA
	G	1.7	2	2.4		
Reverse Current	IR	-	-	10	uA	VR=5V
Dominant wavelength	R	620	-	630	nm	IF=20mA
	G	565	-	575		

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	60	mW
DC Forward Current	IF	30	mA
Peak Forward Current [1]	IFP	60	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Lead Soldering Temperature [1.6mm(.063") From Body]		260°C for 5 seconds	

Notes:

1. 1/10 Duty cycle,0.1ms pulse width.
2. Measurement tolerance: Forward Voltage: $\pm 0.1V$,Luminous Intensity: $\pm 10\%$ mcd,Wavelength(x,y) $\pm 1nm/\pm 0.01$

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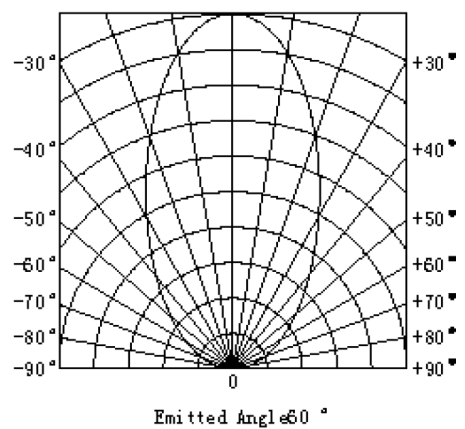
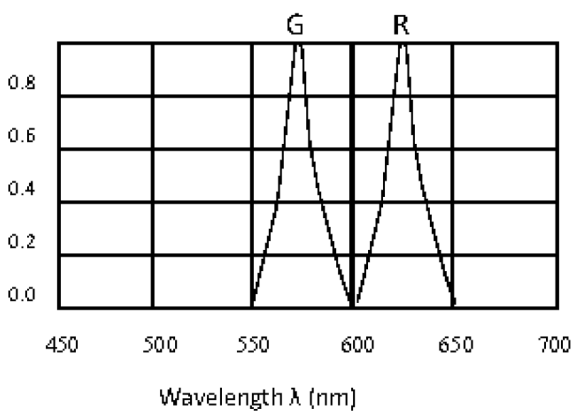
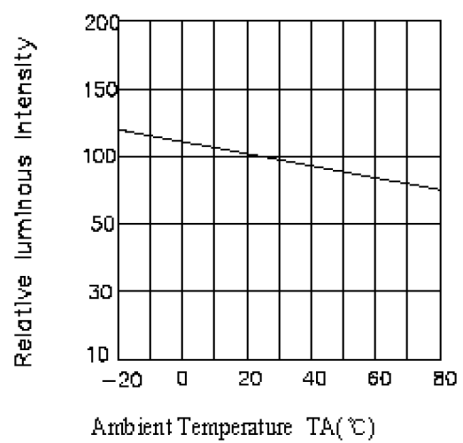
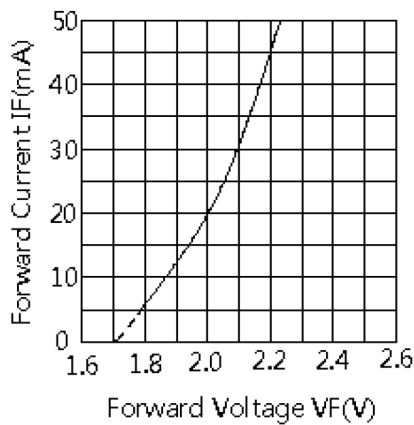
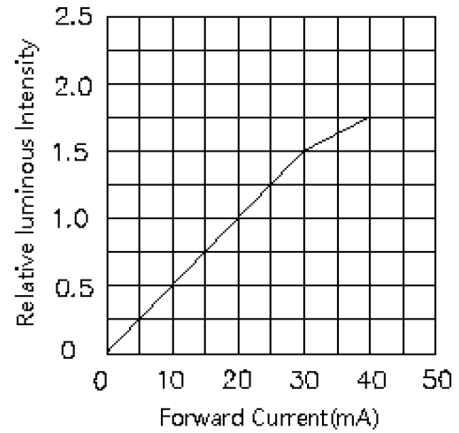
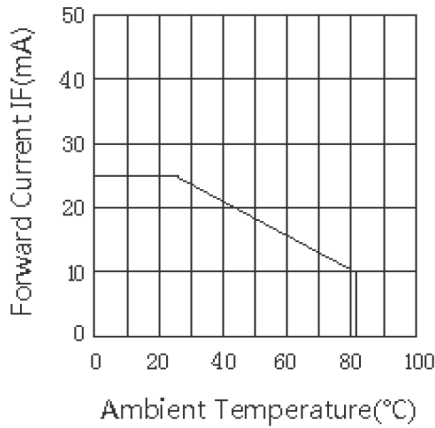
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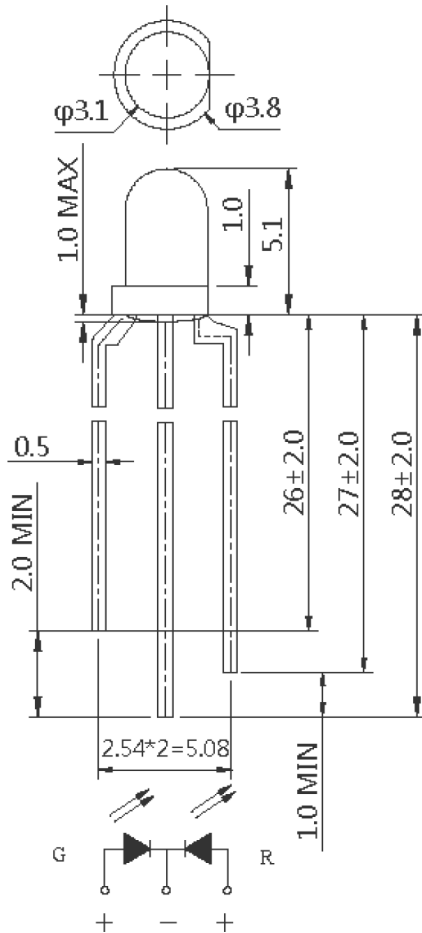
Typical optical characteristics curves



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Dimensions



Notes

Tolerance is ± 0.25 mm unless otherwise noted

Dimensions : Millimetres

Soldering

- When soldering leave a minimum of 2mm clearance from the base of the lens to the soldering point.
- Dipping the lens into the solder must be avoided.
- Do not apply any external stress to the lead frame during soldering while the LED is at high temperature.

Recommended soldering conditions:

Soldering iron		Wave soldering	
Temperature	320°C Max	Pre-heat Pre-heat time	120°C Max 120 sec.Max
Soldering time	3 sec.Max (one time only)	Solder wave Soldering time	260°C Max 5 sec.Max

Note: Excessive soldering temperature and/or time might result in deformation of the LED lens or catastrophic failure of the LED.

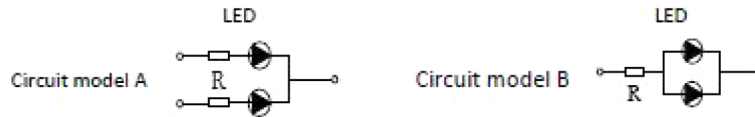
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Drive Method

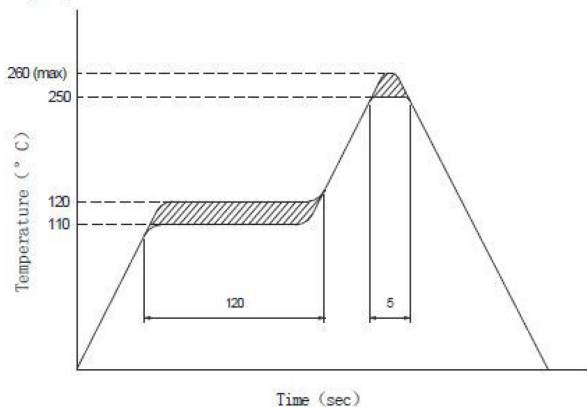
An LED is a current-operated device, In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended that a current limiting resistor be incorporated in the drive circuit, in series with each LED as shown in Circuit A below.



(A) Recommended circuit

(B) The brightness of each LED might appear different due to the differences in the I-V characteristics of those LEDs.

Soldering temperature curve chart



NOTES

After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature. A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.

Part Number Table

Description	Part Number
Round LED, Red/Geen, 630/575nm, 60°, 40/40mcd, Through hole	MP008294

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