

# Round LED

## 3mm, Red/Yellow Green

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**RoHS  
Compliant**



### Features

- 3mm Rounded LED Lamps
- Low power consumption
- Excellent product quality and reliability
- Lead-free device

### Applications

- Electronic signs and signals
- Bright ambient lighting conditions
- Backlight.
- General purpose indicators

### Device Selection Guide

Part No.	Chip		Lens color
MP008531	Material	Emitted color	White Diffused
	AlGaInP	Red	
	GaP	Yellow Green	

### Absolute Maximum Ratings: (T<sub>A</sub> = 25°C)

Parameter	Symbol	Value		Unit
		Red	Yellow Green	
Power Dissipation	P <sub>D</sub>	50		mW
Forward Current	I <sub>F</sub>	30		mA
Peak Forward Current* <sup>1</sup>	I <sub>FP</sub>	100		mA
Reverse Voltage	V <sub>R</sub>	5		V
Operating Temperature	T <sub>OPR</sub>	-40 to +85		°C
Storage Temperature	T <sub>STG</sub>	-40 to +85		°C
Soldering Temperature* <sup>2</sup>	T <sub>SOI</sub>	260°C For 5 Seconds		

Notes:

\*1: Pulse width ≤ 0.1ms, Duty cycle ≤ 1/10

\*2: Δ At the position of 3mm below package base.

\*3: ▲ Please refer to the curve of forward current vs. temperature

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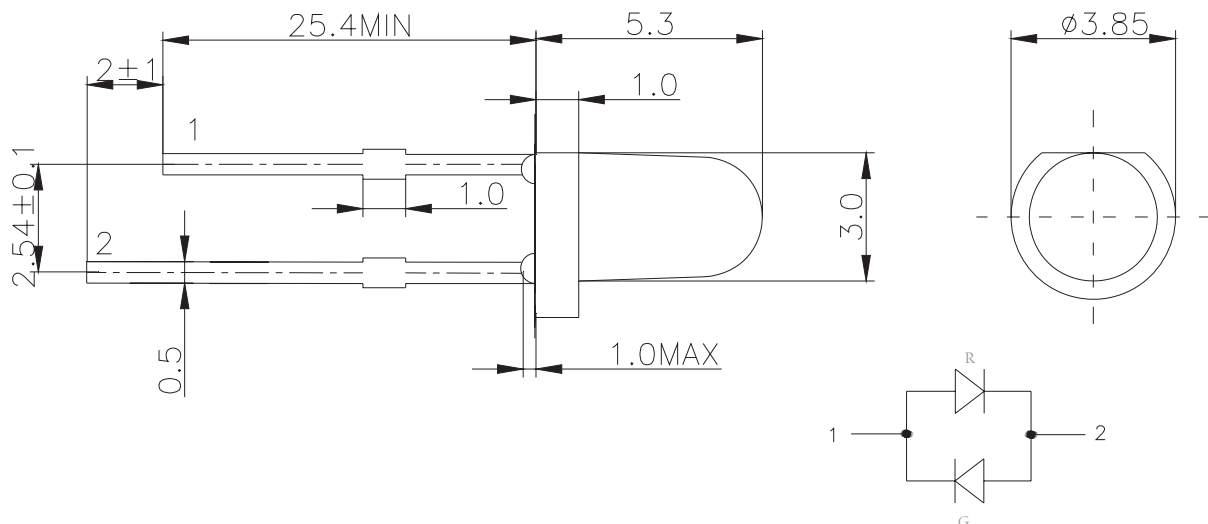
Electrical / Optical Characteristics at T <sub>A</sub> = 25°C							
Parameter		Symbol	Min.	Typ.	Max	Unit	Test Conditions
Forward Voltage	Red	V <sub>F</sub>	1.8	2.2	2.6	V	I <sub>F</sub> =20mA
	Yellow Green	V <sub>F</sub>	1.8	2.1	2.6	V	
Luminous Intensity	Red	I <sub>R</sub>	—	—	10	μA	V <sub>R</sub> =5V
	Yellow Green	I <sub>R</sub>	—	—	10	μA	
Dominant Wavelength	Red	λ <sub>d</sub>	618	621	628	nm	I <sub>F</sub> =20mA
	Yellow Green	λ <sub>d</sub>	565	571	575	nm	
Peak Wavelength	Red	λ <sub>P</sub>	—	630	—	nm	
	Yellow Green	λ <sub>P</sub>	—	570	—	nm	
Spectral line Half-width	Red	Δλ	—	18	—	nm	
	Yellow Green	Δλ	—	17	—	nm	
Luminous Intensity	Red	I <sub>v</sub>	—	980	—	mcd	
	Yellow Green	I <sub>v</sub>	—	95	—	mcd	
Power Angle		2θ1/2	—	R:46 K:50	—	Deg.	

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or dominant wavelength), the typical accuracy of the sorting process is as follows:

1. Dominant Wavelength: +/-1nm
2. Chromatic Coordinates: +/-0.01
3. Luminous Intensity: +/-15%

### Dimensions



Notes:

1. Tolerance is ±0.25 unless otherwise noted.
2. Lead spacing is measured where the leads emerge from the package.
3. Specifications are subject to change without notice.
4. The design and working current for LED is not less than 2mA.

Dimensions : Millimetres

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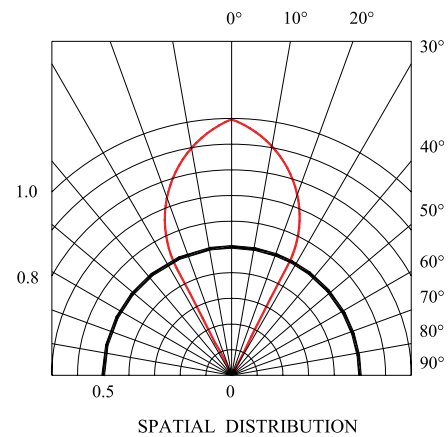
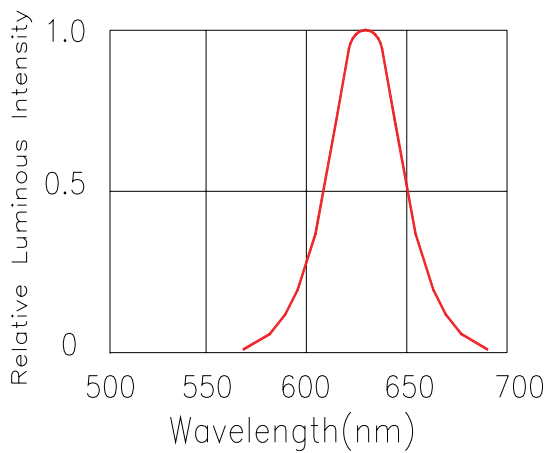
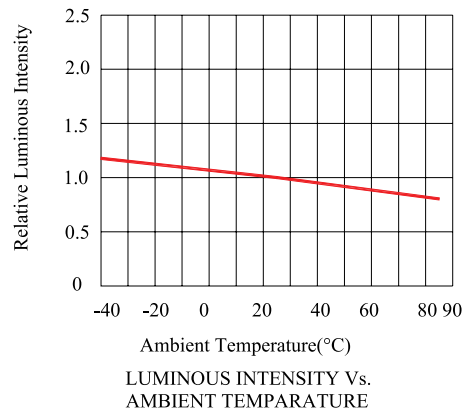
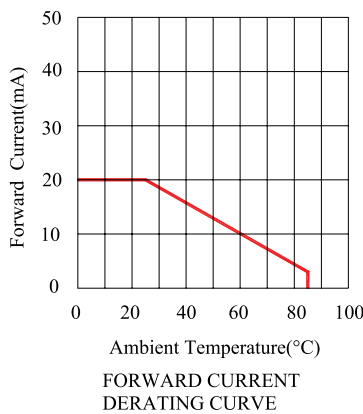
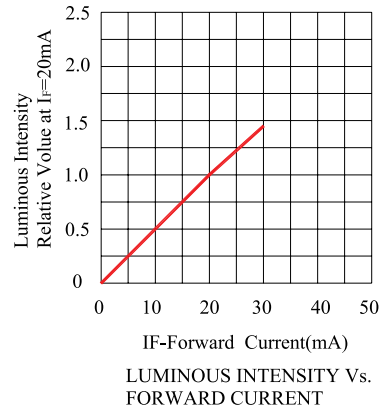
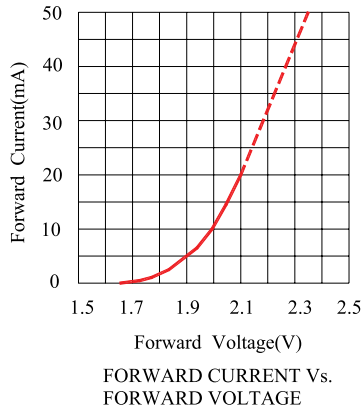
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### Typical Electrical/Optical Characteristics Curves ( Ta=25°C Unless Otherwise Noted )

#### Red

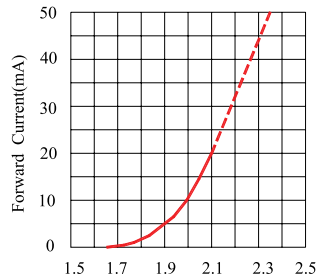


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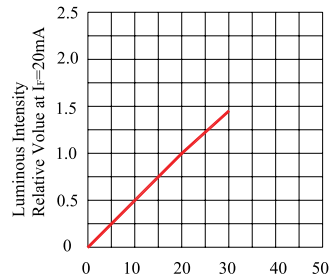
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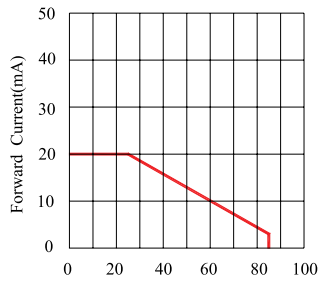
### Yellow Green



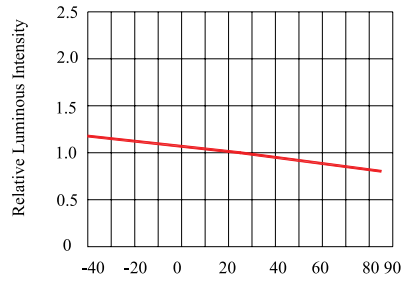
FORWARD CURRENT Vs. FORWARD VOLTAGE



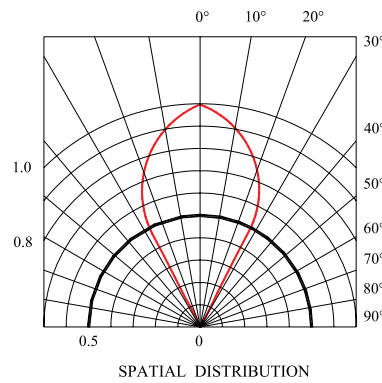
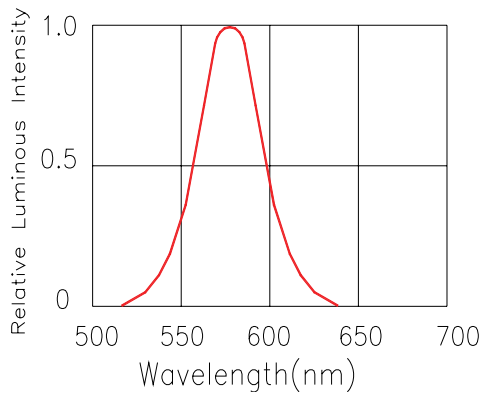
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE



### Part Number Table

Description	Part Number
Round LED, Red/Yellow Green, 630nm/570nm, 46°/50°, 980mcd/95mcd, Through hole	MP008531

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