

# Round LED with Built in Chip Resistor

## Super Red, 5mm x 8.7mm, 12V

**multicomp** PRO

**RoHS  
Compliant**

### Specifications

Dice Material : AllnGaP  
 Emitted colour : Super Red  
 Lens colour : Red Diffused  
 Peak wavelength : 650nm  
 Viewing angle : 45°  
 Luminous intensity (IV) : 20mcd

Electrical / Optical Characteristics at Ta = 25°C						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	14	20	30	mcd	IF = 20mA
Viewing Angle	2θ1/2		45		deg	
Peak Emission Wavelength	λp		650		nm	
Dominant Wavelength	λD	635	640	645	nm	
Spectral Line Half-Width	Δλ		20		nm	
Forward Voltage	VF	11	12	13	V	
Reverse Current	I <sub>r</sub>	-	-	10	uA	VR=5V

▲ Luminous intensity (IV) ±10%, Forward Voltage (VF) ±0.1V, Wavelength (λd) ±0.5nm

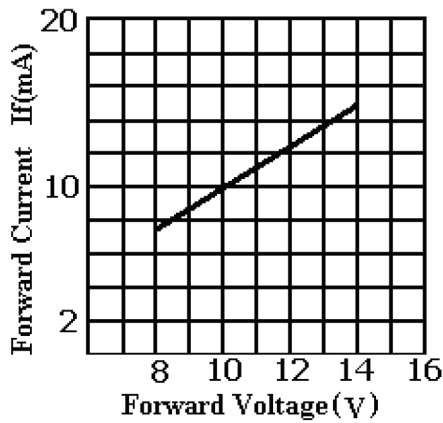
Absolute Maximum Ratings: (Ta = 25°C)			
Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	85	mW
Peak Forward Current ( Duty 1/10 @ 1KHZ )	IF (Peak)	100	mA
Recommended Operating Current	IF (Rec)	25	mA
Electrostatic Discharge	ESD <sub>HBM</sub>	2000	V
Operating Temperature Range	T <sub>OPR</sub>	-40 to +85	°C
Storage Temperature Range	T <sub>STG</sub>	-40 to +100	°C
Lead Soldering Temperature Range (1.6 mm (1/16 inch) from body)		Reflow Soldering: 260°C for 5 sec. Hand Soldering: 350°C for 3 sec.	

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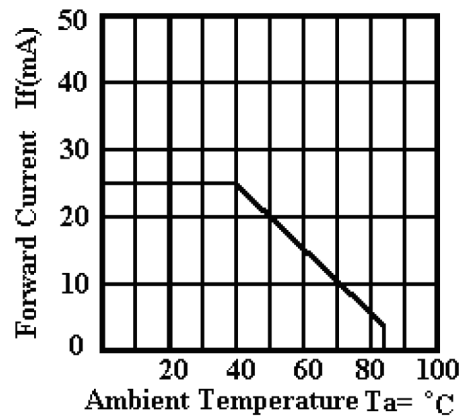


**Typical Electro-Optical Characteristics Curves**

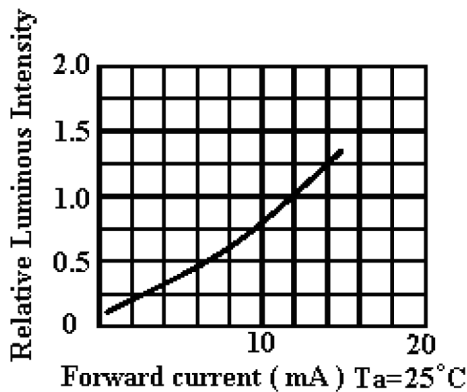
**Super Red (AlInGaP  $\lambda_d=640\text{nm}$ )**



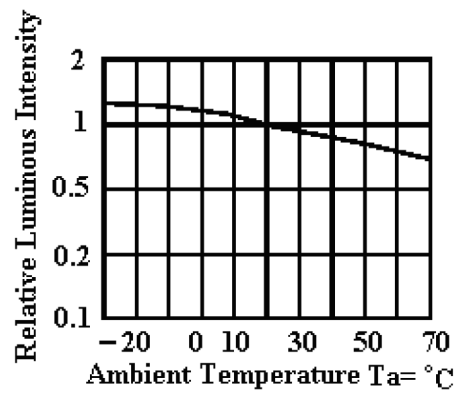
Forward current vs. Forward Voltage



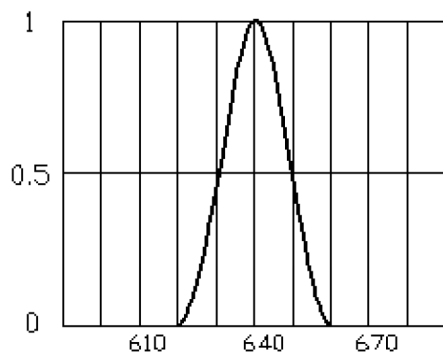
Forward current Derating curve



Luminous Intensity vs. Forward current



Luminous Intensity vs. Ambient Temperature

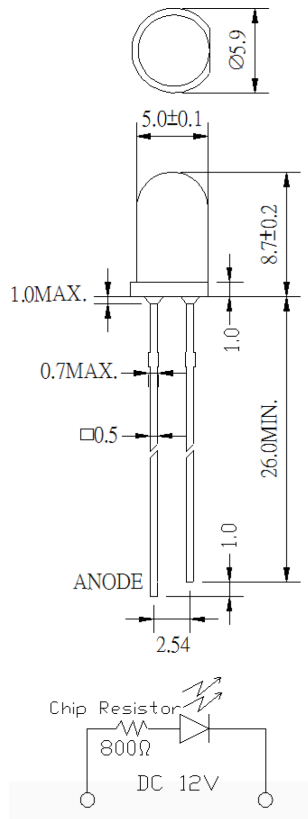


Relative Intensity vs. wavelength

# Round LED with Built in Chip Resistor Super Red, 5mm x 8.7mm, 12V



## Dimensions



Dimensions : Millimetres

## Part Number Table

Description	Part Number
Round LED with Built in Chip Resistor, Super Red, 650nm, 45°, 20mcd, 12V, Through hole	MP008011

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