

Round LED with Built in Chip Resistor

Super Red, 5mm x 8.7mm, 5V

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	4	5	6	V	VR=5V
Reverse Current	I _r	-	-	10	uA	

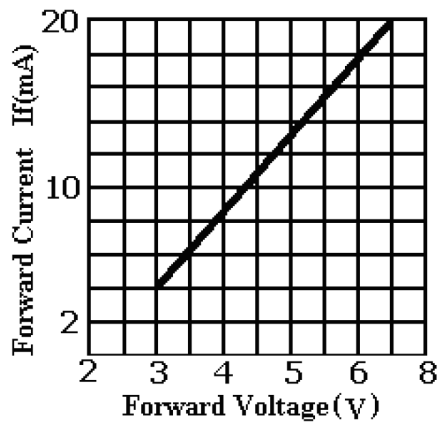
▲ Luminous intensity (IV) ±10%, Forward Voltage (VF) ±0.1V, Wavelength (λd) ±0.5nm

Absolute Maximum Ratings: (Ta = 25°C)

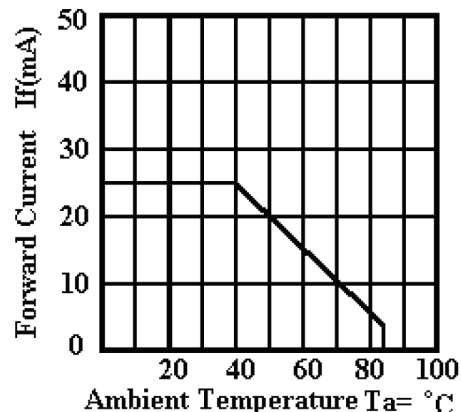
Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	85	mW
Peak Forward Current (Duty 1/10 @ 1KHZ)	IF (Peak)	100	mA
Recommended Operating Current	IF (Rec)	25	mA
Electrostatic Discharge	ESD _{HBM}	2000	V
Operating Temperature Range	T _{OPR}	-40 to +85	°C
Storage Temperature Range	T _{STG}	-40 to +100	°C
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.	

Typical Electro-Optical Characteristics Curves

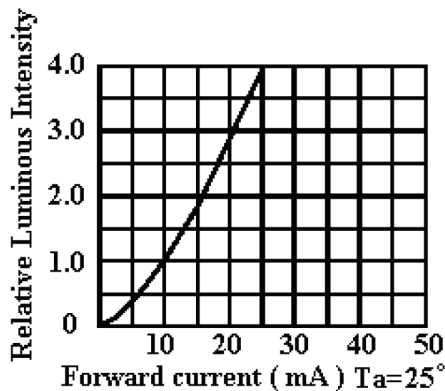
Super Red (AlInGaP $\lambda_d=640\text{nm}$)



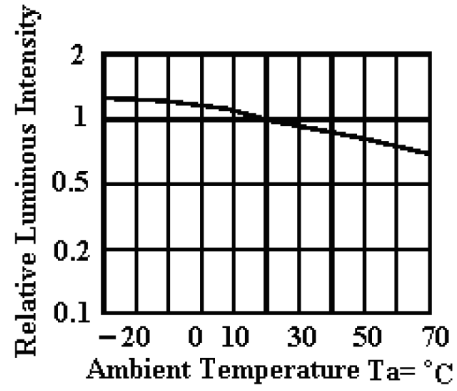
Forward current vs. Forward Voltage



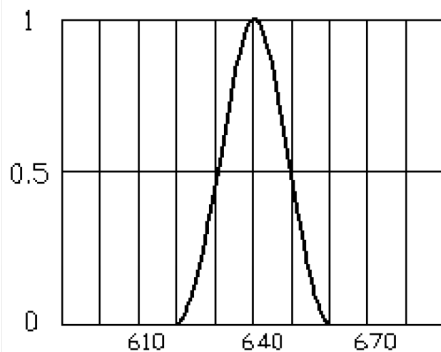
Forward current Derating curve



Luminous Intensity vs. Forward current



Luminous Intensity vs. Ambient Temperature

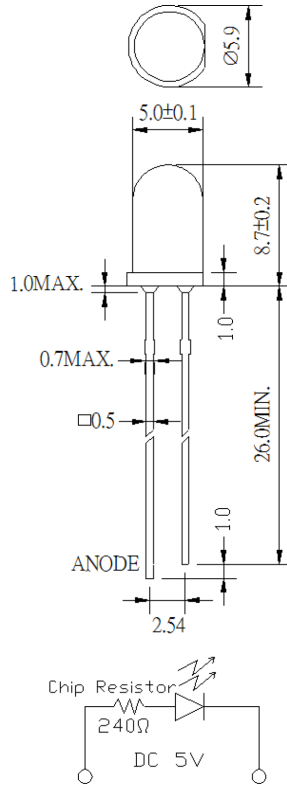


Relative Intensity vs. wavelength

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



Dimensions



Dimensions : Millimetres

Part Number Table

Description	Part Number
Round LED with Built in Chip Resistor, Super Red, 650nm, 45°, 20mcd, 5V, Through hole	MP008012

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