

# Round LED Lamp

## Warm Super White, 5mm

**multicomp** PRO

**RoHS  
Compliant**



### Specifications:

Dice Material	: InGaN
Emitted Colour	: White
Lens Colour	: Water clear
Chromaticity Coordinate	: X=0.3; Y=0.28
Viewing Angle	: 16 Deg.
Luminous Intensity (IV)	: 25,000mcd

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

Reverse Voltage	5V
Reverse Current	10µA (V <sub>R</sub> = 5V)
Electrostatics Discharge (ESD)	200V
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +100°C
Lead Soldering Temperature Range 1.6mm (1/16 inch) from body	260°C for 5 Seconds

### Electrical/Optical Characteristics at T<sub>A</sub> = 25°C

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Test
Luminous Intensity	IV	16500	25000	40000	mcd	IF = 20mA
Viewing Angle	2θ 1/2	-	16	-	deg.	
Chromaticity Coordinate	X		0.3		nm	
	Y		0.28			
Spectral Line Half-Width	Δλ	-	-	-		
Forward Voltage	V <sub>F</sub>	2.8	3.2	3.6	V	
Power Dissipation	P <sub>d</sub>	-	-	85	mW	-
Peak Forward Current (Duty 1/10 at 1KHz)	IF (Peak)	-	-	100	mA	-
Recommended Operating Current	IF (Rec)	-	20	-	mA	-

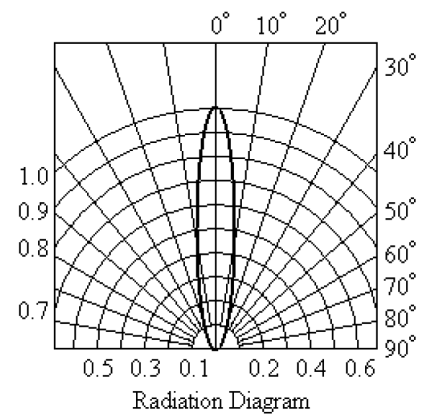
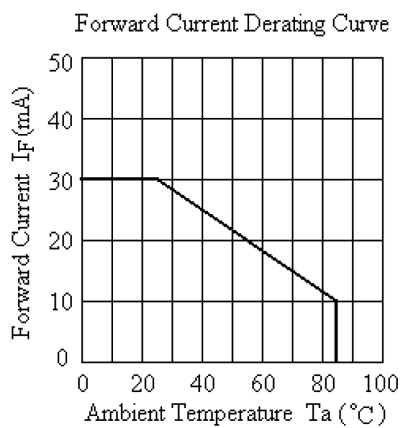
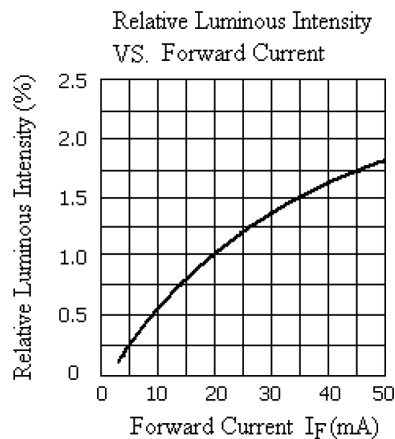
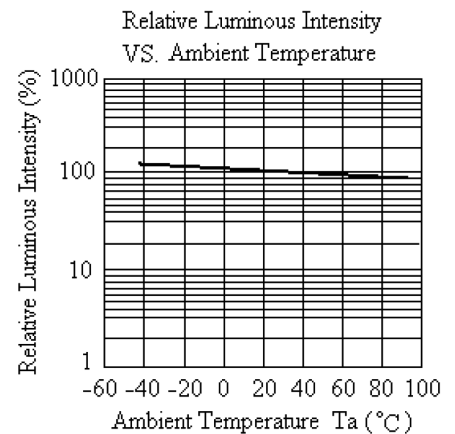
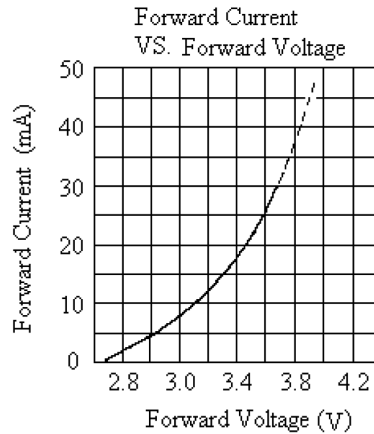
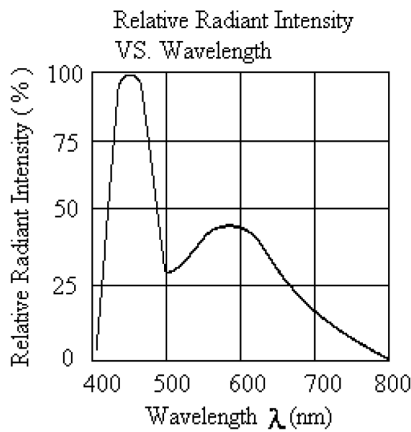
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### White Typical Electrical Optical Characteristics Curves

(Ta = 25°C Ambient Temperature Unless Otherwise Noted)



### Bin Code Explanation

Bin Code:

VF:

Bin Range of Forward Voltage (Unit: V)

BIN A: 1.0~1.2	BIN B: 1.2~1.4	BIN C: 1.4~1.6	BIN D: 1.6~1.8	BIN E: 1.8~2.0
BIN F: 2.0~2.2	BIN G: 2.2~2.4	BIN H: 2.4~2.6	BIN I: 2.6~2.8	BIN J: 2.8~3.0
BIN K: 3.0~3.2	BIN L: 3.2~3.4	BIN M: 3.4~3.6	BIN N: 3.6~3.8	BIN P: 3.8~4.0
BIN Q: 4.0~4.2	BIN R: 4.2~4.4	BIN S: 4.4~4.6	BIN T: 4.6~4.8	

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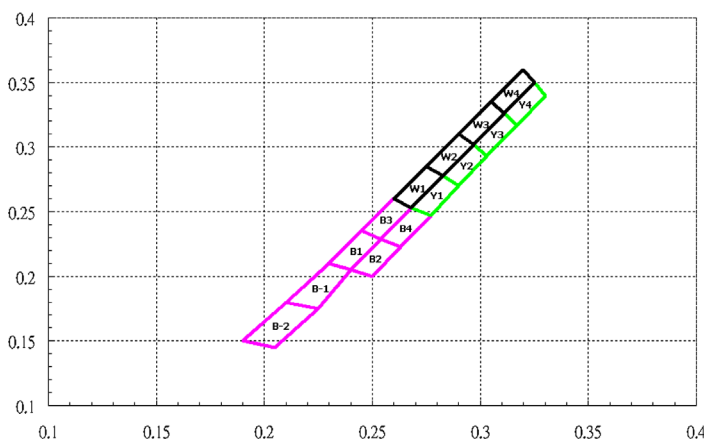
IV:

**Bin Range of Luminous Intensity (Unit: mcd)**

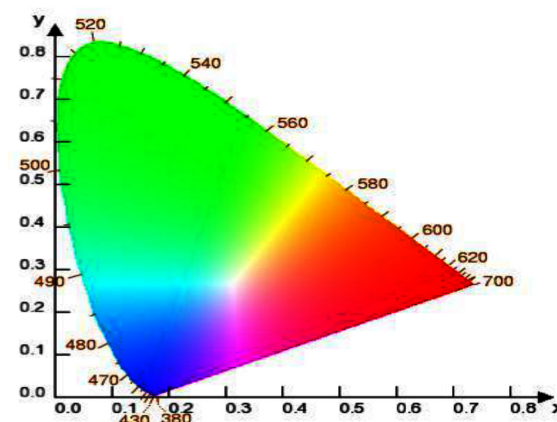
BIN 1: 0.1~4	BIN 2: 4~6	BIN 3: 6~9:	BIN 4: 9~13	BIN 5: 13~19
BIN 6: 19~28	BIN 7: 28~42	BIN 8: 42~63	BIN 9: 63~94	BIN 10: 94~140
BIN 11: 140~210	BIN 12: 210~310	BIN 13: 310~460	BIN 14: 460~690	BIN 15: 690~1000
BIN 16: 1000~1500	BIN 17: 1500~2200	BIN 18: 2200~3300	BIN 19: 3300~4900	BIN 20: 4900~7300
BIN 21: 7300~11000	BIN 22: 11000~16500	BIN 23: 16500~25000	BIN 24: 25000~32000	BIN 25: 32000~40000
BIN 26: 40000~50000	BIN 27: 50000~60000			

XY:

Bin Code	Top		Right		Bottom		Left	
	X1	Y1	X2	Y2	X3	Y3	X4	Y4
BIN B-1	0.21	0.18	0.23	0.21	0.24	0.205	0.225	0.175
BIN B-2	0.19	0.15	0.21	0.18	0.225	0.175	0.205	0.145
BIN B1	0.23	0.21	0.245	0.235	0.254	0.229	0.24	0.205
BIN B2	0.24	0.205	0.254	0.229	0.263	0.223	0.25	0.2
BIN B3	0.245	0.235	0.26	0.26	0.268	0.253	0.254	0.229
BIN B4	0.254	0.229	0.268	0.253	0.277	0.247	0.263	0.223
BIN W1	0.26	0.26	0.275	0.285	0.283	0.278	0.268	0.253
BIN Y1	0.268	0.253	0.283	0.278	0.29	0.27	0.277	0.247
BIN W2	0.275	0.285	0.29	0.31	0.297	0.302	0.283	0.278
BIN Y2	0.283	0.278	0.297	0.302	0.303	0.293	0.29	0.27
BIN W3	0.29	0.31	0.305	0.335	0.311	0.326	0.297	0.302
BIN Y3	0.297	0.302	0.311	0.326	0.317	0.317	0.303	0.293
BIN W4	0.305	0.335	0.32	0.36	0.325	0.35	0.311	0.326
BIN Y4	0.311	0.326	0.325	0.35	0.33	0.34	0.317	0.317



**CIE Chromaticity Coordinates Diagram**



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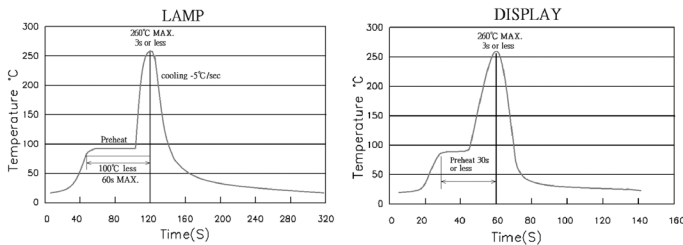
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### Soldering

Recommended soldering condition as shown below:

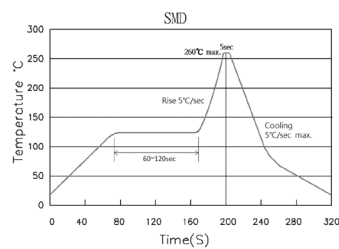
Soldering heat (DIP)



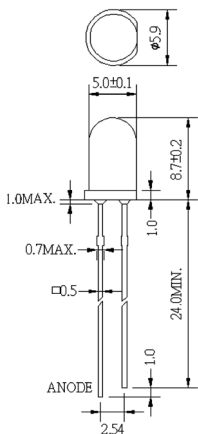
### Soldering Iron

Temperature at tip of iron: 350°C Max. Soldering Time: 3sec. ±1sec. (one time only) If temperature is higher, time should be shorter.

### Reflow Temp./Time (SMD)



### Diagram



Dimensions : Millimetres

### Part Number Table

Description	Part Number
LED, 5mm, 16 Deg., warm super white	MCL053SWC-YH1

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