



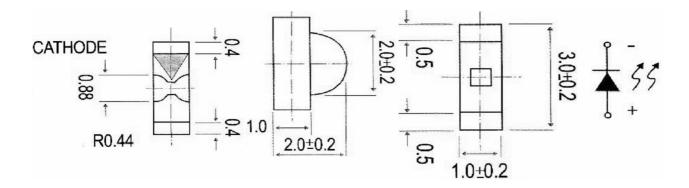




### **Applications**

Interior automotive lighting
 Optical indicators
 Communication Products
 Backlighting
 Toys

### **Technical Drawing**



### **Recommended Soldering Pattern**

#### Notes:

All dimensions in mm tolerance is  $\pm 0.1$ mm unless otherwise noted.

# Rigth Angle Chip LED White

Part No.: **M11M5006** 

DRW:	Dong	CHKD	Chang	MATL:	Chui	DATE	06.12.2009
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## **Absolute Maximum Ratings**

Ta=25°C

Item	Symbol	GaN	Unit
Power Dissipation	$P_{D}$		mW
DC Forward Current	I <sub>F</sub>	20	mA
Plused Forward Current	I <sub>FP</sub> *		mA
Reverse Voltage	$V_R$		V
Operating Temperature	T <sub>OP</sub>		°C
Storage Temperature	$T_{ST}$	-55 to 100	°C

<sup>\* 0.1</sup> msec pulse, 10% duty cycle

### **Electrical / Optical Characteristics**

I<sub>F</sub>=20mA Ta=25°C

Ermitting Color		White	
Material		GaN	
Forward Voltage	typ.	3.6	$V_{F}$
I of ward voitage	max.	4.0	$V_{F}$
Wavelength	λD		nm
_	λP		nm
typ.	Δλ		nm
Color Temperature	min.		K
Color remperature	max.		K
Luminous Intensity *	min.	100	mcd
Lummous intensity	typ.	160	mcd
Reverse Current	max.		μΑ
Viewing Angle	2Θ1/2	120	

<sup>\*</sup> Per NIST standards

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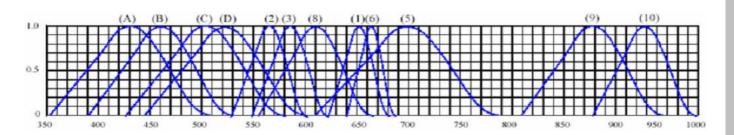








### Curve



### Wavelength (nm)

### **Relative Intensity vs Wavelength**

(1)	GaAsP / GaAs	(9)	GaAlAs
	655nm Red		880nm
(2)	GaP	(10)	GaAs & GaAlAs
	568nm Yellow Green		940nm
(3)	GaAsP / GaP	(A)	GaN
	585nm Yellow		430nm Blue
(4)	GaAsP / GaP	(B)	InGaN
	635nm Orange & Red		470nm Blue
(5)	GaP	(C)	InGaN
	700nm Red		502nm Green
(6)	GaAlAs / GaAs	(D)	InGaN
	660nm Red		523nm Green
(8)	GaAsP / GaP		

610nm Red

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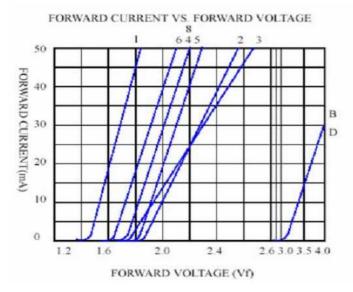


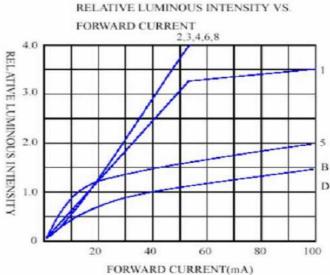




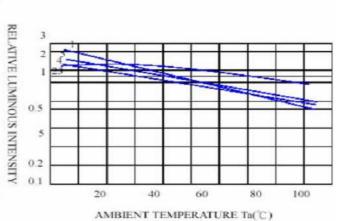


### Curve





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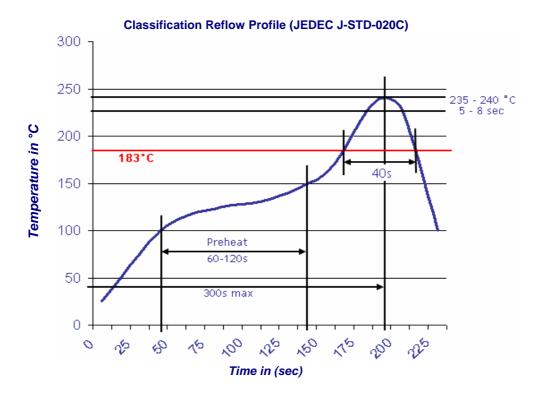






### **Solder Condition**

### Lead Free Solder



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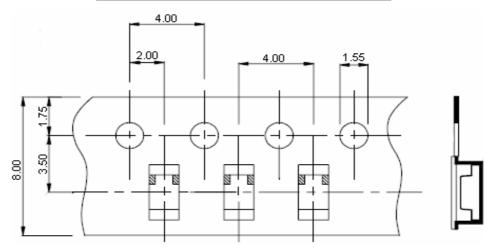




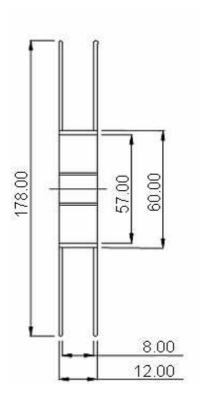


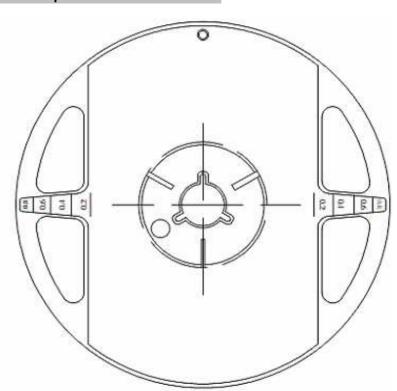


### **Packing Specifications**



### **Reel Specifications**





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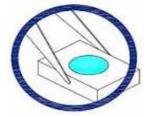




### **Handling Precautions**

Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although ist characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might leads to damage and premature failure of th LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools



2. Do not directly touch or handle the silicone lens surfance. It may damage the internal circuitry.





3. Do not stack together assembled PCBs containing exposed LEDs. Outside impact may scratch the silicone lens or damage the internal circuitry.



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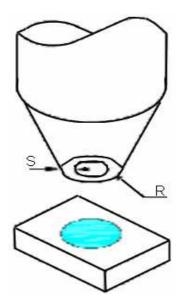








- 4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
- 5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
- 6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



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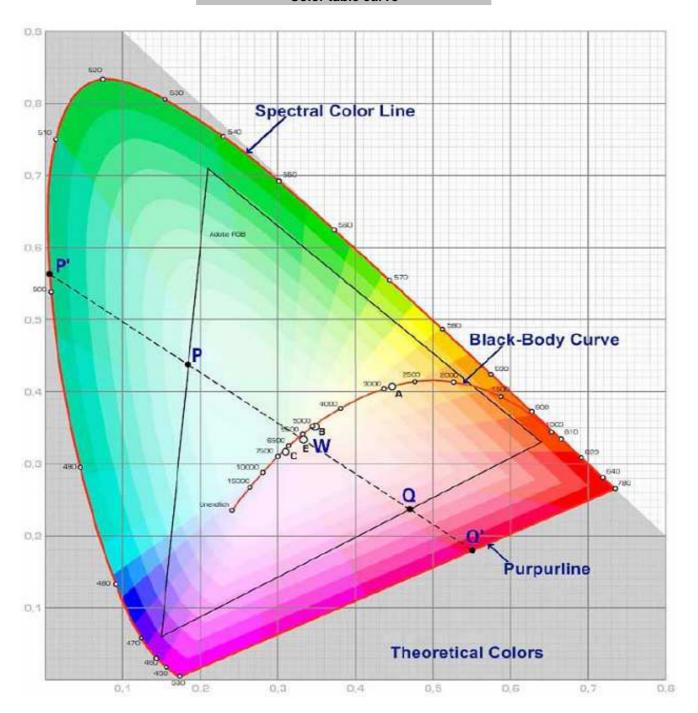








### Color table curve



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