



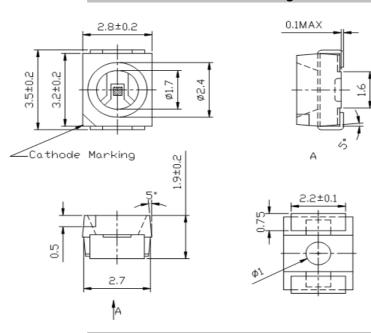




## **Applications**

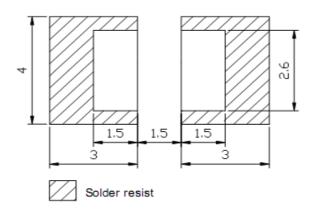
- Interior automotive lighting
  - Optical indicators
- Communication Products
  - Backlighting
    - Toys

## **Technical Drawing**





## **Recommended Soldering Pattern**



## Notes:

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

| F | L | .( |   | C  | 2 |
|---|---|----|---|----|---|
|   | И | /h | i | te | 2 |

Part No.: **M11A1045** 

| DRW:  | Dong | CHKD | Chang | MATL:  | Chui | DATE  | 04.12.2009 |
|-------|------|------|-------|--------|------|-------|------------|
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## **Absolute Maximum Ratings**

Ta=25°C

| Item                   | Symbol            |            | Unit |
|------------------------|-------------------|------------|------|
| Power Dissipation      | $P_{D}$           | 100        | mW   |
| DC Forward Current     | I <sub>F</sub>    | 25         | mA   |
| Plused Forward Current | I <sub>FP</sub> * | 100        | mA   |
| Reverse Voltage        | $V_R$             |            | V    |
| Operating Temperature  | T <sub>OP</sub>   | -40 to 75  | °C   |
| Storage Temperature    | $T_{ST}$          | -40 to 100 | °C   |

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

## **Electrical / Optical Characteristics**

I<sub>F</sub>=5mA Ta=25°C

| Ermitting Color      |       | White             |         |  |  |  |
|----------------------|-------|-------------------|---------|--|--|--|
| Material             |       |                   |         |  |  |  |
| Forward Voltage      | typ.  | 2.8               | $V_{F}$ |  |  |  |
| Torward voitage      | max.  | 3.2               | $V_{F}$ |  |  |  |
| Wavelength           | λD    | x = 0.42 y = 0.41 | nm      |  |  |  |
| •                    | λP    |                   | nm      |  |  |  |
| typ.                 | Δλ    |                   | nm      |  |  |  |
| Color Temperature    | min.  |                   | K       |  |  |  |
| Color remperature    | max.  |                   | K       |  |  |  |
| Luminous Intensity * | min.  | 1373              | mcd     |  |  |  |
| Lummous intensity    | typ.  | 2000              | mcd     |  |  |  |
| Reverse Current      | max.  | 50                | μA      |  |  |  |
| Viewing Angle        | 201/2 | 120               |         |  |  |  |

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

#### **Ranks Combination**

 $I_F=20mA$ 

| Rank               | <b>T</b> 1 | T2        | U1        |     |
|--------------------|------------|-----------|-----------|-----|
| Luminous Intensity | 1373~1716  | 1716~2145 | 2145~2681 | mcd |

PLCC2 White

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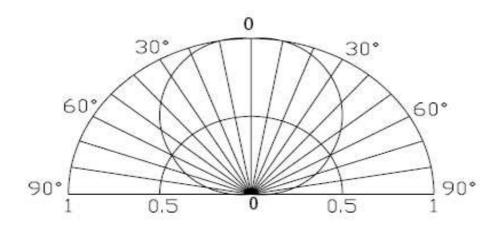








## **Directive Characteristics**



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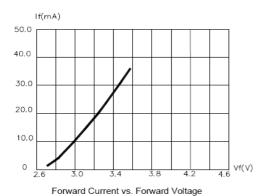


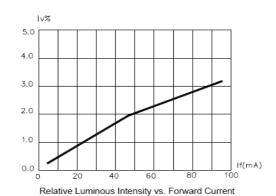


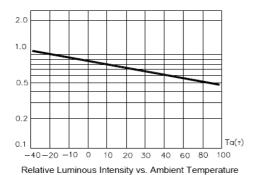


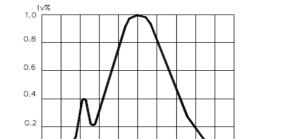


## **Curvs**









600

Relative Luminous Intensity vs. Wavelength

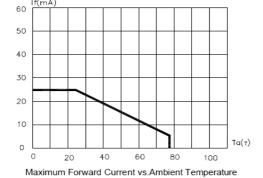
700

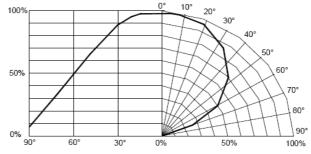
Half Width = :150nm

0.0

400

500





Relative Luminous Intensity vs.Radiation Angle

| PLCC2<br>White |        |            |  |  |  |
|----------------|--------|------------|--|--|--|
| Part No.       | : M11A | A1045      |  |  |  |
| Custome        | er:    |            |  |  |  |
| Chui           | DATE   | 04.12.2009 |  |  |  |
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WL(nm)

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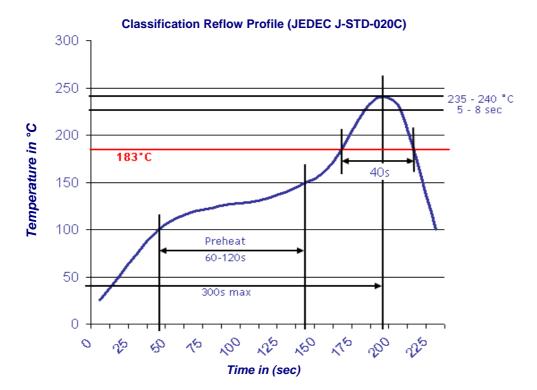






## **Solder Condition**

## Lead Free Solder



| PLCC2 |
|-------|
| White |

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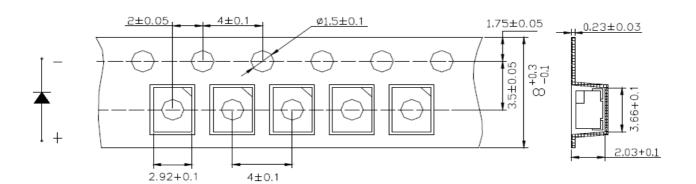




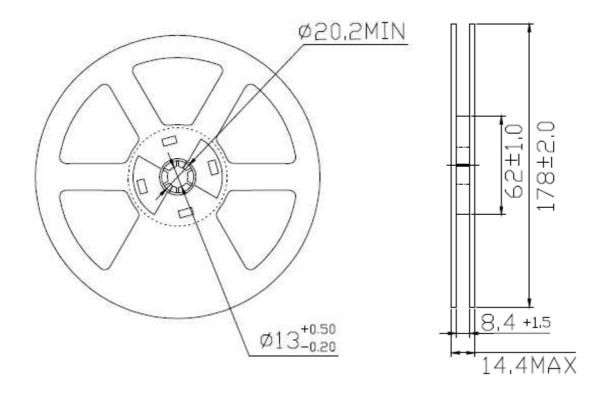




## **Packing Specifications**



## **Reel Specifications**



| PLCC2 |  |
|-------|--|
| White |  |

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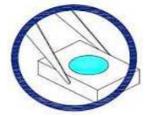




## **Handling Precautions**

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.



## PLCC2 White

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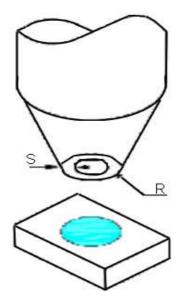








- 4. The outer diameter of the TOP LED pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.
- 5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.
- 6.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



# PLCC2 White

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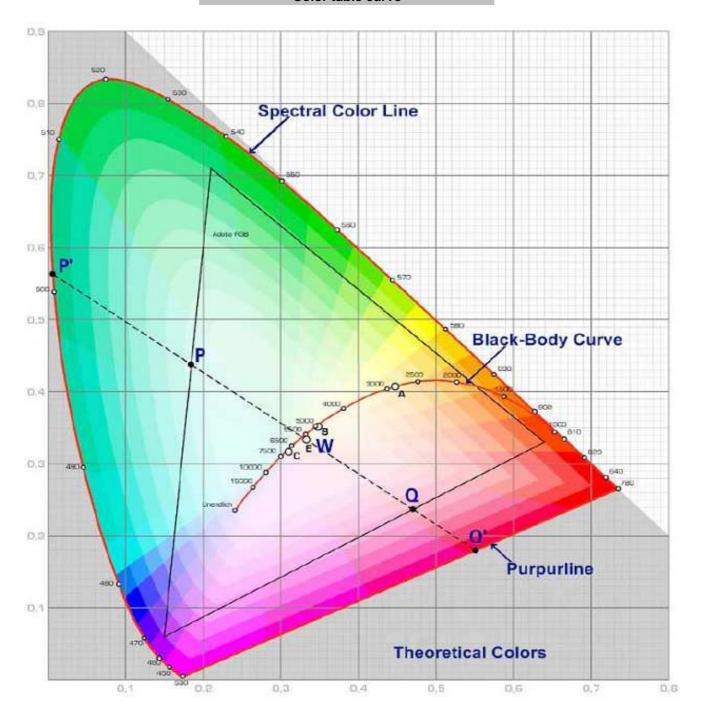








## Color table curve



| PLCC2<br>White |          |  |  |
|----------------|----------|--|--|
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| Customer:      |          |  |  |

DRW: Dong CHKD Chang MATL: Chui DATE 04.12.2009
APPD: Ping FINISH Hui Sheet 9 from 9