



深圳匡通电子有限公司
SHENZHEN KENTO ELECTRONICCO.,LTD

SAMPLE APPROVAL SHEET

DESCRIPTIONS:

- 2.0x1.2x0.8mm SMD LED
- Emitting Color:White
- Lens Color:Yellow Fluorescent

Product Name: LED 0805 White color

Product number: KT-0805-W

Customer Name: _____

Version number: A.2

Date Prepared: MAY 2017

CUSTOMER APPROVED SIGNATURES

| APPROVRD BY | CHECKED BY |
|-------------|------------|
| | |

PRELIMINARY SPEC

2.0x1.2X0.8mm SMD CHIP LED

PART NO: KT-0805W

WHITE

ATTENTION

OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE SENSITIVE
DEVICES

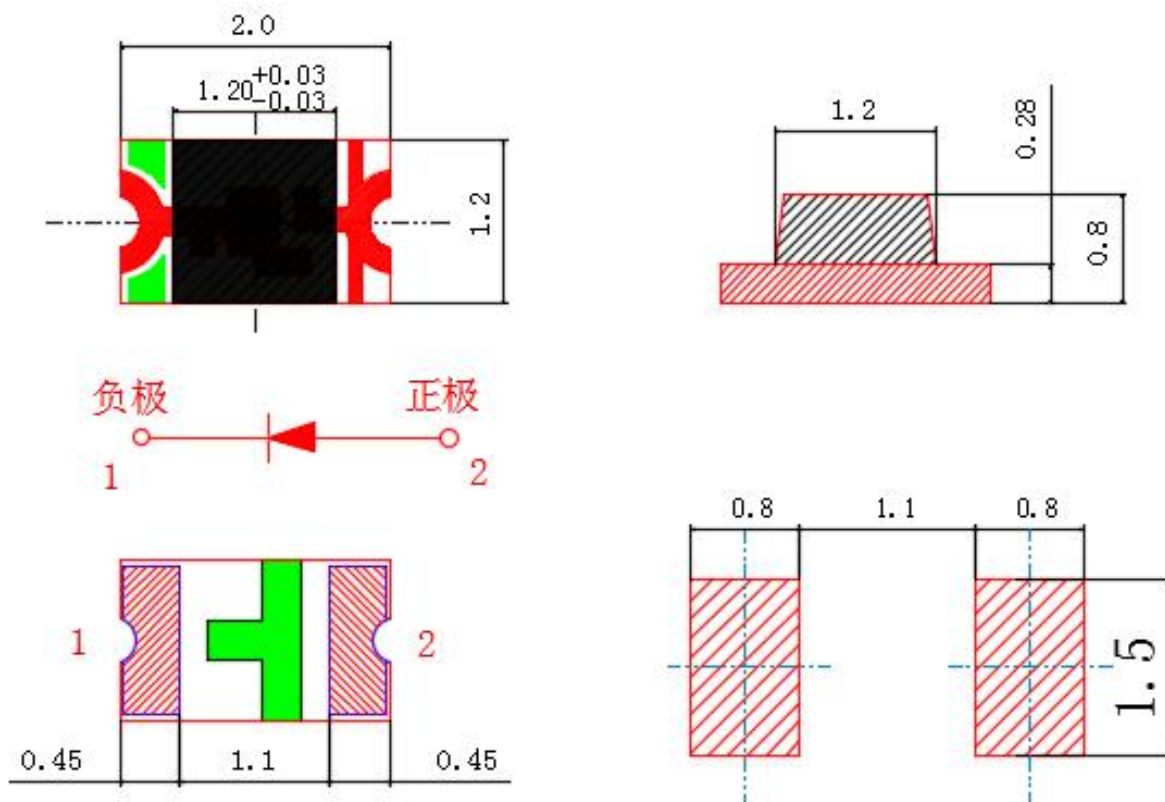
Features

- 2.0mmx1.2mm SMT LED, 0.8mm THICKNESS.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE : 3000PCS / REEL.
- RoHS COMPLIANT.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and back-lighting in telephone and fax.
- Flat backlight for LCD switch and symbol.

◆ Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.15 unless otherwise noted.
3. Specifications are subject to change without notice.



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◆ Device Selection Guide

| Part No. | Chip | | Lens color |
|----------|----------|---------------|--------------------|
| KT-0805W | Material | Emitted color | Yellow Fluorescent |
| | (InGaN) | WHITE | |

◆ Absolute Maximum Ratings at TA=25°C

| Parameter | Symbol | Value | Unit |
|------------------------|--------|----------------|------|
| Power Dissipation | PD | 100 | mW |
| Forward Current | IF | 20 | mA |
| Peak Forward Current*1 | IFP | 100 | mA |
| Reverse Voltage | VR | 5 | V |
| Operating Temperature | Topr | -40°C To +85°C | |
| Storage Temperature | Tstg | -40°C To +85°C | |

Notes:

*1: Pulse width≤0.1ms, Duty cycle≤1/10

◆ Electrical / Optical Characteristics at TA=25°C

| Parameter | Symbol | Min | typ | Max | Unit | Test Conditions |
|--------------------------|--------|-----|------|-----|------|-----------------|
| Forward Voltage | VF | 2.6 | — | 3.0 | V | IF=2mA |
| Reverse Current | IR | — | — | 10 | μA | VR=5V |
| Chromaticity Coordinates | X | — | 0.27 | — | | IF=2mA |
| | Y | — | 0.28 | — | | |
| Luminous Intensity | IV | 90 | — | 180 | mcd | IF=2mA |
| Viewing Angle | 2θ1/2 | — | 120 | — | Deg. | IF=2mA |

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or chromaticity), the typical accuracy of the sorting process is as follows:

1. Chromaticity Coordinates: ±0.01
2. Luminous Intensity: ±15%
3. Forward Voltage: ±0.1V

◆ Typical Electrical/Optical Characteristics Curves

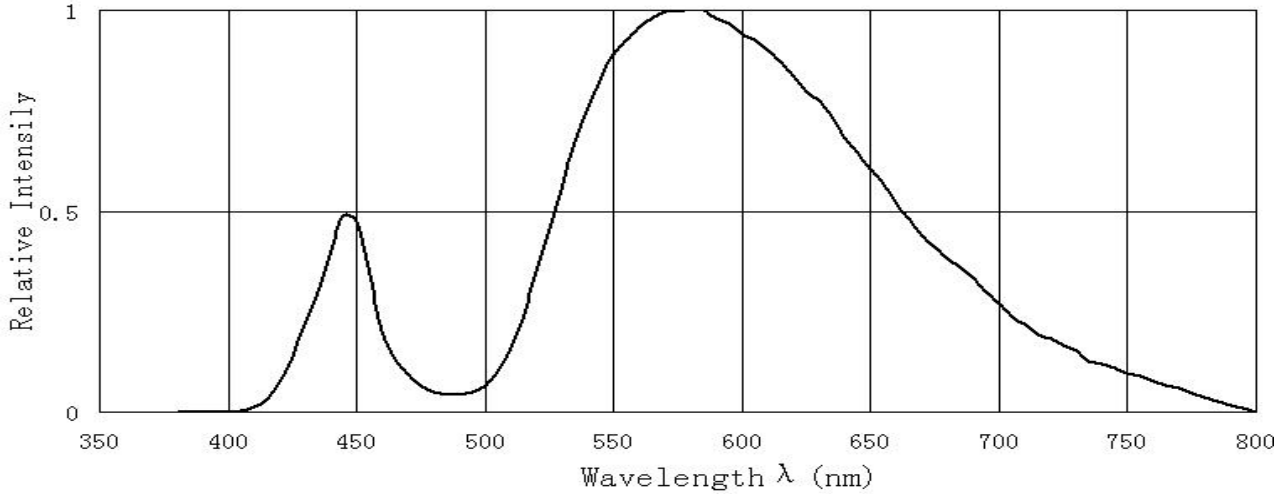


Fig. 1 Relative Intensity vs. Wavelength

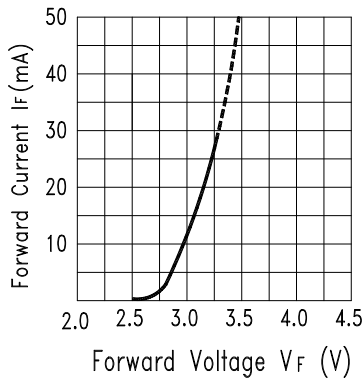


Fig. 2 Forward Current vs. Forward Voltage

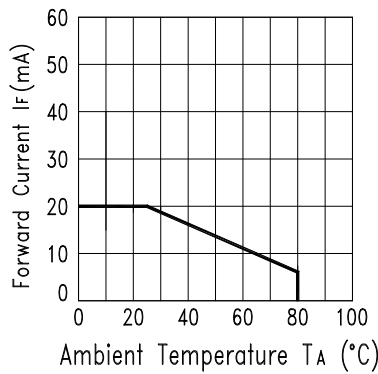


Fig. 3 Forward Current Derating Curve

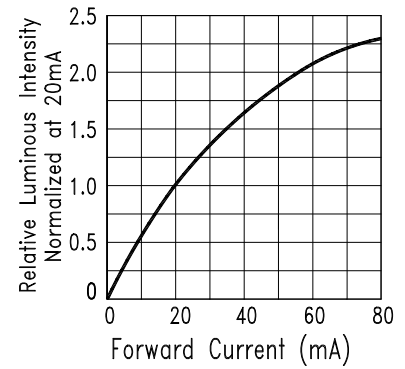


Fig. 4 Relative Luminous Intensity vs. Forward Current

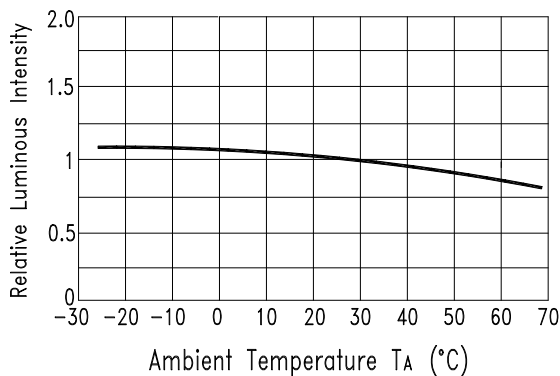


Fig. 5 Luminous Intensity vs. Ambient Temperature

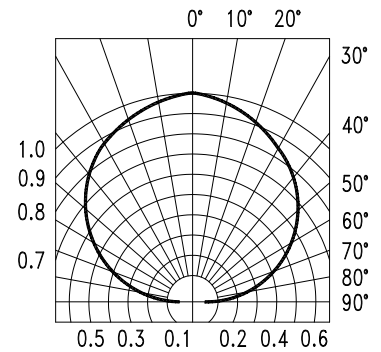
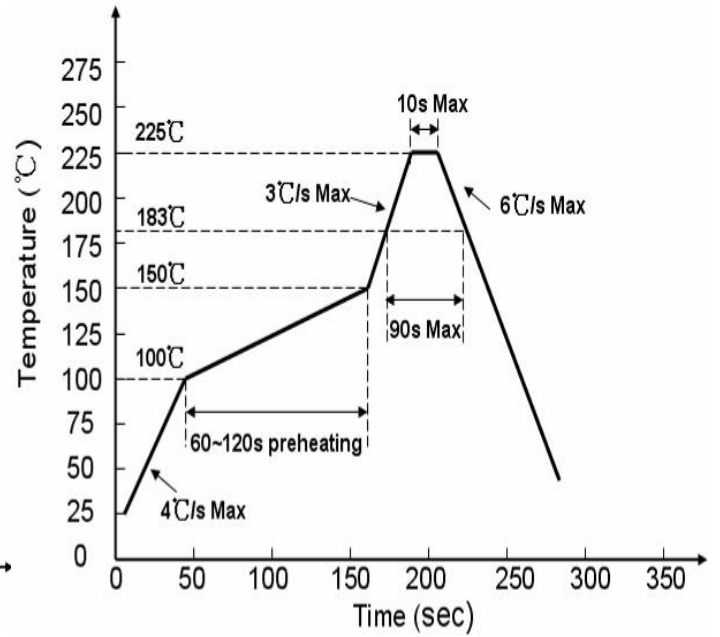
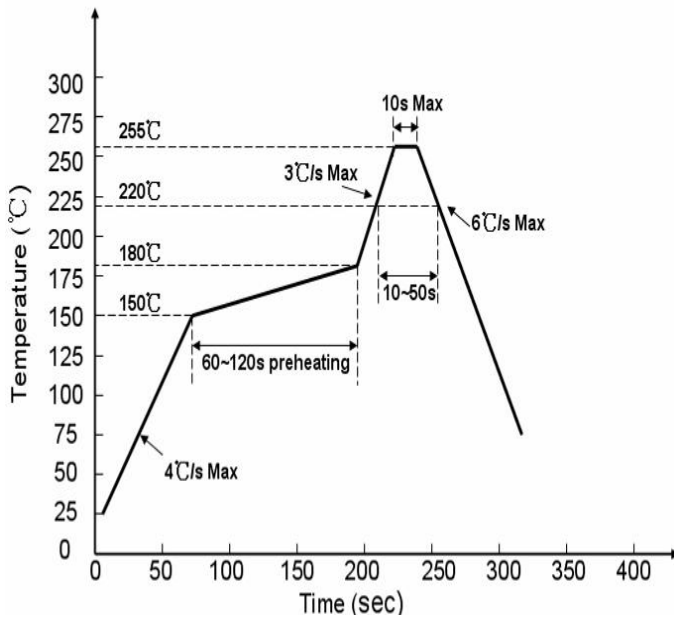


Fig. 6 Spatial Distribution

◆ Soldering Profile

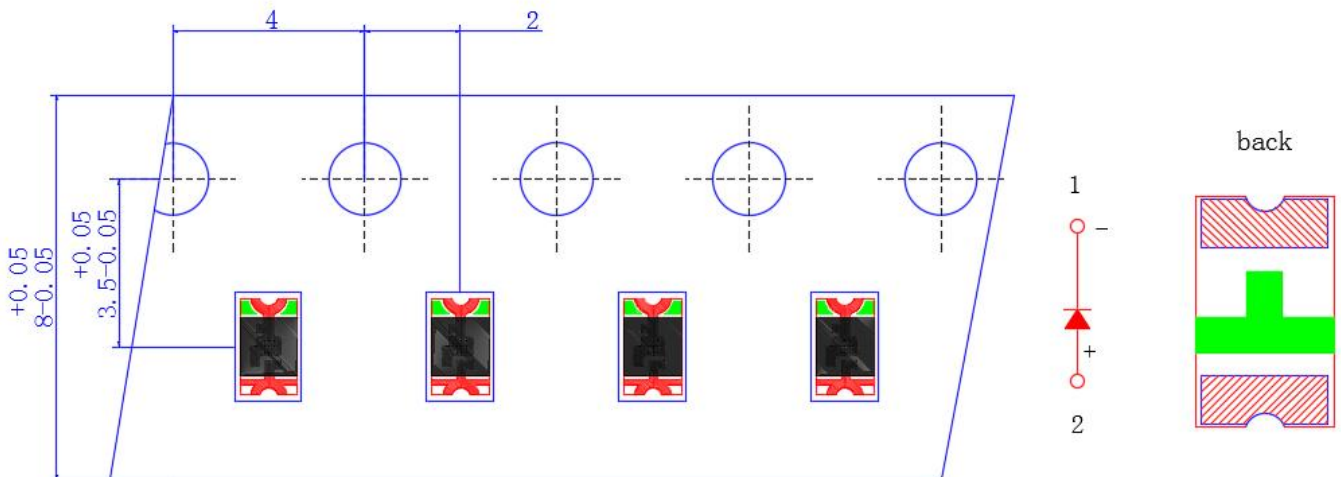


Lead process

Lead process

◆ Tape specifications

(Units:mm)





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◆ VF Rank

| Rank | | VF | | Condition |
|------|----|-----|-----|-----------|
| | | MIN | MAX | |
| b | b2 | 2.6 | 2.7 | IF=2mA |
| | b3 | 2.7 | 2.8 | |
| | b4 | 2.8 | 2.9 | |
| | b5 | 2.9 | 3.0 | |

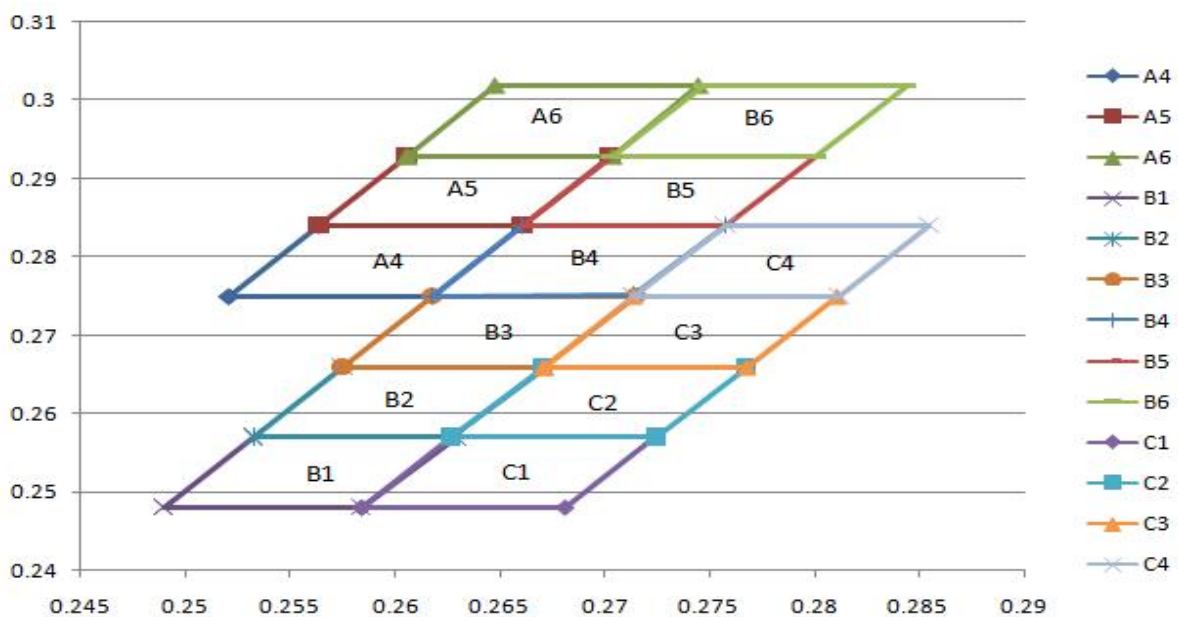
Tolerance:±0.05V

◆ IV Rank

| Rank | | IV | | Condition |
|------|----|-----|-----|-----------|
| | | MIN | MAX | |
| p | p1 | 90 | 120 | IF=2mA |
| | p2 | 120 | 150 | |
| | p3 | 150 | 180 | |

Tolerance:±15%

◆ X Y Rank





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| | | X1Y1 | X2Y2 | X3Y3 | X4Y4 | X1Y1 |
|----|---|--------|--------|--------|--------|--------|
| A4 | X | 0.2521 | 0.2564 | 0.2661 | 0.2618 | 0.2521 |
| | Y | 0.275 | 0.284 | 0.284 | 0.275 | 0.275 |
| A5 | X | 0.2564 | 0.2606 | 0.2703 | 0.2661 | 0.2564 |
| | Y | 0.284 | 0.2929 | 0.2929 | 0.284 | 0.284 |
| A6 | X | 0.2606 | 0.2648 | 0.2745 | 0.2704 | 0.2606 |
| | Y | 0.2929 | 0.3019 | 0.3019 | 0.2929 | 0.2929 |
| B1 | X | 0.249 | 0.2533 | 0.263 | 0.2584 | 0.249 |
| | Y | 0.248 | 0.257 | 0.257 | 0.248 | 0.248 |
| B2 | X | 0.2533 | 0.2575 | 0.2672 | 0.2627 | 0.2533 |
| | Y | 0.257 | 0.266 | 0.266 | 0.257 | 0.257 |
| B3 | X | 0.2575 | 0.2618 | 0.2715 | 0.2671 | 0.2575 |
| | Y | 0.266 | 0.275 | 0.275 | 0.266 | 0.266 |
| B4 | X | 0.2618 | 0.2661 | 0.2758 | 0.2714 | 0.2618 |
| | Y | 0.275 | 0.284 | 0.284 | 0.2751 | 0.275 |
| B5 | X | 0.2661 | 0.2704 | 0.2801 | 0.2758 | 0.2661 |
| | Y | 0.284 | 0.2929 | 0.2929 | 0.284 | 0.284 |
| B6 | X | 0.2704 | 0.2747 | 0.2844 | 0.2801 | 0.2704 |
| | Y | 0.2929 | 0.3019 | 0.3019 | 0.2929 | 0.2929 |
| C1 | X | 0.2584 | 0.2627 | 0.2724 | 0.2681 | 0.2584 |
| | Y | 0.248 | 0.257 | 0.257 | 0.248 | 0.248 |
| C2 | X | 0.2627 | 0.2671 | 0.2768 | 0.2725 | 0.2627 |
| | Y | 0.257 | 0.266 | 0.266 | 0.257 | 0.257 |
| C3 | X | 0.2671 | 0.2714 | 0.2811 | 0.2768 | 0.2671 |
| | Y | 0.266 | 0.275 | 0.275 | 0.266 | 0.266 |
| C4 | X | 0.2714 | 0.2758 | 0.2855 | 0.2812 | 0.2714 |
| | Y | 0.275 | 0.284 | 0.284 | 0.275 | 0.275 |

Tolerance:±0.01

◆ Judgment criteria of failure for the reliability

| Measuring items | Symbol | Measuring conditions | Judgement criteria for failure |
|--------------------|-----------|----------------------|--------------------------------|
| Forward voltage | $V_F(V)$ | $I_F=5mA$ | Initial Level*1.1 |
| Reverse current | $I_R(UA)$ | $V_R=5V$ | Over U*2 |
| Luminous intensity | $IV(mcd)$ | $I_F=5mA$ | Initial Level*0.7 |

◆ CAUTIONS:

1.Storage

- In order to avoid the absorption of moisture, it is recommended to store in the dry box (or desicca tor) with a desiccant. Otherwise, to store them in the following environment is recommended. Temperature: 5°C~30°C Humidity: 60%HR max.

- Attention after opened

However LED is corresponded SMD, when LED be soldered dip, interfacial separation may affect The light transmission efficiency, causing the light intensity to drop. Attention in followed. a. After opened and mounted, the soldering shall be quickly. b. Keeping of a fraction Temperature: 5°C~40°C Humidity: less than 30%

- In case or more than 1 week passed after opening or change color of indicator on desiccant compo nents shall be dried 10-12hr. at 60°C±3°C.

- In case of supposed the components is humid, shall not be dried dip-solder just before. 100Hr at 80°C±3°C or 12Hr at 100°C±3°C

2.ESD (Electrostatic Discharge)

Static Electricity or power surge will damage the LED.

The following procedures may decrease the possibility of ESD damage.

- All production machinery and test instruments must be electrically grounded.
- Use a conductive wrist band or anti-electrostatic glove when handling these LEDs.
- Maintain a humidity level of 50% or higher in production areas.
- Use anti-static packaging for transport and storage.