### 1.0X0.5mm SMD CHIP LED LAMP

Part Number: KPHHS-1005CGCK Green



ATTENTION **OBSERVE PRECAUTIONS** FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

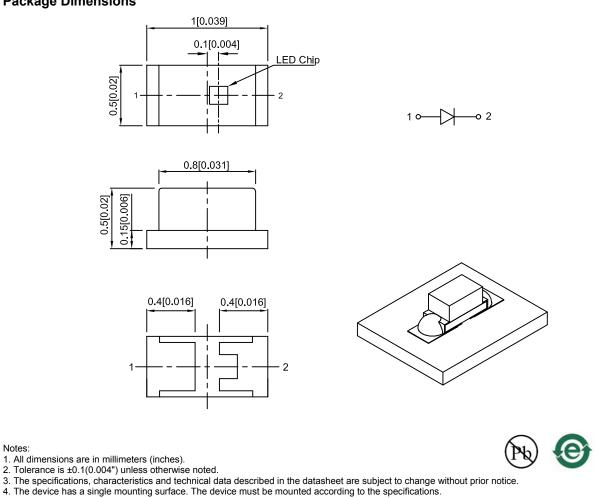
#### **Features**

- 1.0mmx0.5mm SMD LED, 0.5mm thickness.
- Low power consumption.
- · Wide viewing angle.
- Ideal for backlight and indicator.
- Package: 2000pcs / reel .
- Moisture sensitivity level : level 3.
- · RoHS compliant.

#### Descriptions

- The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.
- Electrostatic discharge and power surge could damage the LEDs.
- It is recommended to use a wrist band or antielectrostatic glove when handling the LEDs.
- All devices, equipments and machineries must be electrically grounded.

#### **Package Dimensions**



SPEC NO: DSAC5628 **APPROVED: Wynec** 

REV NO: V.19B **CHECKED:** Allen Liu DATE: JAN/17/2017 DRAWN: W.Q.Zhong PAGE: 1 OF 5 ERP: 1203002672

#### **Selection Guide**

| Part No.       | Emitting Color (Material) | Lens Type   | lv (mcd) [2]<br>@ 20mA |      |       |  | Viewing<br>Angle [1] |
|----------------|---------------------------|-------------|------------------------|------|-------|--|----------------------|
|                |                           |             | Min.                   | Тур. | 201/2 |  |                      |
| KPHHS-1005CGCK | Green (AlGaInP)           | Water Clear | 20                     | 50   | 120°  |  |                      |

Notes:

01/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
Luminous intensity / luminous Flux: +/-15%.
Luminous intensity value is traceable to CIE127-2007 standards.

### Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter                | Emitting Color | Тур. | Max. | Units | Test Conditions |
|--------|--------------------------|----------------|------|------|-------|-----------------|
| λpeak  | Peak Wavelength          | Green          | 574  |      | nm    | I⊧=20mA         |
| λD [1] | Dominant Wavelength      | Green          | 570  |      | nm    | I⊧=20mA         |
| Δλ1/2  | Spectral Line Half-width | Green          | 20   |      | nm    | I⊧=20mA         |
| С      | Capacitance              | Green          | 15   |      | pF    | VF=0V;f=1MHz    |
| Vf [2] | Forward Voltage          | Green          | 2.1  | 2.5  | V     | I⊧=20mA         |
| IR     | Reverse Current          | Green          |      | 10   | uA    | VR=5V           |

Notes:

1. Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.

3. Wavelength value is traceable to CIE127-2007 standards.

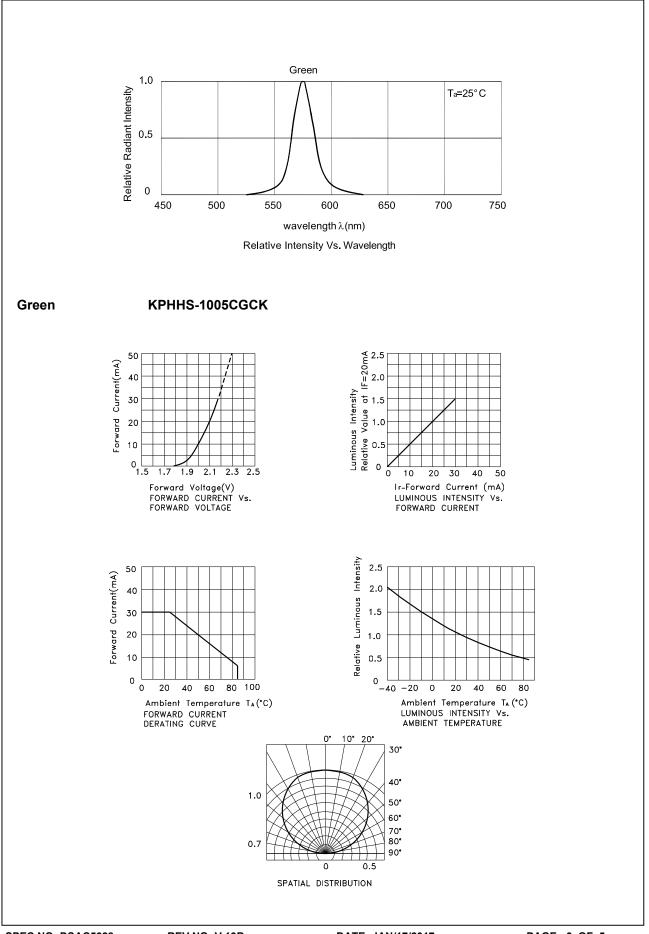
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

#### Absolute Maximum Ratings at TA=25°C

| Parameter                | Values         | Units |  |  |
|--------------------------|----------------|-------|--|--|
| Power dissipation        | 75             | mW    |  |  |
| DC Forward Current       | 30             | mA    |  |  |
| Peak Forward Current [1] | 150            | mA    |  |  |
| Reverse Voltage          | 5              | V     |  |  |
| Operating Temperature    | -40°C To +85°C |       |  |  |
| Storage Temperature      | -40°C To +85°C |       |  |  |

Notes:

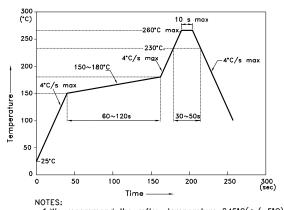
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.



### **KPHHS-1005CGCK**

Reflow soldering is recommended and the soldering profile is shown below. Other soldering methods are not recommended as they might cause damage to the product.

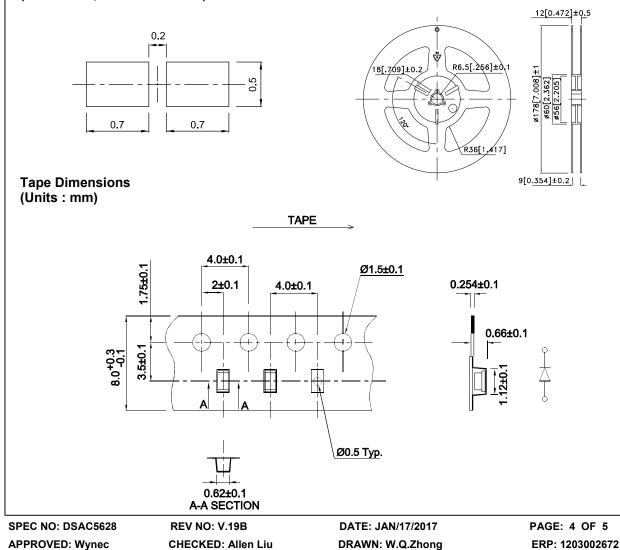
Reflow Soldering Profile For Lead-free SMT Process.

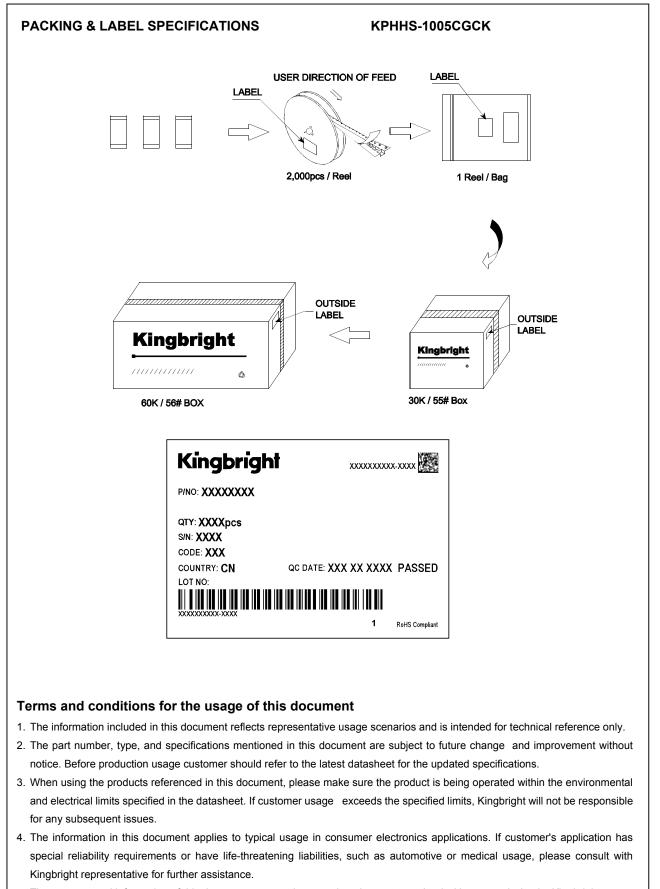


NOTES: 1.We recommend the reflow temperature 245°C(+/-5°C).The maximum soldering temperature should be limited to 260°C. 2.Don't cause stress to the epoxy resin while it is exposed to bit temperature to high temperature. 3.Number of reflow process shall be 2 times or less.



#### **Reel Dimension**





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- 6. All design applications should refer to Kingbright application notes available at <a href="http://www.kingbright.com/application\_notes">http://www.kingbright.com/application\_notes</a>

DATE: JAN/17/2017 DRAWN: W.Q.Zhong