




**SPECIFICATION SHEET**

|   |  |  |
|---|--|--|
| <b>SPECIFICATION SHEET NO.</b>          | R0126- BND0603JKYGS01  |  |
| <b>DATE</b>                             | Jan. 26, 2024  |  |
| <b>REVISION</b>                         | A0   | Updated With Most Recent Data - Official First Release |
| <b>DESCRIPTION AND MAIN PARAMETRICS</b> | <p>SMD LED 0603 Dimension L2.0*W1.25*H0.8mm, Color Yellow Green</p> <p>Forward Voltage (VF) 1.8~2.4 V</p> <p>Dominant Wavelength Rank (WL) 567~576nm</p> <p>Luminous Intensity Rank (IV) 1.5~12.5mcd</p> <p>Operating Temp. Range -40°C ~+85°C</p> <p>Package in Tape/Reel,</p> <p>REACH/RoHS/RoHS III Compliant</p> |  |
| <b>CUSTOMER</b>                         |  |  |
| <b>CUSTOMER PART NO.</b>                |  |  |
| <b>CROSS REF. PART NO.</b>              |  |  |
| <b>ORIGINAL MFG/PART NO.</b>            | Oriental Technology/BND-0603JKYG   |  |
| <b>PART CODE</b>                        | BND0603JKYGS01   |  |

|                         |   |  |   |
|-------------------------|---|--|---|
| <b>VENDOR APPROVE</b>   |   |  |   |
| Issued/Checked/Approved |  |  |  |
| DATE: Jan. 26, 2024     |   |  |   |

|                         |  |
|-------------------------|--|
| <b>CUSTOMER APPROVE</b> |  |
|                         |  |
| DATE:                   |  |

**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**MAIN FEATURE**

- Wide Viewing Angle 120degree
- High Luminous Intensity and Low Power Dissipation
- Reflow Solderable
- Suitable for SMT process
- Cross Competitors Parts
- REACH/RoHS/RoHS III Complaint



**APPLICATION**

- Optical Indicator
- Indoor Display
- Backlighting In Dashboard And Switch
- Backlighting For LCD, Symbol And Display

**RFQ**  
Request For Quotation

**PART CODE GUIDE**

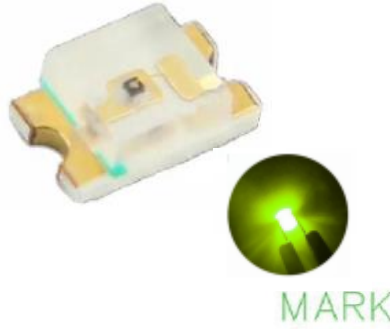
| BND0603 | JK | YG | S01 | ( ) |
|---------|----|----|-----|-----|
| 1       | 2  | 3  | 4   | 5   |

1. BND0603: Part family Code for SMD LED 0603 Series Red Clear Color Dimensions L2.0\*W1.25\*H0.8mm
2. JK: QC Code
3. YG: Color code, R: Red Clear; B: Blue Clear; G: Pure Green; YG: Yellow Green Clear; W: White Clear; RGB: Red/Green/Blue Tri-color.
4. S01: Internal Control Code or special Parameters code letter A~Z or digits (1-9)
5. ( ): Custom Parameters code letter A~Z or digits (1-9); Blank: N/A

**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**DIMENSION** – (Unit: mm, Tol.: +/-0.1mm)

Image For Reference

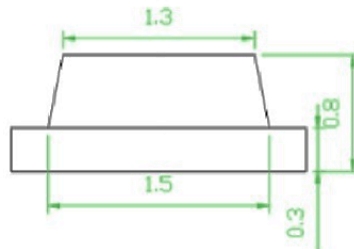
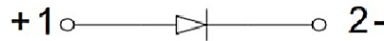
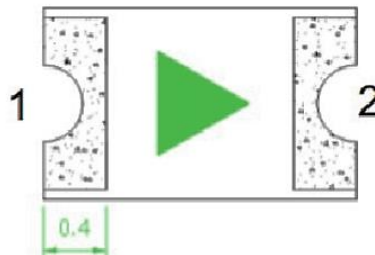
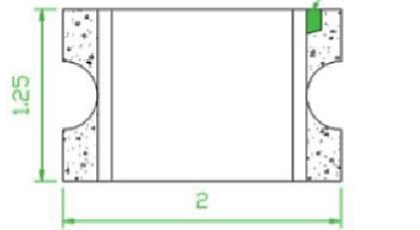


**BND0603 Series**

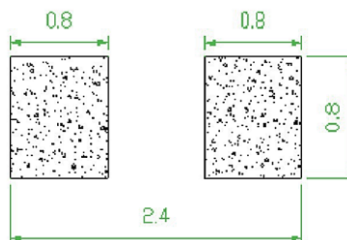
Size Code 0603

Dimension

L2.0\*W1.25\*H0.8mm



**Recommend Pad Layout**



**SMD LED 0603 SERIES YELLOW GREEN COLOR**
**MAXIMUM RATING**  $T_s=25^{\circ}\text{C}$ , RH60%

| PARAMETERS  | SYMBOL | VALUES  | UNIT |
|---|--------|---------|------|
| Operating Temperature   | Top    | -40~+85 | °C   |
| Storage Temperature   | Tstg   | -40~+85 | °C   |
| Junction Temperature  | Tj     | 110     | °C   |
| Forward Current ( $T_s=25^{\circ}\text{C}$ )                    | IF     | 30      | mA   |
| Peak Forward Current<br>Duty ratio=1/10, Pulse Width=0.1ms      | IFs    | 100     | mA   |
| Reverse Voltage ( $T_s=25^{\circ}\text{C}$ )                    | VR     | 5.0     | V    |
| Electrostatic Discharge<br>(acc.to ANSI/ESDA/JEDEC JS-001-2017) | VESD   | ≥2.0    | kV   |

**OPTICAL & ELECTRICAL CHARACTERISTICS**  $I_F=5.0\text{mA}$ ,  $T_s=25^{\circ}\text{C}$ , RH60%

| Parameters                     | Symbol                              | Values |      |      | Unit |
|--------------------------------|-------------------------------------|--------|------|------|------|
|                                |                                     | Min.   | Typ. | Max. |      |
| Peak Wavelength                | $\lambda_{\text{peak}}$             | -      | 574  | -    | nm   |
| Dominant wavelength            | $\lambda_{\text{dom}}$              | 567    | 571  | 576  | nm   |
| Luminous Intensity Rank @5.0mA | Iv                                  | 1.5    | -    | 12.5 | mcd  |
| Spectral bandwidth at 50% IV   | $\Delta\lambda$                     | -      | 20   | -    | nm   |
| Viewing Angle                  | $2\theta_{1/2}$                     | -      | 120  | -    | Deg  |
| Forward Voltage                | V <sub>F</sub>                      | 1.8    | -    | 2.4  | V    |
| Reverse Current                | I <sub>R</sub> (V <sub>R</sub> =5V) | -      | -    | 10   | μA   |
| Power Dissipation              | P <sub>D</sub>                      | -      | 75   | -    | mW   |

**SMD LED 0603 SERIES YELLOW GREEN COLOR**
**BIN CODE LIST**

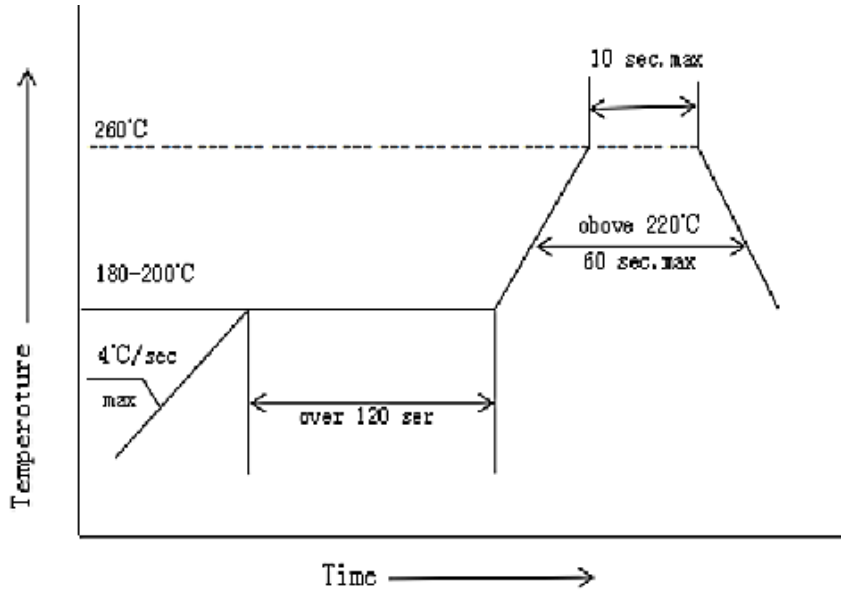
| PARAMETERS  | SYMBOL | VALUES   | TOLERANCE | UNIT |
|---|--------|----------|-----------|------|
| Forward Voltage Rank (VF)<br>@IF=5.0mA, Ts=25°C, RH60%      | Vp     | 1.8~2.0  | ±0.05     | V    |
|   | Vq     | 2.0~2.2  |           |      |
|   | VL     | 2.2~2.4  |           |      |
|   |        |          |           |      |
| Dominant Wavelength Rank (WLD)<br>@IF=5.0mA, Ts=25°C, RH60% | WL5    | 567~570  | ±1.5      | nm   |
|   | WL6    | 570~573  |           |      |
|   | WL7    | 573~576  |           |      |
| Luminous Intensity Rank (IV)<br>@IF=5.0mA, Ts=25°C, RH60%   | ML2    | 1.5~2.9  | ±12%      | mcd  |
|   | ML3    | 2.3~4.6  |           |      |
|   | ML4    | 3.7~7.2  |           |      |
|   | ML5    | 5.9~12.5 |           |      |
|   |        |          |           |      |

**Note:**

1. We support custom parameter on the basis of above mentioned Bin Code List if customer required.
2. Custom parameter code can be added as per Part Code Guide Page 2.

**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**REFLOW SOLDERING CHARACTERISTICS**



| PROFILE FEATURE                                 |                              | PB-FREE ASSEMBLY    |
|---|------------------------------|---------------------|
| Average Ramp-up Rate (Ts Max to Tp)             |                              | 4°C/second Max      |
| Preheat   | Temperature Min (Ts Min.)    | 180°C               |
|   | Temperature Max (Ts Max.)    | 200°C               |
|   | Time (ts Min. to ts Max.)    | 60~120 seconds Max. |
| Time maintained above                           | Temperature (Tl)             | 220°C               |
|   | Time(ts) maintained above TL | 60 seconds Max.     |
| Peak/Classification Temperature (Tp)            |                              | 260 °C              |
| Time within 5°C of actual Peak Temperature (tp) |                              | 10 seconds Max      |
| Suggest reflow times                            |                              | 2 Times Max.        |

**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**OPTICAL & ELECTRICAL CHARACTERISTICS CURVES** -IF=5.0mA, Ts=25°C, RH60%

Figure 1. Relative Intensity Vs Wavelength

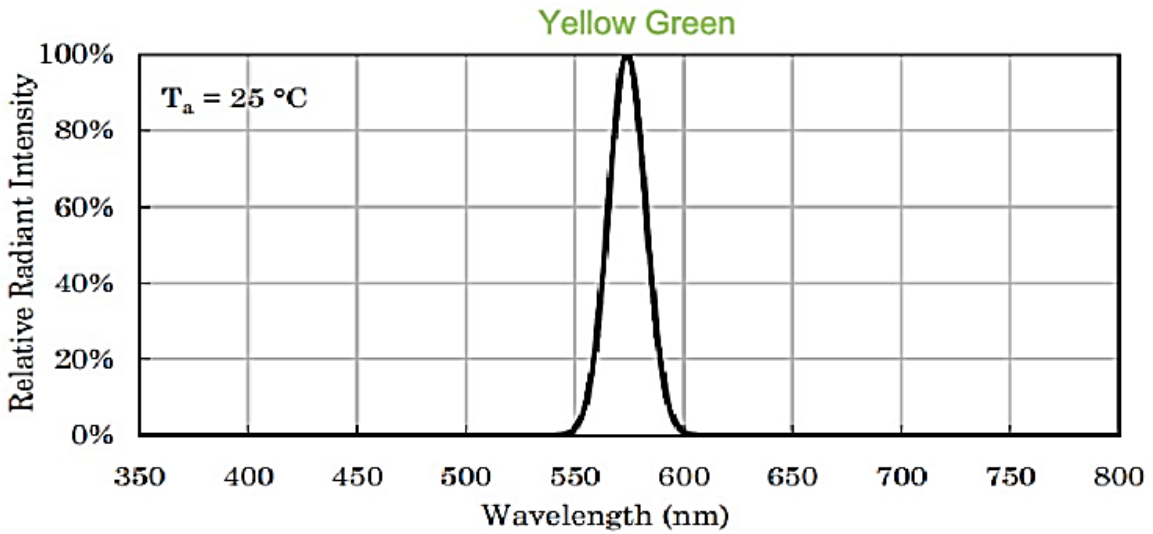
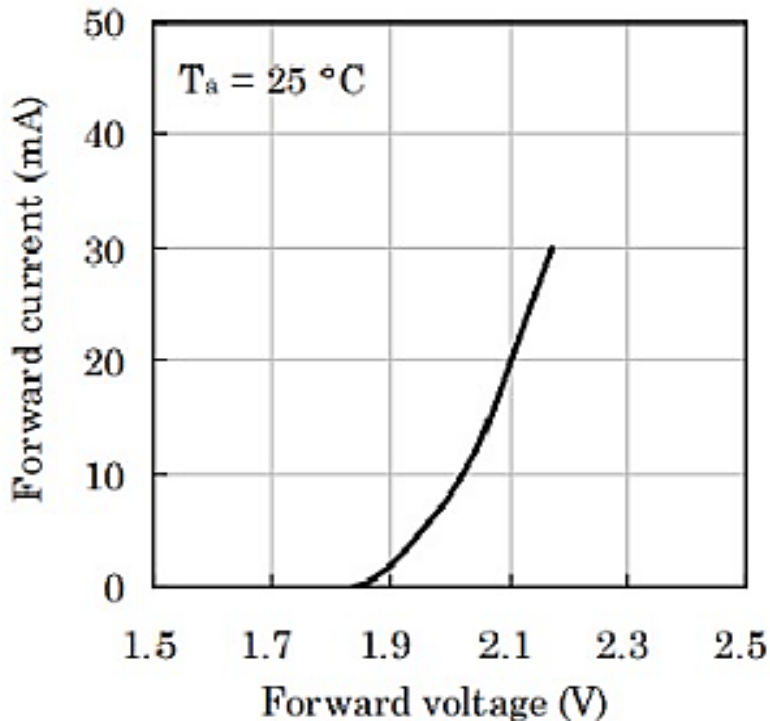


Figure 2. Forward Current Vs. Forward Voltage



**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**OPTICAL & ELECTRICAL CHARACTERISTICS CURVES** -IF=5.0mA, Ts=25°C, RH60%

Figure 3. Luminous Intensity Vs. Forward Current

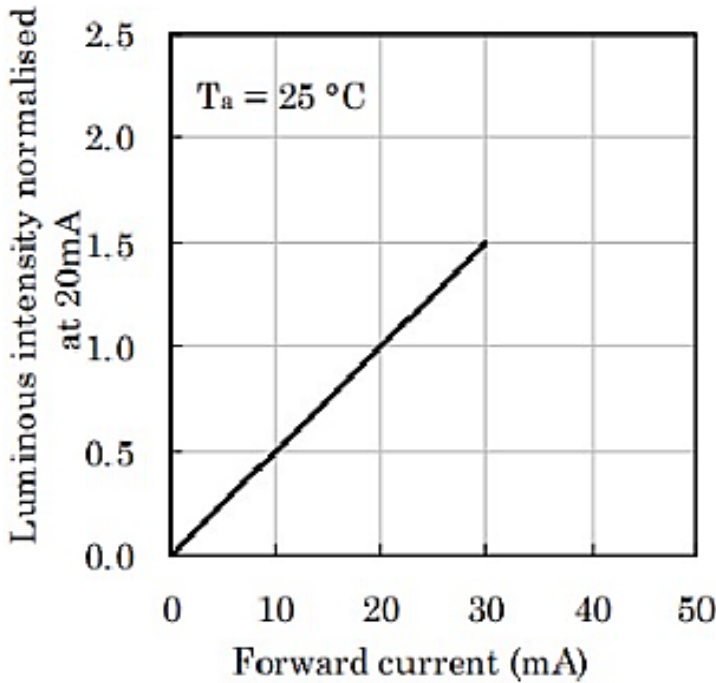
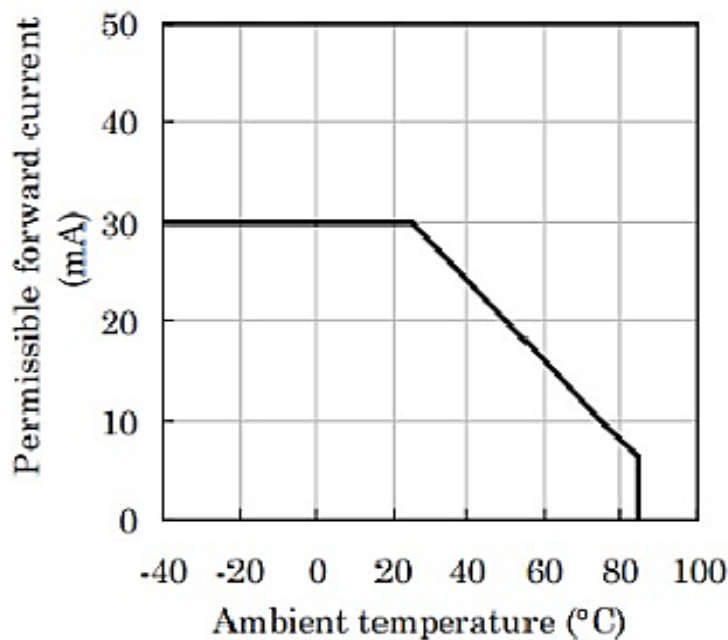


Figure 4. Forward Current Derating Curve





**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**OPTICAL & ELECTRICAL CHARACTERISTICS CURVES** -IF=5.0mA, Ts=25°C, RH60%

Figure 5. Luminous Intensity Vs. Ambient Temperature

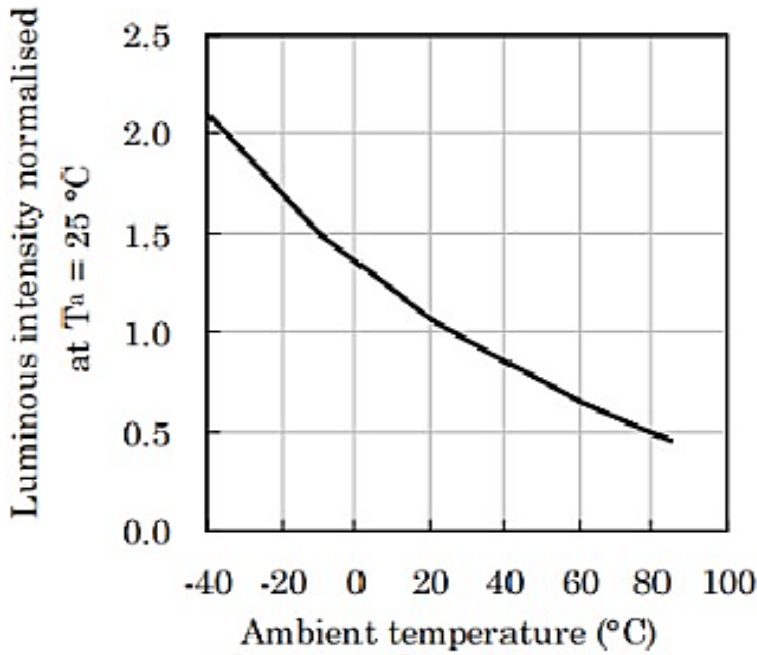
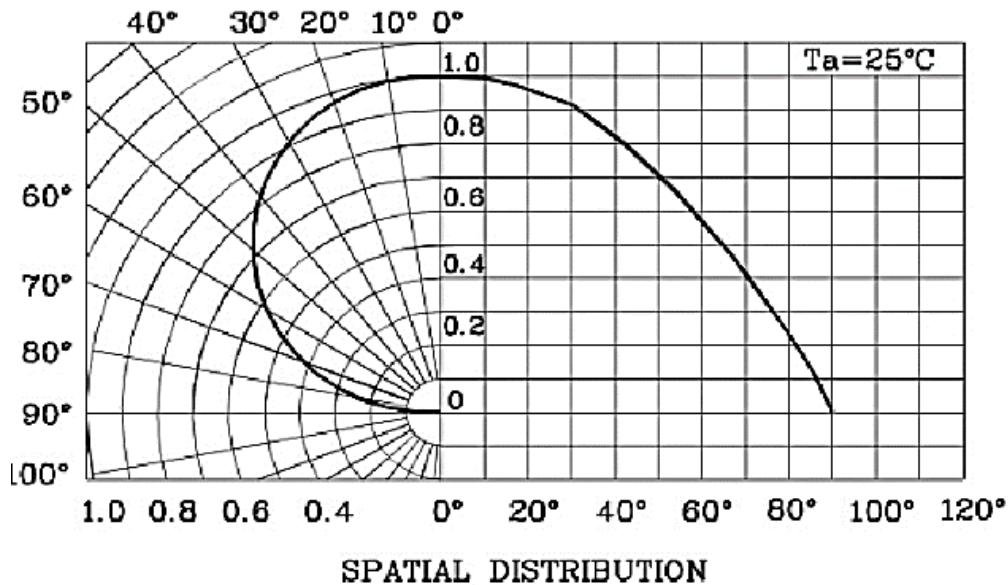


Figure 6. Radiation Diagram



**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**RELIABILITY TEST ITEMS AND CONDITION**

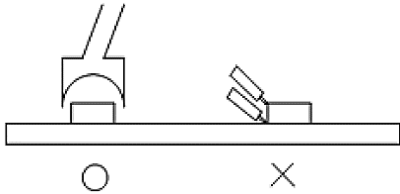
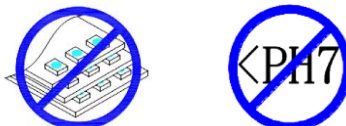
| TEST ITEMS  | TEST CONDITIONS   | REQUIREMENT                 |
|---|---|-----------------------------|
| Solderability   | Solder Temperature : 240 °C<br>Solder Duration:3.5 +/-0.5 sec.  | Solderable Area over<br>95% |
| Thermal Shock Followed by High Temperature & High Humidity Cyclic | -40° → 10min.<br>5 Cycles ↑ ↓ Shift (2~3) min<br>100 °C → 10min<br>25 °C ~55 °C ( 90%~ 95%) RH<br>2 Cycles for 48 hours. Recover for 2 hours. | C = 0 & I **                |
| Resistance for Soldering Heat                                     | Reflow Solder   |                             |
| DC Operating Life   | 1000 hours<br>Forward Current: 20 mA  |                             |
| High Temperature Storage  | 100 °C → 1000 hrs.  |                             |
| High Temperature & Humidity Cyclic                                | 25 °C ~55 °C ( 90%~ 95%) RH<br>6 Cycles for 144 hours. Recover for 2 hours.   |                             |

Reminds

1. The reliability of products shall be satisfied with items listed above
2. Confidence level: 90%; LTPD:10%
3. The technical information shown in the data sheets are limited to the typical characteristics and related circuit samples.

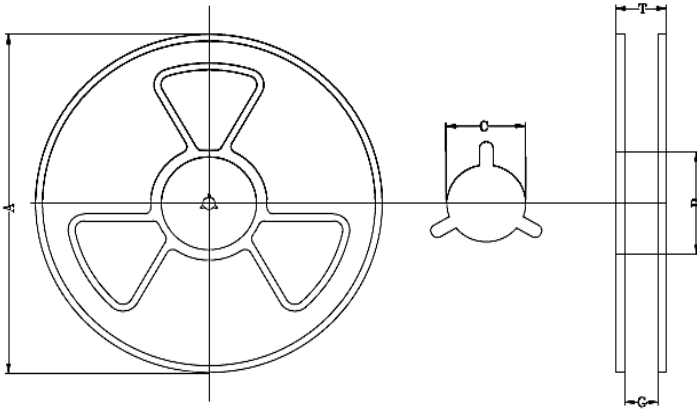
**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**NOTICE CONDITION**

| ITEMS                | TEST CONDITIONS   |
|----------------------|---|
| Soldering by Iron    | <ol style="list-style-type: none"> <li>1. The temperature of Iron must be lower than 300 °C, 3 second by hand soldering</li> <li>2. The hand solder should be done only one times</li> </ol>  |
| Repairing            | <p>Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed before if the characteristics of LEDS will or not be damaged by repair.</p>    |
| Storage              | <ol style="list-style-type: none"> <li>1. Package is sealed: Recommended storage condition @ 5°C ~30°C and Humidity 90% RH Max. for 24 months</li> <li>2. Package is opened: (1) After this bag is opened ,devices that will be applied to infrared to infrared reflow, vapor-phase reflow. A. Completed within 672 hour. B. Stored at 5°C~30°Cand 60% RH or less</li> <li>3. If baking is required, devices must be baked under below conditions 24 hours at 60°C±3°C</li> </ol> |
| Handling Precautions | <ol style="list-style-type: none"> <li>1. Don't stack together assembled PCBs containing LEDs. Impact may scratch the silicone lens or damage</li> <li>2. Not available in the situation of Acidity for PH</li> </ol>    |

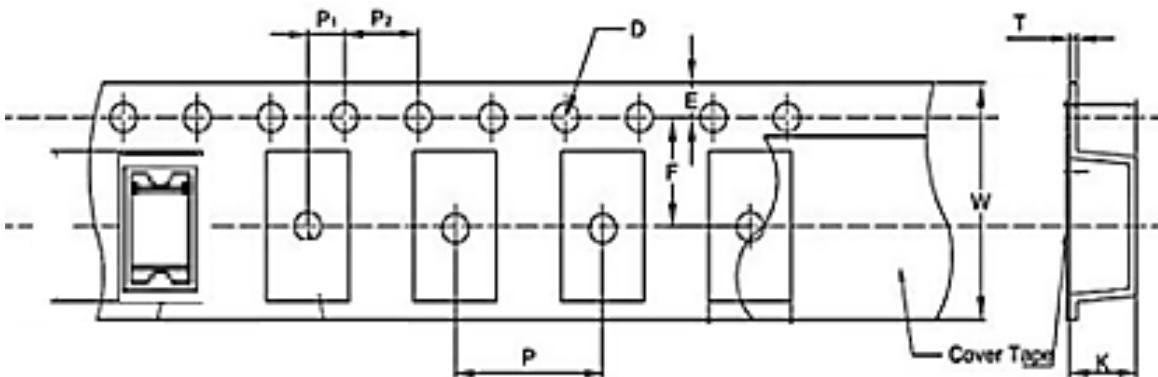
**SMD LED 0603 SERIES YELLOW GREEN COLOR**

**REEL DIMENSION** (Unit: mm 4000pcs/Reel)



| CODE | DIMENSION |
|------|-----------|
| A    | 178.0±2.0 |
| B    | Φ60±2.0   |
| C    | R6.5±0.5  |
| G    | 9.0±1.0   |
| T    | 12.0±1.0  |

**TAPE DIMENSION** (Unit mm)



| CODE      | D     | E     | F     | K     | P     | P1    | P2    | T     | W     |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dimension | 1.50  | 1.75  | 3.50  | 0.70  | 4.00  | 2.00  | 4.00  | 0.235 | 8.00  |
|           | ±0.20 | ±0.10 | ±0.05 | ±0.10 | ±0.10 | ±0.05 | ±0.10 | ±0.1  | ±0.30 |

## SMD LED 0603 SERIES YELLOW GREEN COLOR

### IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
4. NextGen Component, Inc (*NextGen*) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
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7. *NextGen* products are not authorized for use as critical components in life support devices or systems without express written approval by *NextGen*.
8. *NextGen* requires that customers first obtain an RMA (Returned Merchandise Authorization) number prior to returning any products. Returns must be made within 30 days of the date of invoice, be in the original packaging, unused and like-new condition. At the time of quoting or purchasing, a product may say that it is Non-Cancelable/ Non-Returnable (NCNR). These products are not returnable and not refundable.