# PRODUCT SPECIFICATION

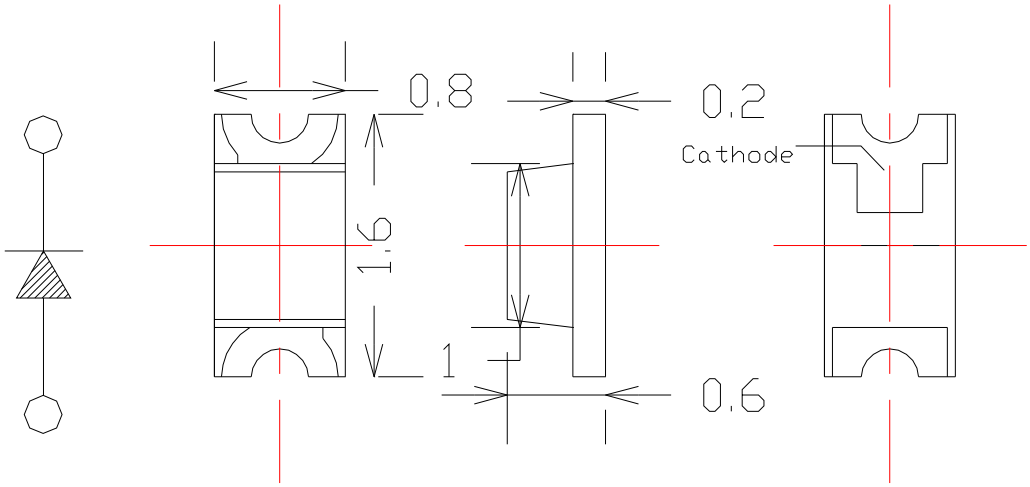
**Part No: 0603white**

**Colour: white**

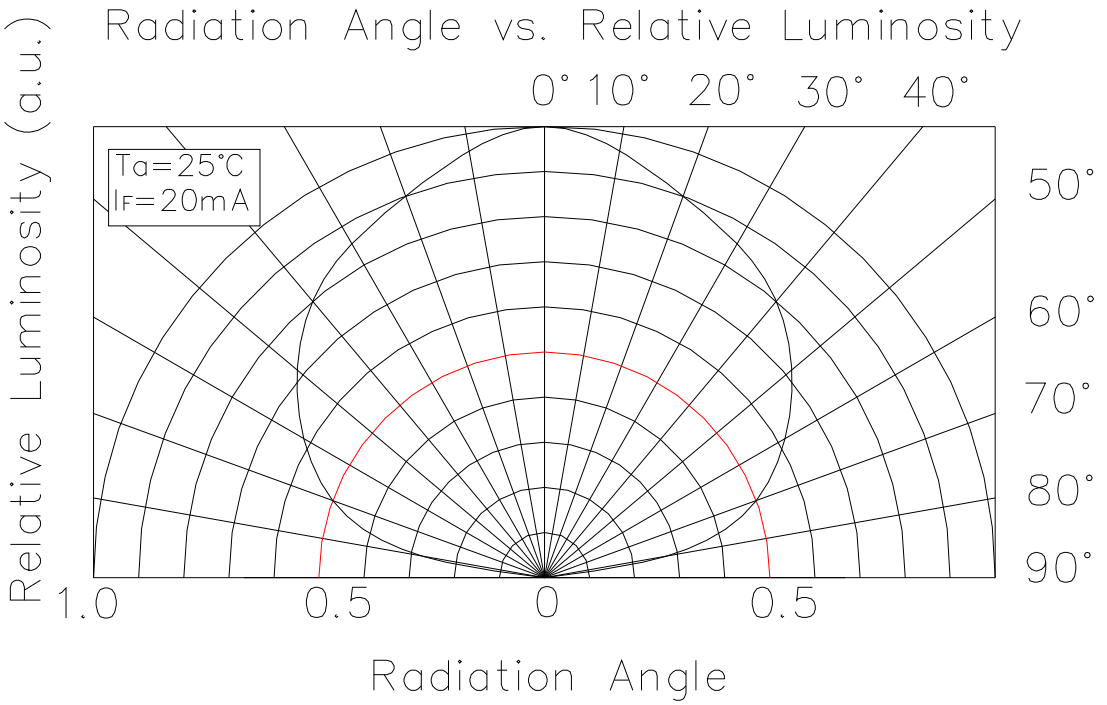
| Customer Approved | Checked | Prepared |
|---|---|---|
| | | |

# SMD-LED 0603 white

■ **Outline Dimension:**




■ **View Angle:**



# SMD-LED 0603 white

## ■Absolute Maximum Ratings (Ta = 25℃)

| Items | Symbol | Absolute maximum Rating | Unit |
|---|---|---|---|
| Power Dissipation | $P_D$ | 120 | mW |
| Forward Current(DC) | $I_F$ | 25 | mA |
| Peak Forward Current | $I_{FP}$ | 100 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Operation Temperature | Topr | - 20～ + 75 | ℃ |
| Storage Temperature | Tstg | - 30～ + 80 | ℃ |
| Lead Soldering Temperature | Tsol | Max.260℃ for 5 sec Max.<br>(3min from the base of the epoxy bulb) | |

**Pulse width≤0.1msec duty≤1/10**

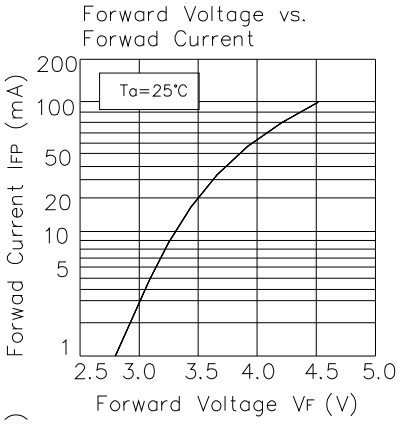
## ■Typical Electrical & Optical Characteristics(Ta=25°)

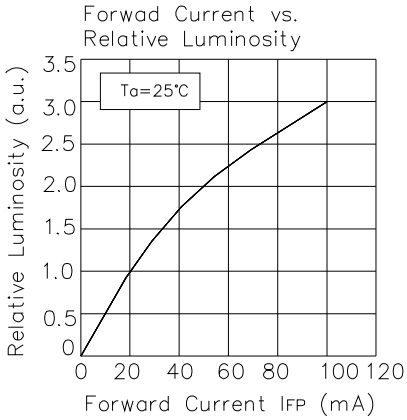
| Items | Symbol | Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Forward Voltage | VF | $I_F$ =20mA | 3.0 | 3.4 | 3.6 | V |
| Reverse Current | IR | VR =5V | --- | --- | 50 | μA |
| Chromatic Coordinates | X, Y | $I_F$ =20mA | --- | 0.31,0.32 | --- | |
| Luminous Intensity | Iv | $I_F$ =20mA | 110 | 140 | | mcd |
| View Angle | 2θ1/2 | $I_F$ =20mA | --- | 140 | --- | Deg |

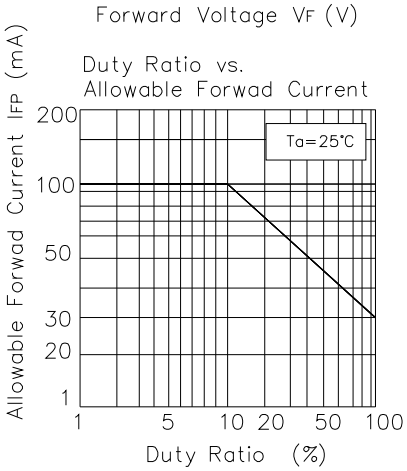
| Rank | Luminous Intensity (mcd) | Rank | Luminous Intensity (mcd) | Rank | Luminous Intensity (mcd) |
|---|---|---|---|---|---|
| K | 105~150 | L | 150~210 | | |

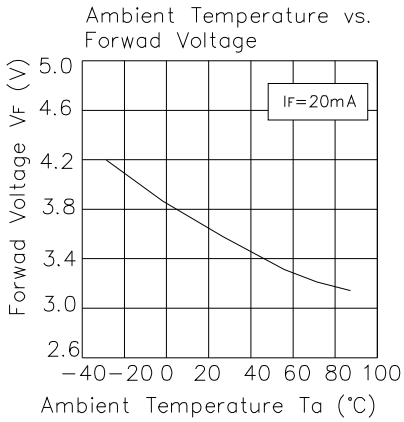
# SMD-LED 0603 white

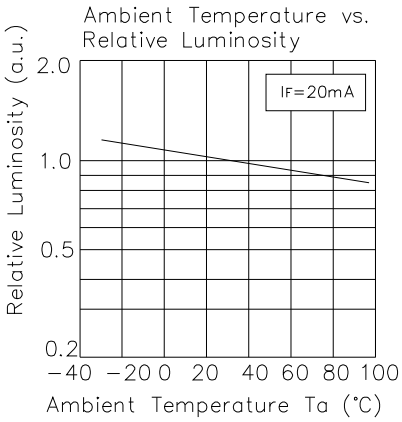
## ■ Typical Electrical/Optical Characteristics Curves:

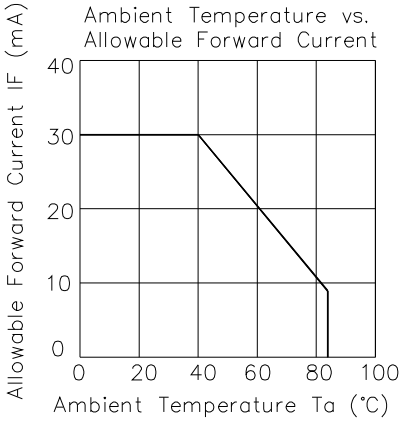


# SMD-LED 0603 white

## ■ Reliability Test :

| Classific-ation | Test Item | Standard Test Method | Test Conditions | Durati-on | Units Tested | Number of Damaged |
|---|---|---|---|---|---|---|
| Life Test | Operating Life Test | JIS7021:B4<br>MIL-STD-202:107D<br>MIL-STD-750:1026 | $T_A$=25℃±5℃,IF=30mA | 1000h | 22 | 0/22 |
| Environment Test | High Temperature Storage | JIS7021:B10<br>MIL-STD-202:210A<br>MIL-STD-750:2031 | $T_A$=100℃±5℃ | 1000h | 22 | 0/22 |
| | Low Temperature Storage | JIS7021:B12 | $T_A$=－55℃±5℃ | 1000h | 22 | 0/22 |
| | Temp &Humidity Test | JIS7021:B11<br>MIL-STD-202:103D | $T_A$=85℃±5℃<br>RH=85％±5℃RH | 1000h | 22 | 0/22 |
| | Thermal Shock Test | JIS7021:B4<br>MIL-STD-202:107D<br>MIL-STD-750:1026 | －10℃±5℃<br>←→100℃<br>±5℃<br>5min - 5min | 50 Cycles | 22 | 0/22 |
| | Temperature Cycling Test | JIS7021:A3<br>MIL-STD-202:107D<br>MIL-STD-750:1051 | －55℃～25℃～85℃～25℃<br>3min -5min-30min- 5min | 50 Cycles | 22 | 0/22 |
| Mechanical Test | Resistance to Soldering Heat | JIS7021:A1<br>MIL-STD-202:210A<br>MIL-STD-750:2031 | 260±5℃,<br>10±1sec | 1 time | 22 | 0/22 |
| | Lead Integrity | MIL-STD-750D<br>Method 2036.3 | Load 2.5N<br>0°～90°～0° | 3time | 22 | 0/22 |

2.Criteria for Judging The Damage

| Item | Symbol | Test Conditions | Criteria for Judgment | |
|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=20mA | Min | Max |
| Luminous Intensity | $I_V$ | $I_F$=20mA | --- | Initial Data × 1.1 |
| | | | Initial Data × 0.7 | --- |
| Reverse Current | $I_R$ | $V_R$=5V | --- | 100μA |