# BRIGHT LED ELECTRONICS CORP.

## SURFACE MOUNT CHIP LED LAMP SPECIFICATION

●COMMODITY：SURFACE MOUNT CHIP LED LAMP

●DEVICE NUMBER：BL-HJ736 VERSION：1.0 / 2000.12.05

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

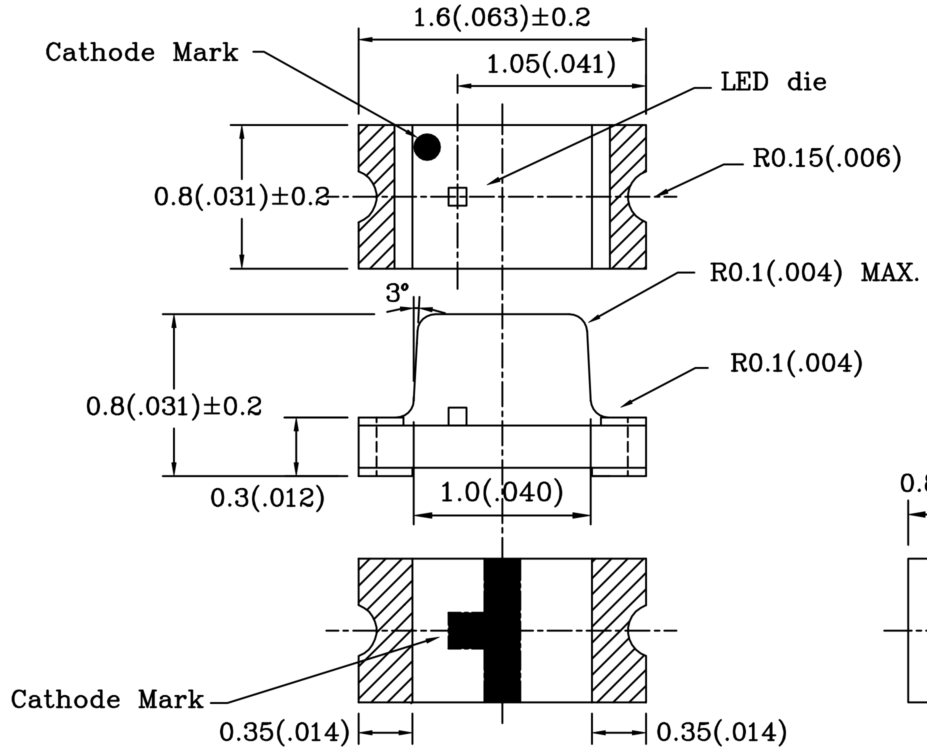
| Chip | | Lens Appearance | Absolute Maximun Rating | | | | Electro-optical Data (At 20mA) | | | | Viewing Angle 2θ1/2 (deg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Emitted Color | Peak Wave Length λP(nm) | | Δλ (nm) | Pd (mW) | If (mA) | Peak If(mA) | Vf(V) | | Iv Typ. (mcd) | | |
| | | | | | | | Typ. | Max. | Min | Typ. | |
| Super Orange | 630 | Water Clear | 17 | 100 | 30 | 150 | 2.2 | 2.6 | 40.0 | 60.0 | 120 |

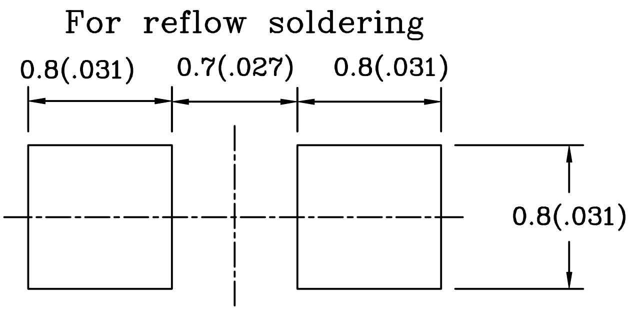
Remark：Viewing angle is the Off-axis angle at which the luminous intensity is half the axial luminous intensity.

●ABSOLUTE MAXIMUN RATINGS (Ta=25℃)

Reverse Voltage ............................................................ 5V
Reverse Current ($V_R$=5V) ............................................................ ≦100μA
Operating Temperature Range ............................................................ -25℃ ～ 80℃
Storage Temperature Range ............................................................ -30℃ ～ 85℃

●PACKAGE DIMENSIONS





NOTES: 1.All dimensions are in millimeters (inches).
2.Tolerance is ± 0.10mm (0.004) unless otherwise specified.
3.Specifications are subject to change without notice.
4.Condition for IFp is pulse of 1/10 duty and 0.1msec width.

RELEASED：許 2000.12.05 耀宗

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## SURFACE MOUNT CHIP LED LAMP SPECIFICATION

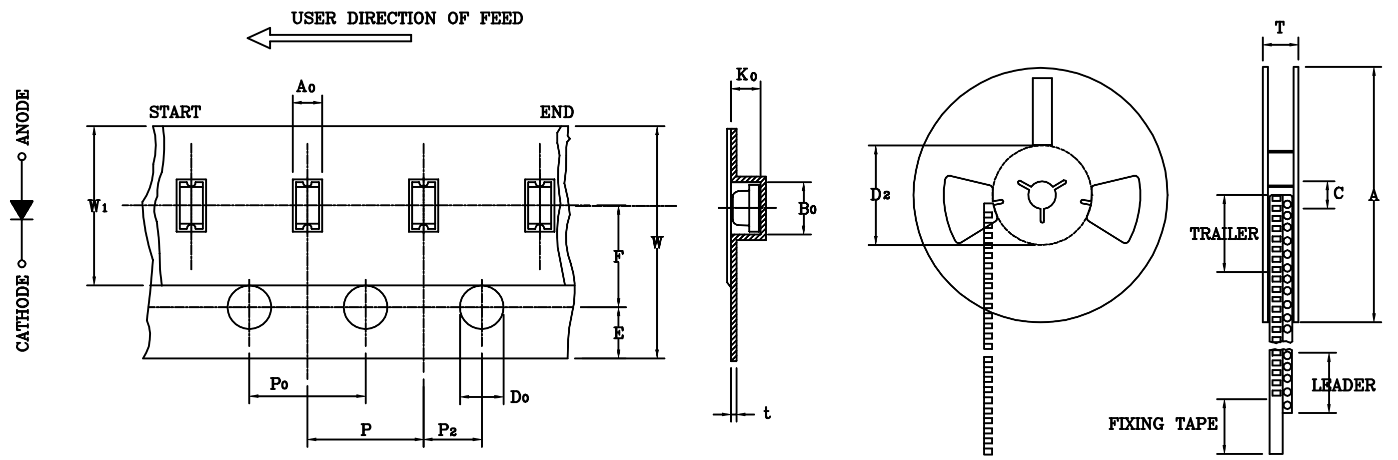
●COMMODITY : SURFACE MOUNT CHIP LAMP

●DEVICE NUMBER:BL-HJ736-TR

VERSION:1.0 / 2000.12.05

●TAPPING AND PACKAGING SPECIFICATION

| ITEM | SYMBOL | SPECIFICATION | | | |
|---|---|---|---|---|---|
| | | Minimum | | Maximum | |
| | | mm | inch | mm | inch |
| Tape Feed Hole Diameter (DIA) | $D_0$ | 1.40 | 0.055 | 1.60 | 0.063 |
| Feed Hole Location | E | 1.65 | 0.064 | 1.85 | 0.073 |
| Centers Line Dimensions Length Direction | F | 3.45 | 0.135 | 3.55 | 0.139 |
| Compartment Depth | $K_0$ | 0.95 | 0.037 | 1.07 | 0.042 |
| Compartment Pitch | P | 3.90 | 0.153 | 4.10 | 0.161 |
| Sprocket Hole Diameter | $P_0$ | 3.90 | 0.153 | 4.10 | 0.161 |
| Centers Line Dimensions Length Direction | $P_2$ | 1.95 | 0.076 | 2.05 | 0.080 |
| Carrier Tape Thickness | t | — | — | 0.30 | 0.012 |
| Carrier Tape Width | W | 7.70 | 0.303 | 8.30 | 0.326 |
| Flange Diameter | A | 178.0 | 7.008 | 180.0 | 7.087 |
| Hub Spindle Hole | C | 12.50 | 0.492 | 13.50 | 0.531 |
| Hub Diameter | $D_2$ | 70.00 | 2.755 | 72.00 | 2.830 |
| Fixing Tape Width | $W_1$ | 5.25 | 0.206 | 5.35 | 0.210 |
| Flange Space Between Flanges | T | 12.50 | 0.492 | 13.50 | 0.531 |
| Compartment Length | $A_0$ | 0.95 | 0.037 | 1.07 | 0.042 |
| Compartment Width | $B_0$ | 1.75 | 0.068 | 1.90 | 0.074 |



NOTE: 3000 pcs PER REEL

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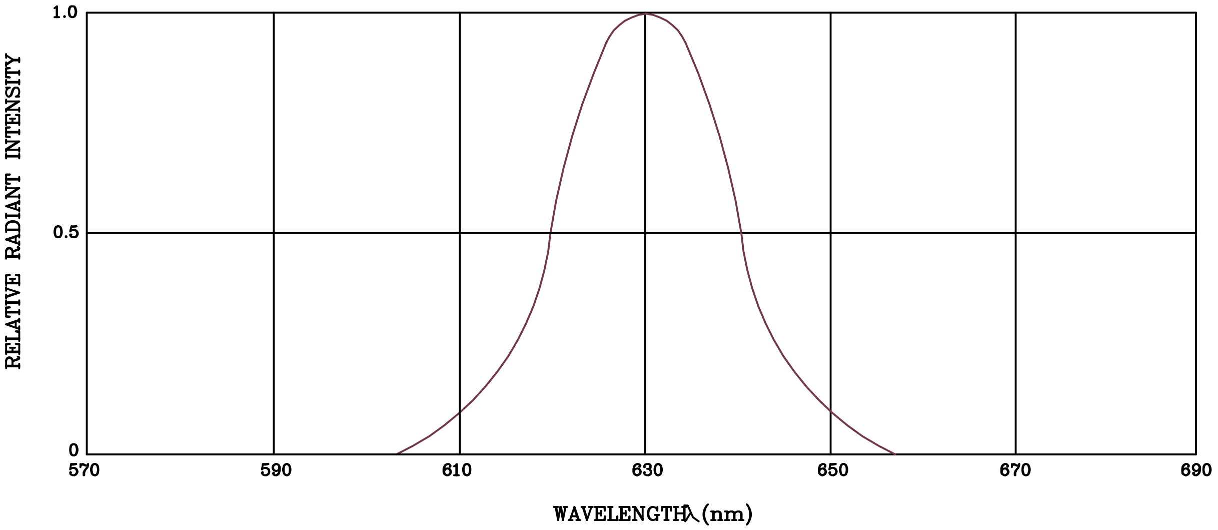
# BRIGHT LED ELECTRONICS CORP.

## TYPICAL CHARACTERISTICS

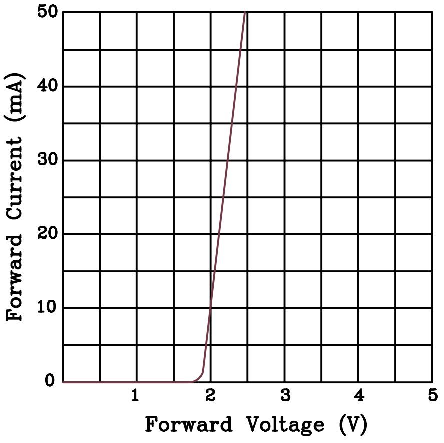
## DEVICE NUMBER: BL-HK736

VERSION:1.0/2000.12.05

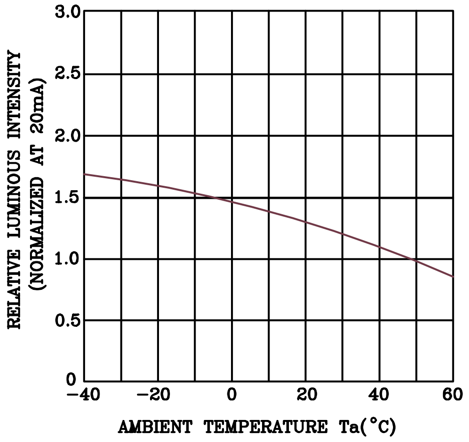
SPECTRAL DISTRIBUTION



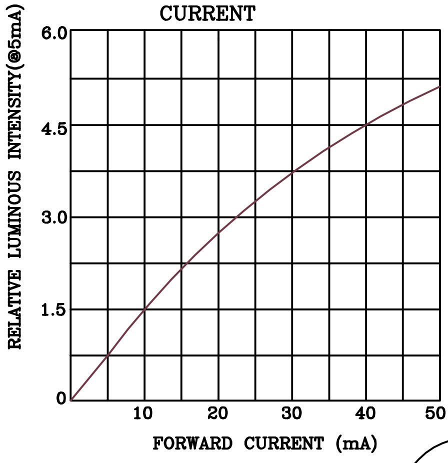
FORWARD CURRENT VS. FORWARD VOLTAGE



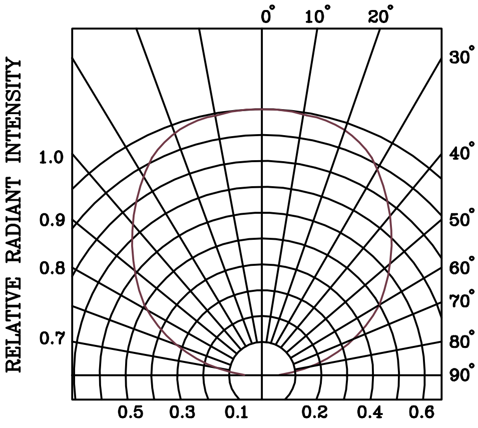
RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



RADIATION DIAGRAM



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# BRIGHT LED ELECTRONICS CORP.

# RELIABILITY TEST

**DEVICE NO.: BL-HJ736** VERSION：1.0 / 2000.12.05

| Classification | Test Item | Reference Standard | Test Conditions | Result |
|---|---|---|---|---|
| Endurance Test | Operation Life | MIL-STD-750:1026<br>MIL-STD-883:1005<br>JIS C 7021 :B-1 | Connect with a power If=20mA<br>Ta=Under room temperature<br>Test time=1,000hrs | 0/20 |
| | High Temperature High Humidity Storage | MIL-STD-202:103B<br>JIS C 7021 :B-11 | Ta=+65℃±5℃<br>RH=90%-95%<br>Test time=1,000hrs | 0/20 |
| | High Temperature Storage | MIL-STD-883:1008<br>JIS C 7021 :B-10 | High Ta=+85℃±5℃<br>Test time=1,000hrs | 0/20 |
| | Low Temperature Storage | JIS-C-7021 :B-12 | Low Ta=-35℃±5℃<br>Test time=1,000hrs | 0/20 |
| Environmental Test | Temperature Cycling | MIL-STD-202:107D<br>MIL-STD-750:1051<br>MIL-STD-883:1010<br>JIS C 7021 :A-4 | -35℃ ～+25℃ ～+85℃ ～+25℃<br>60min 20min 60min 20min<br>Test Time=5cycle | 0/20 |
| | Thermal Shock | MIL-STD-202:107D<br>MIL-STD-750:1051<br>MIL-STD-883:1011 | +85℃±5℃ ～-35℃±5℃<br>20min 20min<br>Test Time=10cycle | 0/20 |
| | Solder Resistance | MIL-STD-202:201A<br>MIL-STD-750:2031<br>JIS C 7021 :A-1 | Preheating：<br>140℃-160℃,within 2 minutes.<br>Operation heating：<br>235℃(Max.),within 10 seconds.(Max.) | 0/20 |

JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

| Measuring items | Symbol | Measuring conditions | Judgement criteria for failure |
|---|---|---|---|
| F0rward voltage | VF ( V) | IF=20mA | Over Ux1.2 |
| Reverse current | IR(uA) | VR=5V | Over Ux2 |
| Liminous intensity | IV ( mcd ) | IF=20mA | Below SX0.5 |

Note: 1.U means the upper limit of specifide characteristics. S means initial value.

2.Measurment shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.

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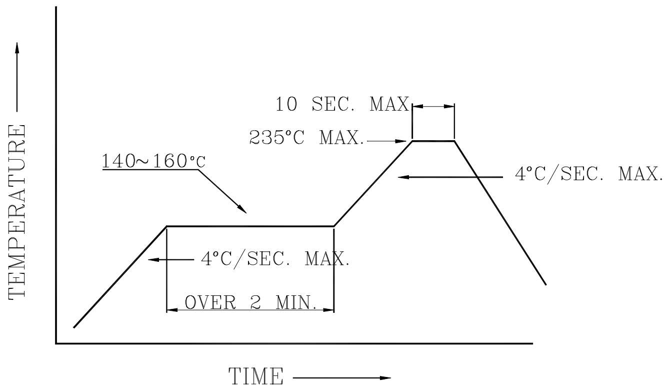
**●DEVICE NO.: BL-HJ736**

## 1. SOLDERING :

**Manual Of Soldering**
**The temperature of the iron tip should not be highter than 300℃(572℉)and**
**Soldering whthin 3 seconds per solder-land is to be observed.**
**Reflow Soldering**
**Preheating : 140℃~160℃±5℃,within 2 minutes.**
**Operation heating : 235℃(MAX.) within 10 seconds.(Max)**
**Gradual Cooling (Avoid quenching).**



## 2. Handling :

**Care must be taken not to cause to the epoxy resin portion of BRIGHT LEDs while it is exposed to high temperature.**
**Care must be taken not rub the epoxy resin portion of BRIGHT LEDs with hard or sharp article such as the sand blast and the metal hook**

## 3. Notes for designing :

**Care must be taken to provide the current limiting resistor in the circuit so as to drive the BRIGHT LEDs within the rated figures.Also, caution should be taken not to overload BRIGHT LEDs with instantaneous voltage at the turning ON and OFF of the circuit.**
**When using the pulse drive care must betaken to keep the average Current within the rated figures. Also,the circuit should be designed soas be sudjected to reverse voltage when turning off the BRIGHT LEDs.**

## 4. Storage :

**In order to avoid the absorption of moisture.It is recommended tosolder BRIGHT LEDs as soon as possible after unpacking the sealed envelope**
**If the envelope is still pack, to store it in the environment as following :**
**Temperature : 5℃-30℃(41℉)Humidity : RH 60% Max.**

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