

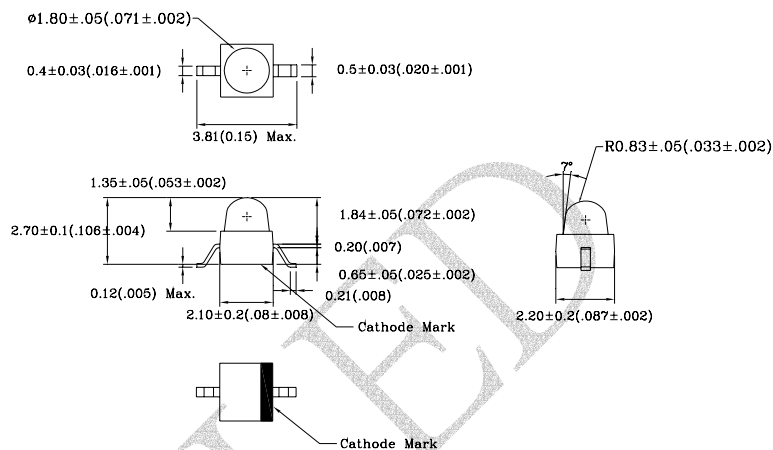
● Features:

1. Emitted Color: Super Yellow.
2. Lens Appearance: Water Clear.
3. Low cost plastic package.
4. This product doesn't contain restriction Substance, comply ROHS standard.

● Applications:

1. Backlighting: LCDs, Key pads advertising.
2. Status indicators: Consumer & industrial electronics.
3. General use.

● Package Dimensions:



NOTES:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.10 mm unless otherwise specified.
3. Specifications are subject to change without notice.

● Absolute Maximum Ratings(Ta=25°C)

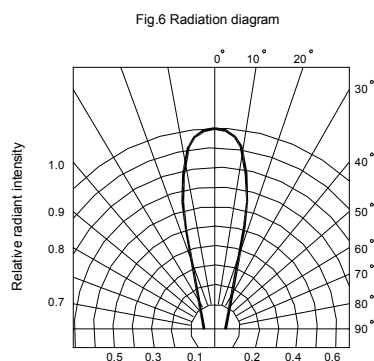
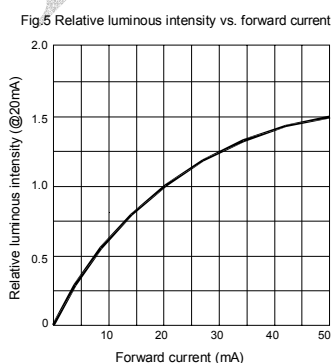
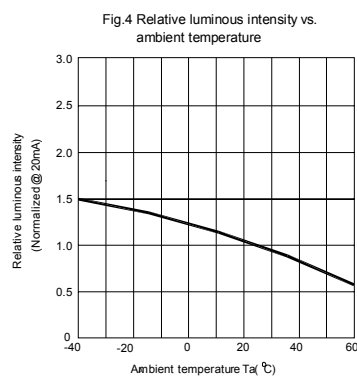
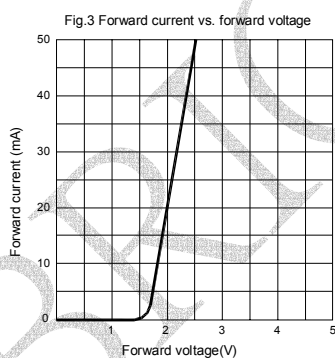
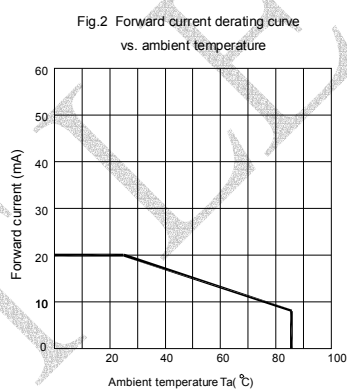
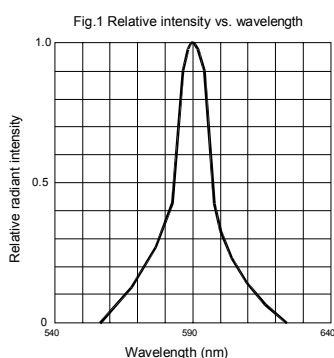
| Parameter | Symbol | Rating | Unit |
|--------------------------|-----------------|--------------|------|
| Power Dissipation | Pd | 50 | mW |
| Forward Current | I _F | 20 | mA |
| Peak Forward Current * 1 | I _{FP} | 100 | mA |
| Reverse Voltage | V _R | 5 | V |
| Operating Temperature | Topr | -40°C ~ 85°C | - |
| Storage Temperature | Tstg | -40°C ~ 85°C | - |
| Soldering Temperature | Tsol | See Page 4 | - |

* 1 Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

● Electrical and optical characteristics(Ta=25°C)

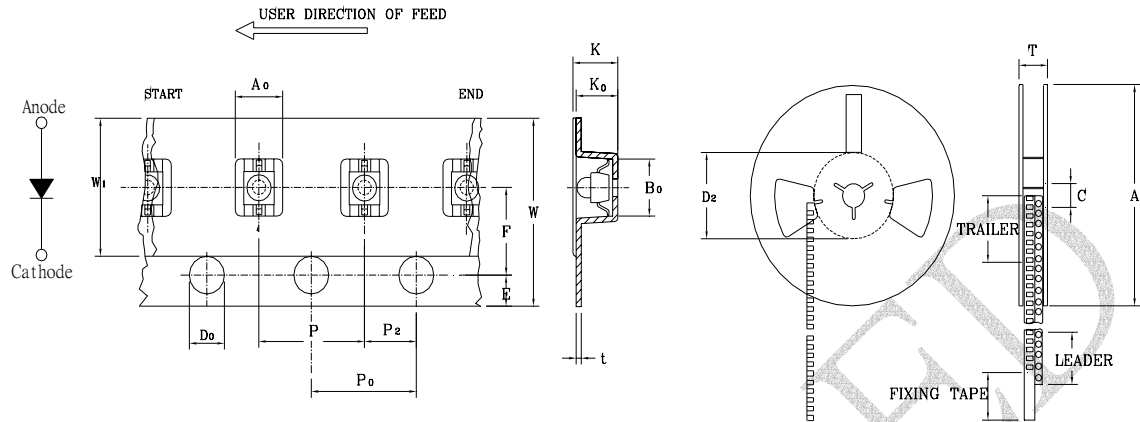
| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|----------------------|-------------------|----------------------|------|------|------|------|
| Forward Voltage | V _f | I _F =20mA | - | 2.2 | 2.6 | V |
| Luminous Intensity | I _v | I _F =20mA | 210 | 400 | - | mcd |
| Reverse Current | I _R | V _R =5V | - | - | 100 | μA |
| Peak Wave Length | λ _p | I _F =20mA | - | 590 | - | nm |
| Dominant Wave Length | λ _d | I _F =20mA | 584 | - | 594 | nm |
| Viewing Angle | 2θ _{1/2} | I _F =20mA | - | 35 | - | deg |

● Typical Electro-Optical Characteristics Curves

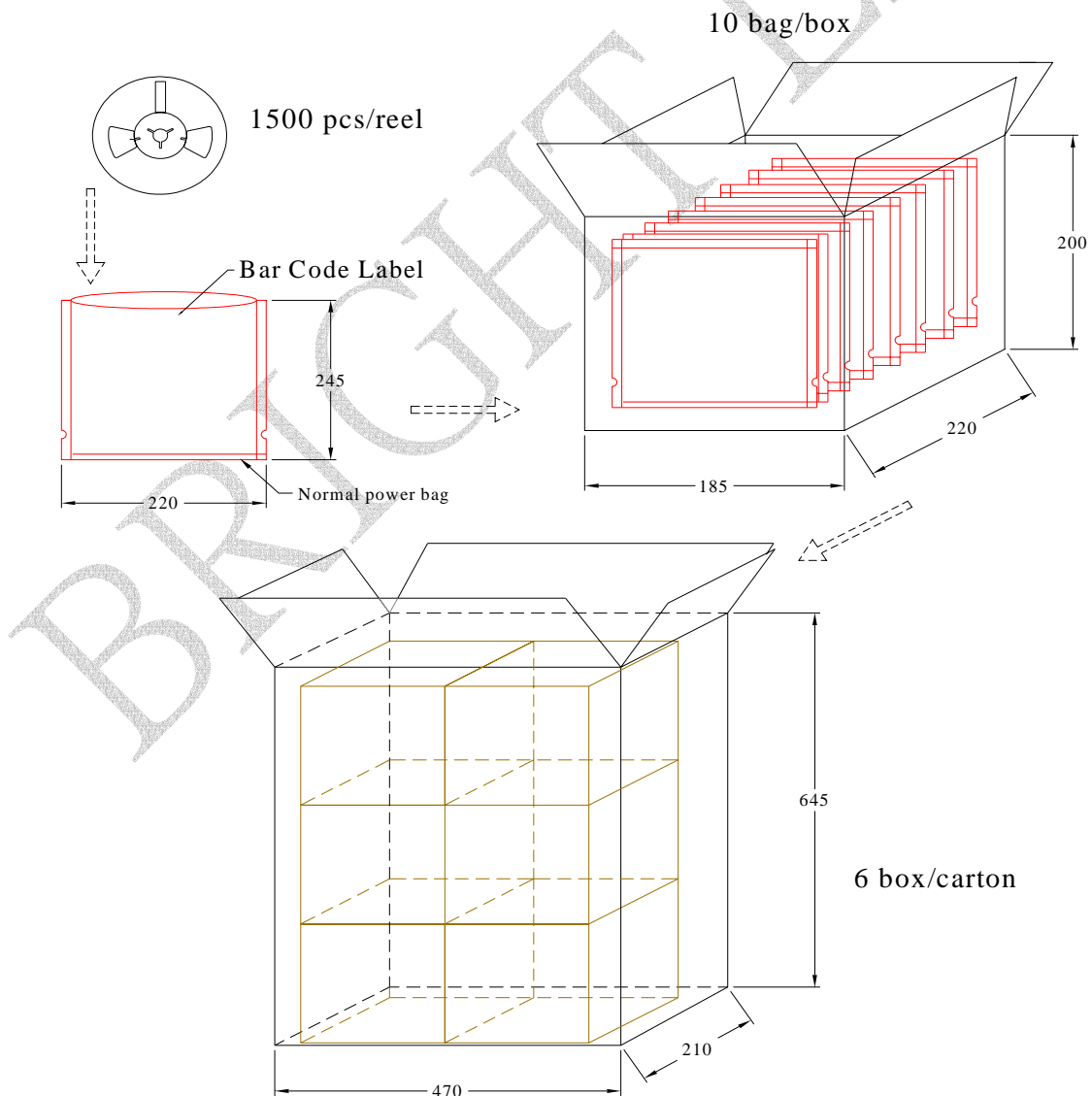


● Tapping and packaging specifications(Units: mm)

Quantity:1500PCS



● Package Method:(unit:mm)



● Reliability Test

| Classification | Test Item | Reference Standard | Test Conditions | Result |
|--------------------|--|--|---|--------|
| Endurance Test | Operation Life | MIL-STD-750D:1026 MIL-STD-883D:1005 JIS-C-7021 :B-1 | Ta: Under room temperature Test time:1,000hrs IF=Product Recommended IF | 0/32 |
| | High Temperature High Humidity Storage | MIL-STD-202F:103B JIS-C-7021 :B-11 | Ta:85±5℃ RH:90%-95% Test time:240hrs | 0/32 |
| | High Temperature Storage | MIL-STD-883:1008 JIS-C-7021 :B-10 | Ta:100±5℃ Test time:1,000hrs | 0/32 |
| | Low Temperature Storage | JIS-C-7021 :B-11 | Ta: -40±5℃ Test time=1,000hrs | 0/32 |
| Environmental Test | Temperature Cycling | MIL-STD-202F:107D MIL-STD-750D:1051 MIL-STD-883D:1010 JIS-C-7021 :A-2 | Ta:-35±5℃~25±5℃~85±5℃~25±5℃ 30min 5min 30min 5min | 0/32 |
| | Thermal Shock | MIL-STD-202F:107D(1980) MIL-STD-750D:1051(95) MIL-STD-883D:1011(1991) | Ta:-45±5℃ ~+85±5℃ 20min 20 min Time: 40min/cycle 10cycle | 0/32 |
| | Wetting balance | MIL-STD-883:2003 MIL-STD-202F:208D MIL-STD-883D:2003 | Ta:230±5℃ Time:5±0.5s | 0/32 |
| | Solder Resistance | MIL-STD-202F:210A MIL-STD-883D:1011 JIS-C-7021 :A-1 | Ta:260±10℃ Time:10±1s | 0/32 |

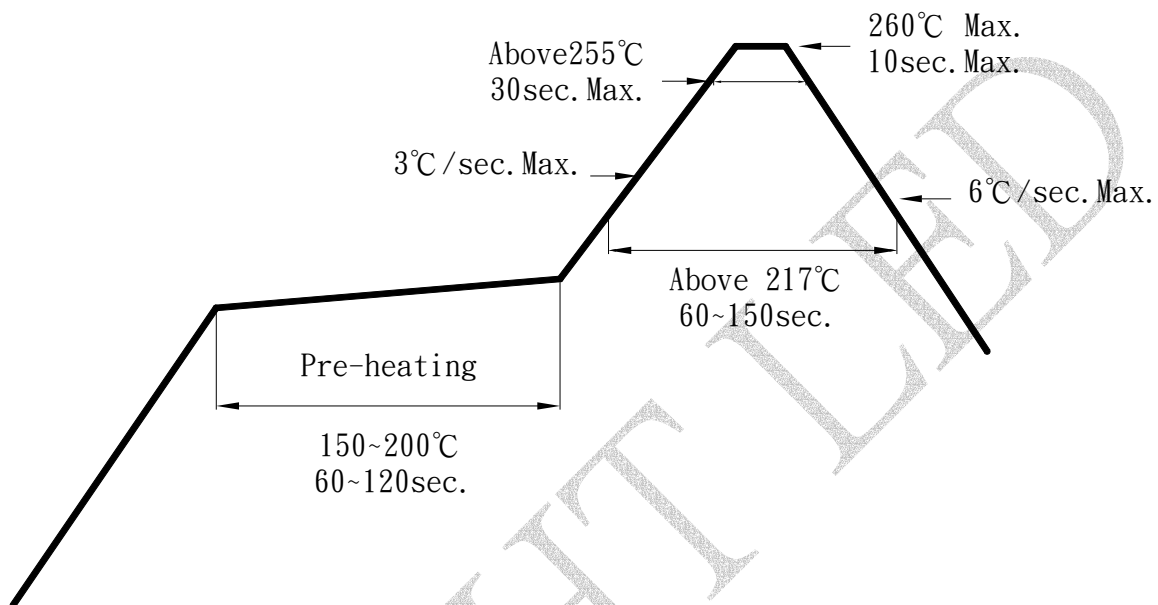
● Judgment criteria of failure for the reliability

| Measuring items | Symbol | Measuring conditions | Judgment criteria for failure |
|--------------------|--------------------|----------------------|-------------------------------|
| Forward voltage | V_F (V) | $I_F=20\text{mA}$ | Over $U \times 1.2$ |
| Reverse current | $I_R(\mu\text{A})$ | $V_R=5\text{V}$ | Over $U \times 2$ |
| Luminous intensity | I_v (mcd) | $I_F=20\text{mA}$ | Below $S \times 0.5$ |

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

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

● IR-Reflow Soldering



1. Avoid any external stress applied to the resin while the LEDs are at high temperature, especially during soldering .
2. Avoid rapid cooling or any excess vibration during temperature ramp-down process
3. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

● IRON Soldering

350°C Within 3 sec.,One time only.



● 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 be taken to keep the average current within the rated figures. Also, the circuit should be designed so as to be subjected to reverse voltage when turning off the BRIGHT LEDs.

● Storage:

In order to avoid the absorption of moisture, it is recommended to solder BRIGHT LEDs as soon as possible after unpacking the sealed envelope.


If the envelope is still packed, to store it in the environment as following:

(1) Temperature : 5°C -30°C (41°F) Humidity : RH 60% Max.

● Package and Label of Products:


(1) Package: Products are packed in one bag of 1500 pcs (one taping reel) and a label is attached on each bag.

(2) Label:




佰鴻工業股份有限公司
BRIGHT LED ELECTRONICS CORP.


Part No.: JBL-Xxxxxx-TR7




Quantity: xxxx



BIN: x



Sealing date: xxxxx



x xx xx
Year Cycle

Manufacture Location

BRIGHT LED LOGO

Part No.

Quantity
BIN.

Sealing Date