# TAPE AND REEL SURFACE MOUNT CHIP LED LAMPS

SURFACE MOUNT CHIP LED LAMP SPECIFICATION

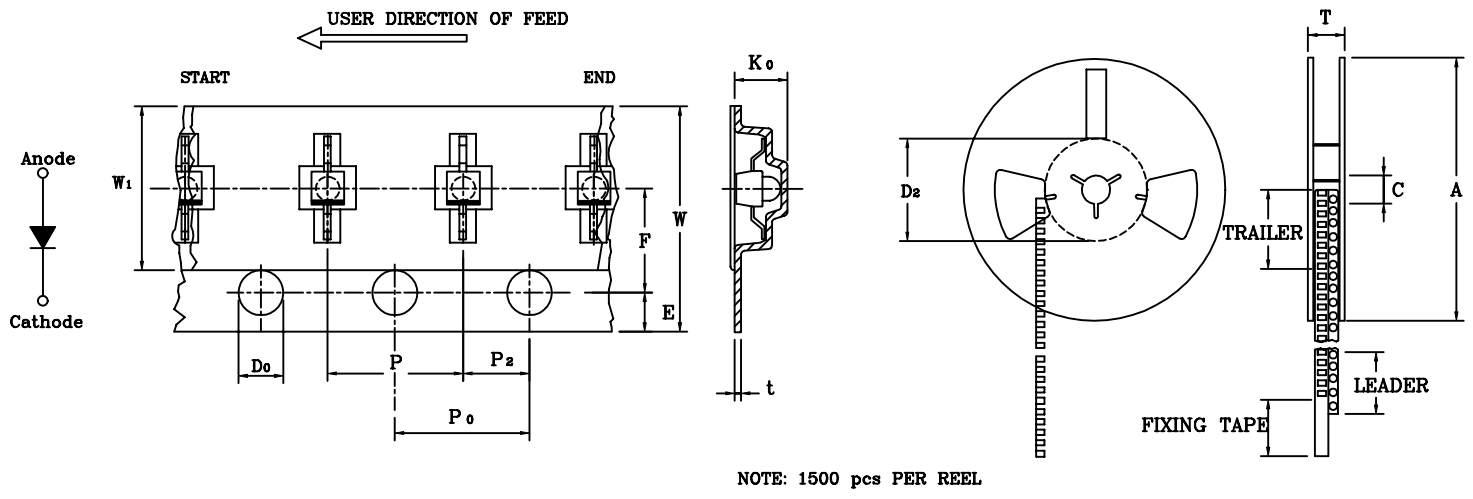
●**DEVICE NUMBER：BL-XUB361-TR9** **VERSION：1.0 / 2001.06.07**

●FEATURES:

Compatible with automatic placement equipment
Surface Mount assembly lamp
High efficiency low power consumption
Long life solid state reliability

●TAPPING AND PACKAGING SPECIFICATION

| ITEM | SYMBOL | SPECIFICATION | | | |
|---|---|---|---|---|---|
| | | Minimum | | Maximum | |
| | | mm | inch | mm | inch |
| Tape Feed Hole Diameter (DIA) | $D_0$ | 1.40 | 0.055 | 1.55 | 0.061 |
| Feed Hole Location | E | 1.65 | 0.065 | 1.85 | 0.072 |
| Centers Line Dimensions Length Direction | F | 5.45 | 0.215 | 5.55 | 0.218 |
| Compartment Depth | $K_0$ | 3.10 | 0.122 | 3.20 | 0.126 |
| 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 | 12.00 | 0.472 | 12.30 | 0.484 |
| 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 | $D_2$ | 20.00 | 0.788 | 21.50 | 0.846 |
| Fixing Tape Width | $W_1$ | 9.00 | 0.354 | 9.30 | 0.366 |
| Flange Space Between Flanges | T | 16.00 | 0.629 | 18.40 | 0.724 |
| Compartment Length | $A_0$ | 1.97 | 0.077 | 2.05 | 0.080 |
| Compartment Width | $B_0$ | 6.40 | 0.250 | 6.50 | 0.256 |



# BRIGHT LED ELECTRONICS CORP.

SURFACE MOUNT CHIP LED LAMP SPECIFICATION

●COMMODITY：AXIAL TYPE LED

**●DEVICE NUMBER：BL-XUB361-F9** **VERSION：1.0 / 2001.06.07**

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

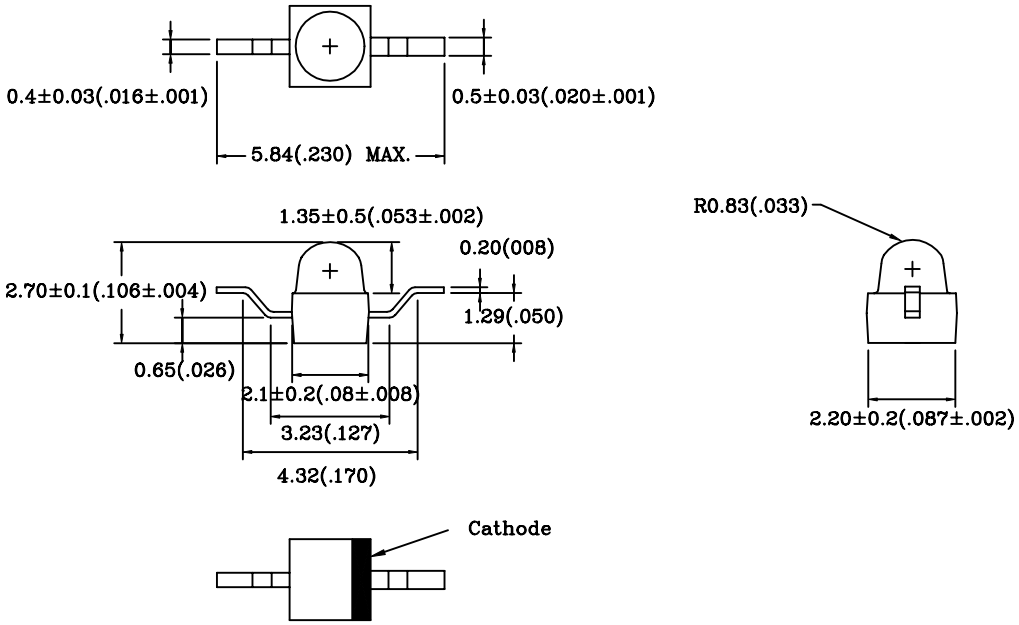
| Chip | | Lens Appearance | Absolute Maximum Rating | | | | Electro-optical Data (At 20mA) | | | Viewing Angle 2θ1/2 (deg) |
|---|---|---|---|---|---|---|---|---|---|---|
| Emitted Color | Peak Wave Length λP(nm) | | Δλ (nm) | Pd (mW) | If (mA) | Peak If(mA) | Vf(V) Typ. | Vf(V) Max. | Iv Typ. (mcd) | |
| Ultra Red | 645 | Water Clear | 20 | 80 | 30 | 150 | 2.0 | 2.6 | 150.0 | 35 |

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 (-Vr=5V) ……100μA
Operating Temperature Range ……-25℃ ～ 80℃
Storage Temperature Range ……-30℃ ～ 85℃
Preheating Temperature ……100℃ ~ 150℃ Within 2 Minutes
Soldering Temperature ……240℃ ~ 250℃ Within 5 Seconds

●PACKAGE DIMENSIONS




NOTES: 1.All dimensions are in millimeters (inches).
2.Tolerance is ± 0.25mm (0.01”) unless otherwise specified.
3.Specifications are subject to change without notice.

RELEASED： 曾 2001.06.08 志 宏

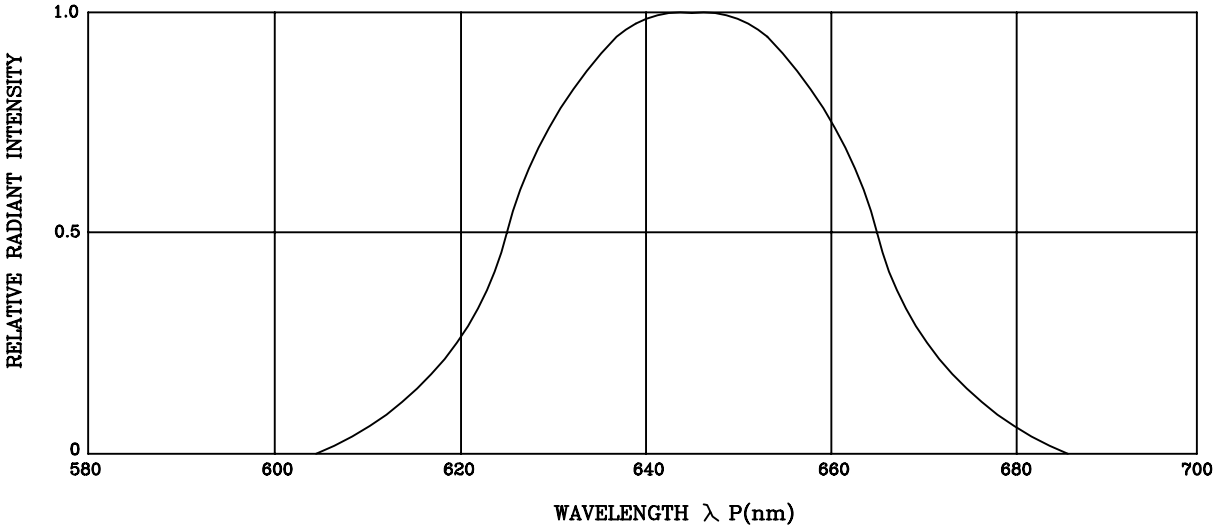
ENGINEER： 余 2001.06.08 愛 萍

# BRIGHT LED ELECTRONICS CORP.

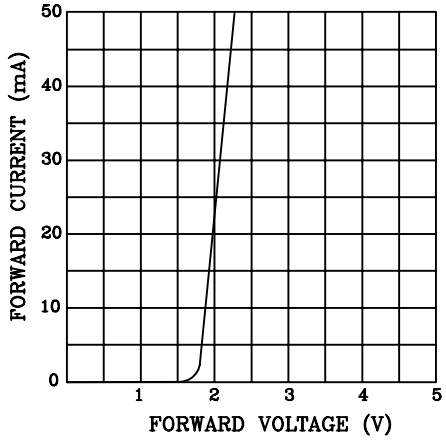
## TYPICAL CHARACTERISTICS

### DEVICE NUMBER: BL-XUB361-TR9

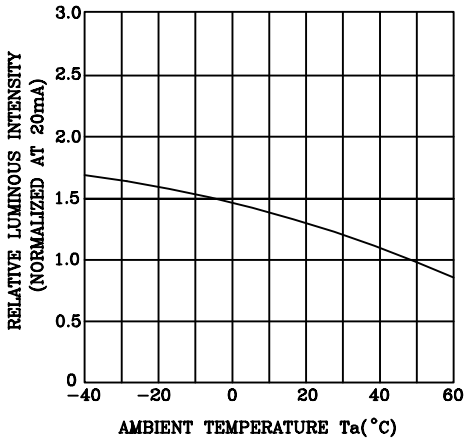
SPECTRAL DISTRIBUTION



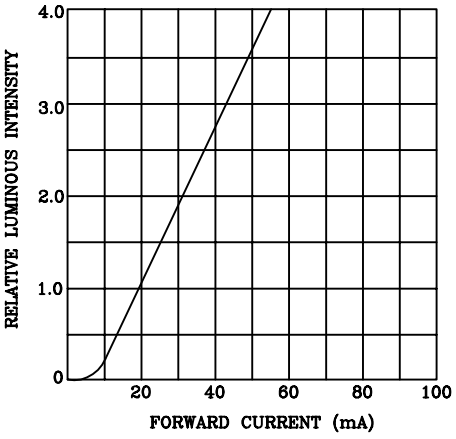

FORWARD CURRENT VS. FORWARD VOLTAGE



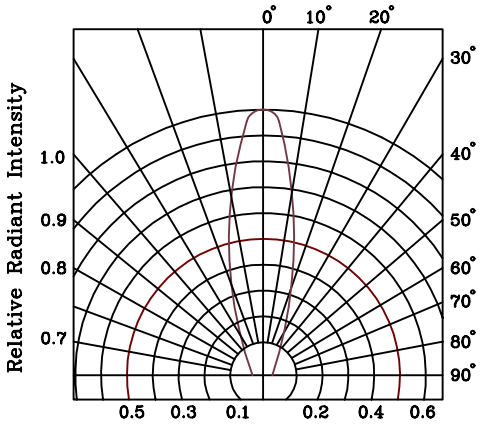

RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE




RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT




RADIATION DIAGRAM



# BRIGHT LED ELECTRONICS CORP.

# RELIABILITY TEST

**DEVICE NO.: BL-XUB361-TR9**

| 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.