



## LED LAMPS SPECIFICATION

REVISION: 1.0

●DEVICE NUMBER : BL-R2132N

[illegible][illegible]

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|                                                                                       |                                                                                       |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| APPROVED                                                                              | DRAWN                                                                                 |
|  |  |

# BRIGHT LED ELECTRONICS CORP.

## LED LAMPS SPECIFICATION

●COMMODITY : 2.0x5.0x7.0mm 1.0"Lead Rectangular

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●DEVICE NUMBER : BL-R2132N

VERSION : 1.0

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25°C)

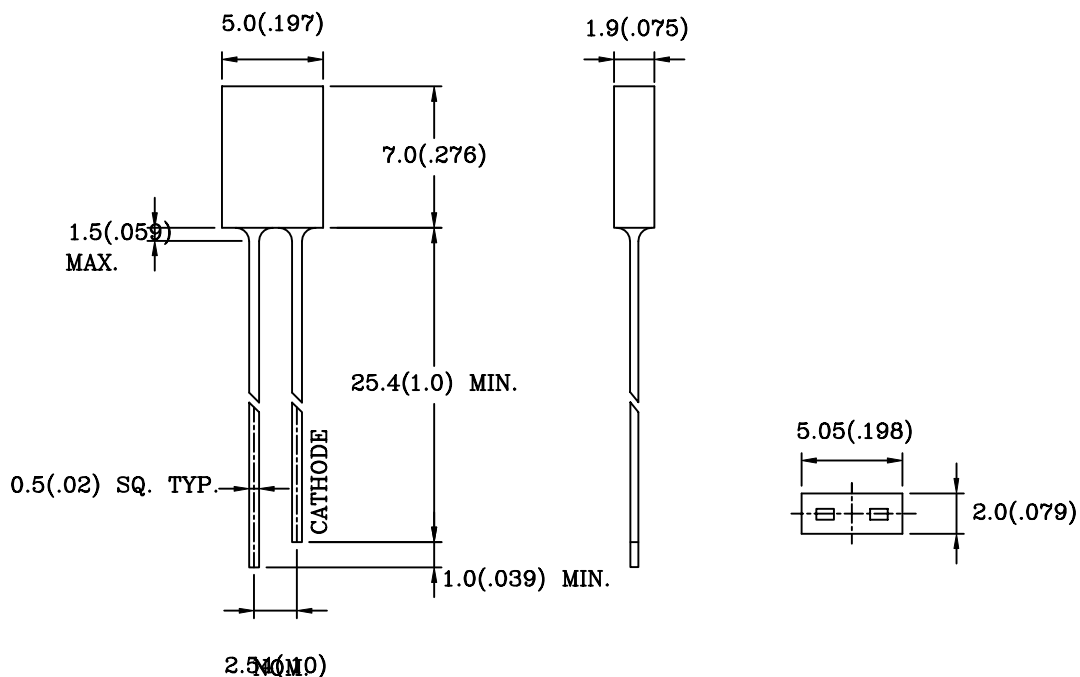
| Chip             |                                   | Lens<br><br>Appearance | Absolute Maximum<br>Rating |            |            |                | Electro-optical<br>Data (At 20mA) |      |                  | Viewing<br>Angle<br>2 θ 1/2<br>(deg) |
|------------------|-----------------------------------|------------------------|----------------------------|------------|------------|----------------|-----------------------------------|------|------------------|--------------------------------------|
| Emitted<br>Color | Peak<br>Wave<br>Length<br>λ P(nm) |                        | Δ λ<br>(nm)                | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf(V)                             |      | Iv Typ.<br>(mcd) |                                      |
|                  |                                   |                        |                            |            |            |                | Typ.                              | Max. |                  |                                      |
| Green            | 568                               | Green Diffused         | 30                         | 80         | 30         | 150            | 2.2                               | 2.6  | 9.0              | 125                                  |

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

●ABSOLUTE MAXIMUN RATINGS (Ta=25°C)

Reverse Voltage ..... 5V  
 Reverse Current (-Vr=5V) ..... 100 $\mu$ A  
 Operating Temperature Range ..... -40°C ~ 80°C  
 Storage Temperature Range ..... -40°C ~ 85°C  
 Lead Soldering Temperature ..... 260°C For 5 Seconds

●PACKAGE DIMENSIONS



NOTES: 1.All dimensions are in millimeters (inches).

2.Tolerance is  $\pm 0.25$ mm (0.01") unless otherwise specified.

3.Lead spacing is measured where the leads emerge from the package.

4.Specifications are subject to change without notice.

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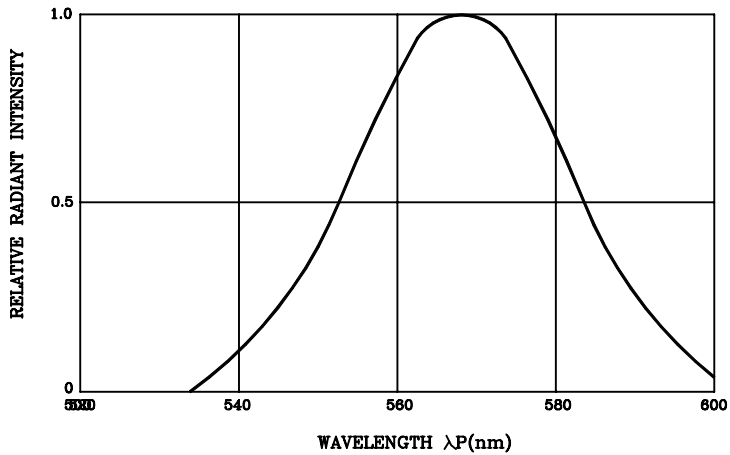
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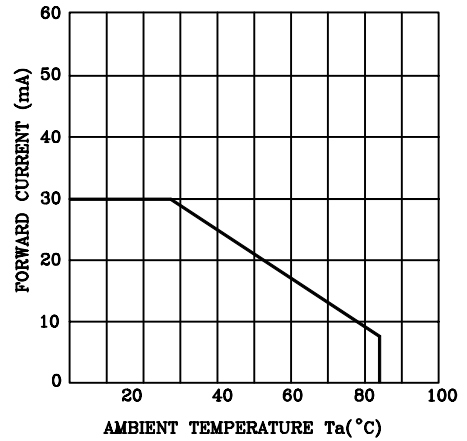
●ELECTRICAL AND OPTICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ )

REVISION: 1.0

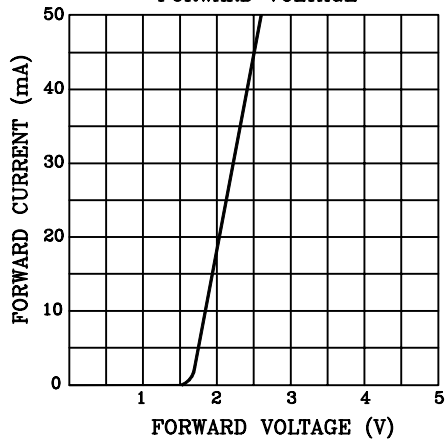
SPECTRAL DISTRIBUTION



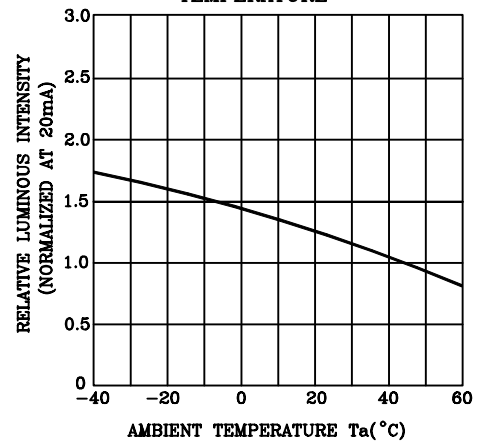
FORWARD CURRENT  
DERATING CURVE



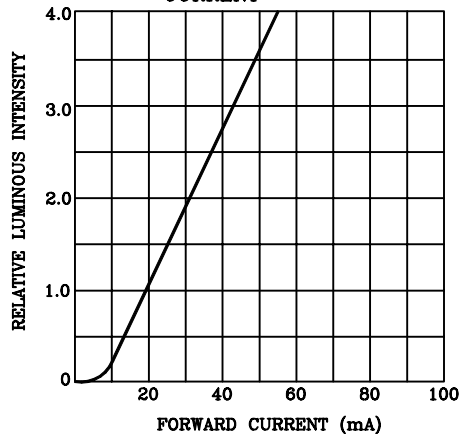
FORWARD CURRENT VS.  
FORWARD VOLTAGE



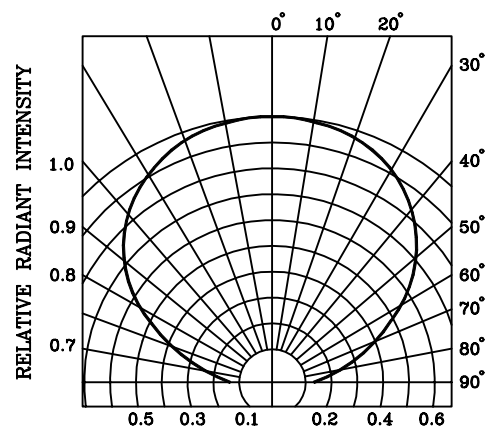
RELATIVE LUMINOUS  
INTENSITY VS. AMBIENT  
TEMPERATURE



RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



RADIATION DIAGRAM



# BRIGHT LED ELECTRONICS CORP.

## LED LAMP SPECIFICATION

### RELIABILITY TEST

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| 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<br>If=30mA<br>Ta=Under room temperature<br>Test time=1,000hrs | 0/100  |
|                           | High Temperature<br>High Humidity<br>Storage | MIL-STD-202:103B<br>JIS C 7021 :B-11                                        | Ta=85°C±5°C<br>RH=90%-95%<br>Test time=1,000hrs                                    | 0/100  |
|                           | High Temperature<br>Storage                  | MIL-STD-883:1008<br>JIS C 7021 :B-10                                        | High Ta=85°C±5°C<br>Test time=1,000hrs                                             | 0/100  |
|                           | Low Temperature<br>Storage                   | JIS-C-7021 :B-12                                                            | Low Ta=-35°C±5°C<br>Test time=1,000hrs                                             | 0/100  |
| Environment<br>al<br>Test | Temperature<br>Cycling                       | MIL-STD-202:107D<br>MIL-STD-750:1051<br>MIL-STD-883:1010<br>JIS C 7021 :A-4 | -35°C ~ 25°C ~ 85°C ~ 25°C<br>30min 5min 30min 5min<br>Test Time=10cycle           | 0/100  |
|                           | Thermal Shock                                | MIL-STD-202:107D<br>MIL-STD-750:1051<br>MIL-STD-883:1011                    | 85°C±5°C ~ -35°C±5°C<br>10min 10min<br>Test Time=10cycle                           | 0/100  |
|                           | Solder Resistance                            | MIL-STD-202:201A<br>MIL-STD-750:2031<br>JIS C 7021 :A-1                     | T.sol=260±5°C<br>Dwell Time=10±1sec.                                               | 0/50   |
|                           | Solderability                                | MIL-STD-202:208D<br>MIL-STD-750:2026<br>MIL-STD-883:2003<br>JIS C 7021 :A-2 | T.sol=230±5°C<br>Dwell Time=5±1sec.                                                | 0/50   |
|                           | Lead Bending<br>Stress                       | MIL-STD-750:2036<br>JIS C 7021 :A-11                                        | 0°~90°~0°bend , 3 cycles<br>Weight 250g                                            | 0/50   |

### JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

| Measuring items    | Symbol | Measuring conditions | Judgement criteria for failure |
|--------------------|--------|----------------------|--------------------------------|
| Forward voltage    | VF     | IF=20mA              | Over Ux1.2                     |
| Reverse current    | IR     | VR=5V                | Over Ux2                       |
| Luminous intensity | IV     | IF=20mA              | Below Sx0.5                    |

Note: 1.U means the upper limit of specified 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.

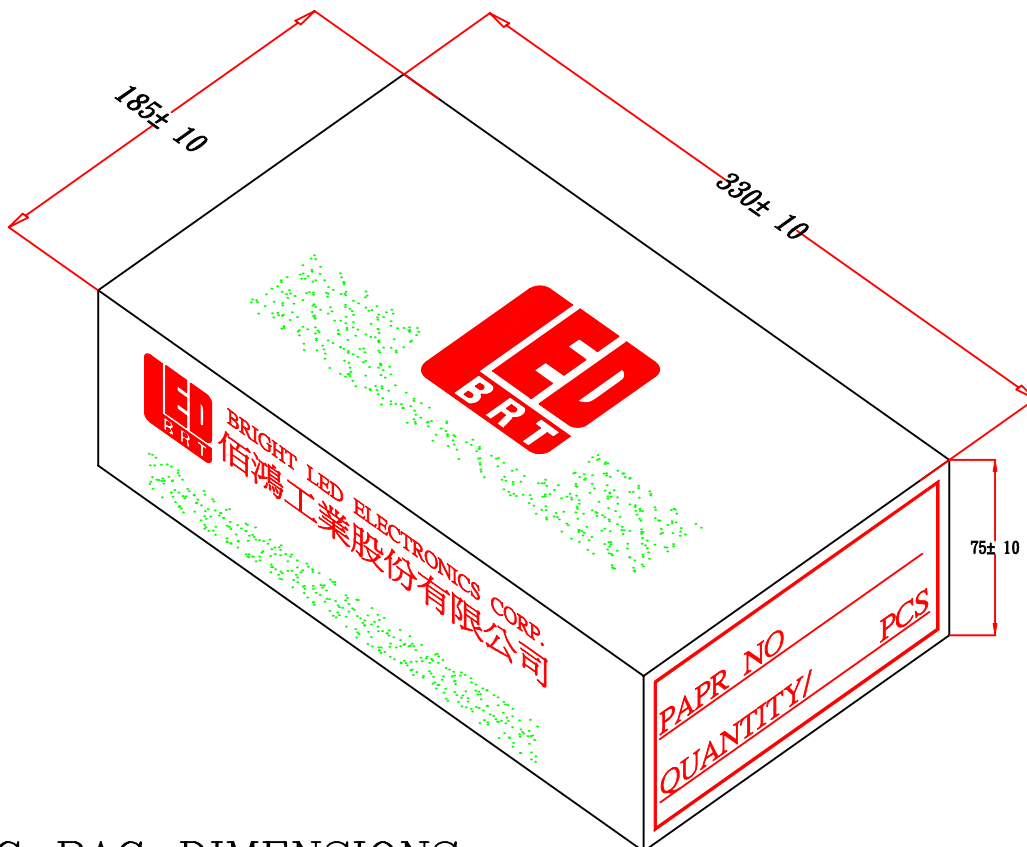
# BRIGHT LED ELECTRONICS CORP.

## PACKAGING DIMMENSIONS

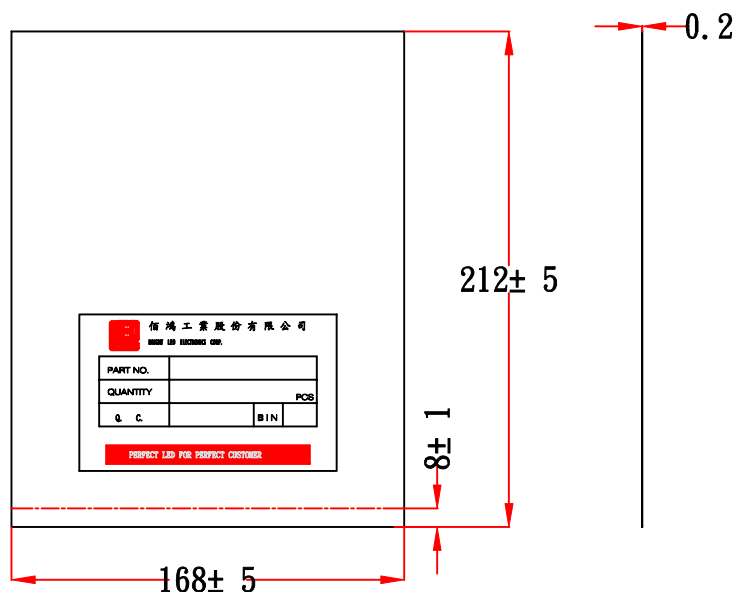
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### PACKAGING BOX DIMENSIONS



### PACKAGING BAG DIMENSIONS



#### NOTES:

1. 1000 PCS PER BAG, 10K PCS PER BOX
2. ALL Dimensions are in millimeters(inches).
3. Specifications are subject to change without notice.