



### ● Features:

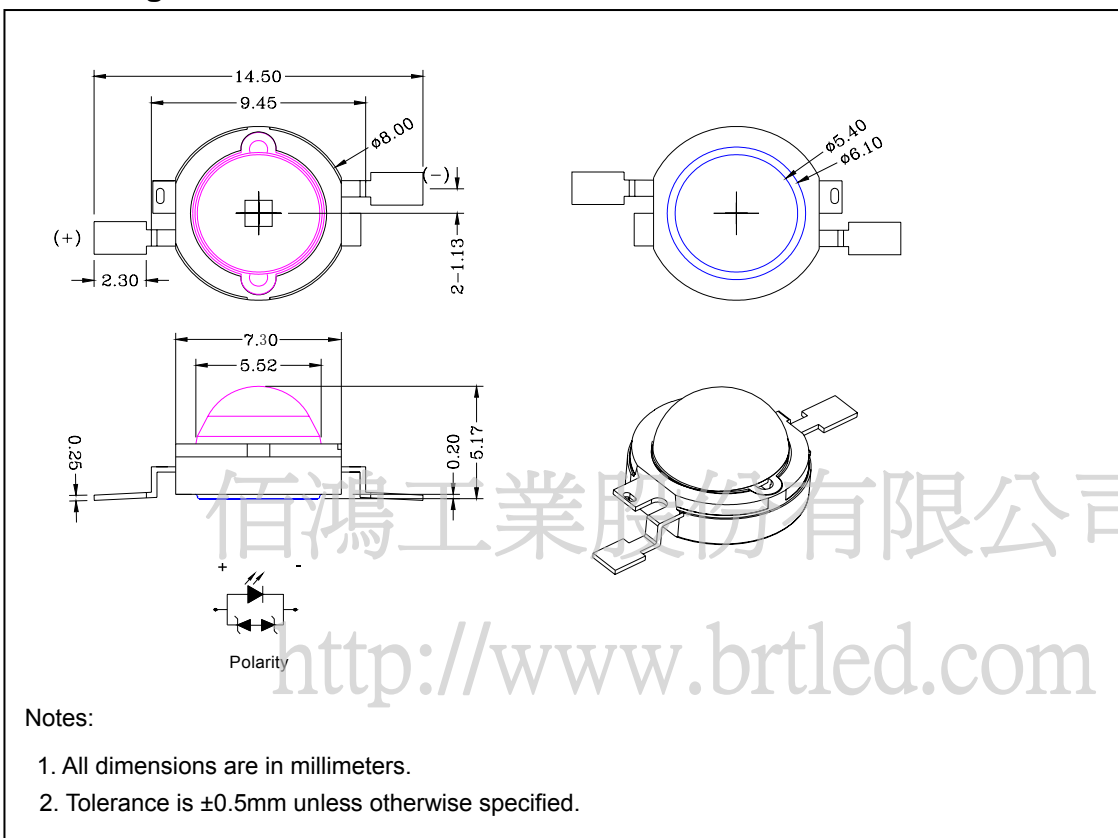
1. Input power: 3W.
  2. Chip material: InGaN.
  3. Emitted color: Warm white.
  4. High lumen output.
  5. High flux density.
  6. Low power consumption.
  7. Efficient heat transfer.
  8. Exterior lens is PC.
  9. Add extra heat sink is necessary.
- \* Must increasing heatsink, let the unit temperature below 60 °C.



### ● Applications:

1. Torch.
2. Head Light.
3. Architectural Lighting.
4. LCD Backlight.

### ● Package dimensions :



● **Absolute maximum ratings (T<sub>J</sub>=25°C)**

Parameter	Symbol	Rating	Unit
Power Dissipation	P <sub>D</sub>	3.0	W
DC Forward Current* <sup>1</sup>	I <sub>F</sub>	700	mA
Peak Pulsed Forward Current* <sup>2</sup>	I <sub>FP</sub>	2.0	A
LED Junction Temperature	T <sub>J</sub>	130	°C
Operating Temperature	Topr	-30~120	°C
Storage Temperature	Tstg	-40~120	°C
Reverse Voltage	V <sub>R</sub>	5	V
Soldering Temperature (T=5 sec)	Tsol	300 ± 5	°C

\*<sup>1</sup>Proper current derating must be followed to keep LED junction temperature (T<sub>J</sub>) below the maximum.

\*<sup>2</sup>Condition for I<sub>FP</sub> is pulsed with 1/10 duty and 0.1msec width.

● **Electrical & Optical Characteristics (T<sub>J</sub>=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 700mA	-	3.9	4.5	V
Total Flux	Φ <sub>v</sub>	I <sub>F</sub> = 700mA	100	105	-	lm
Color Temperature	CCT	I <sub>F</sub> = 700mA	2580	-	3710	K
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	μA
Thermal Resistance, Junction To Case	R <sub>θ J-C</sub>	I <sub>F</sub> = 700mA	-	9	-	°C/W
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> = 700mA	-	120	-	degree

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### ● Typical electro-optical characteristics curves

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

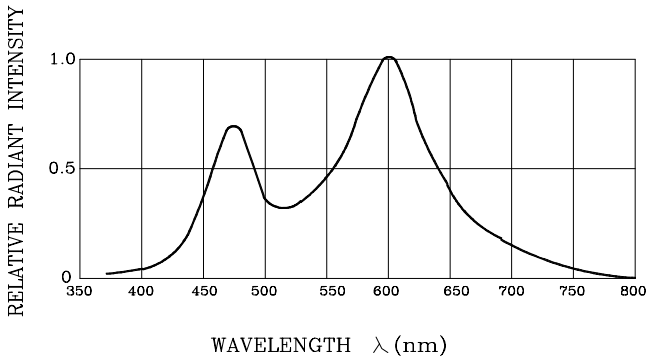


Fig.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

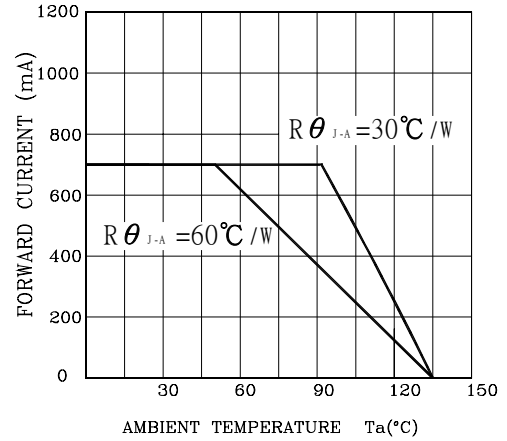


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

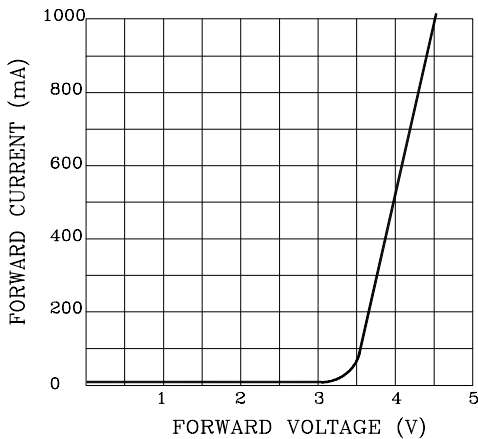


Fig.4 RELATIVE LUMINOUS INTENSITY VS. JUNCTION TEMPERATURE

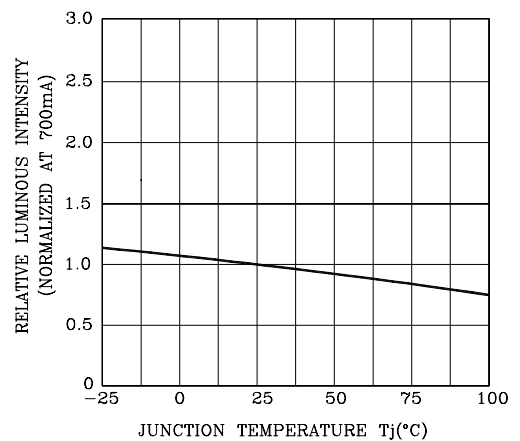


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

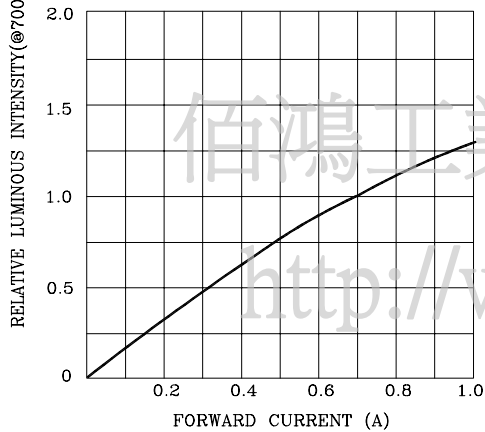
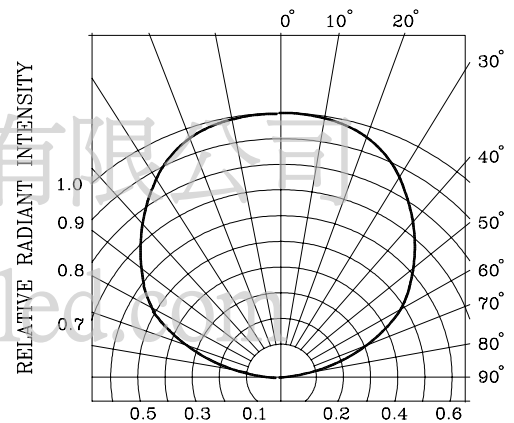


Fig.6 RADIATION DIAGRAM

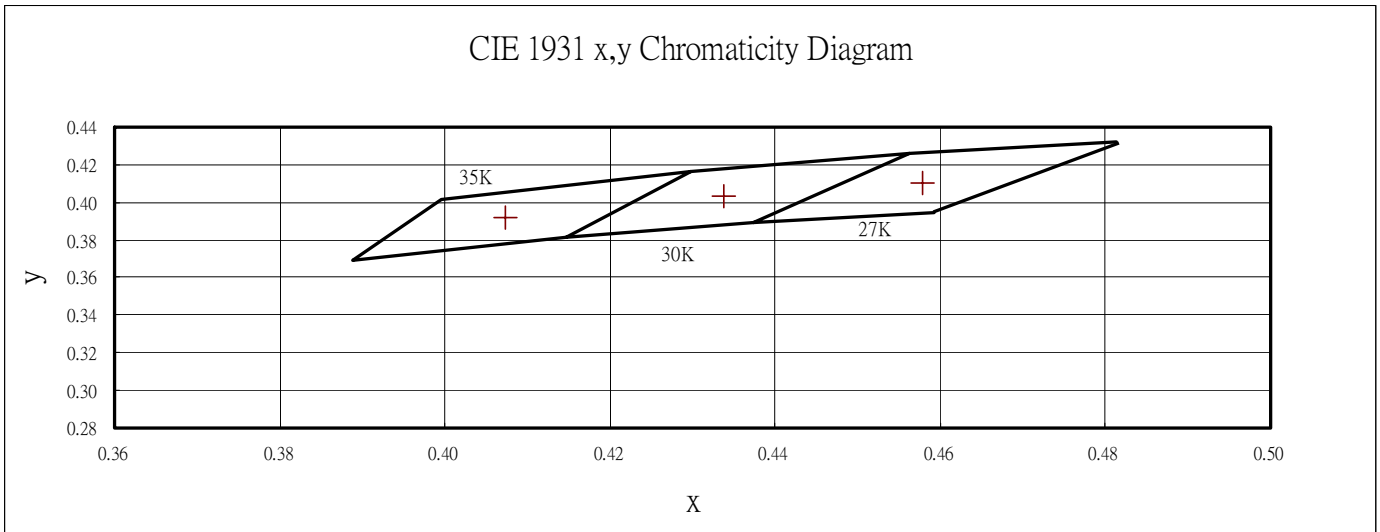


● Total Flux Bin Limits (At 700mA)

BIN CODE	Min. (lm)	Max. (lm)
Q	100	121

Tolerance for each Bin limit is  $\pm 15\%$

● Color Temperature Bin Limits(At 700mA)



BIN CODE	Nominal CCT	CCT Range	Chromaticity Coordinates				
			x	y	x	y	
K27	2700K	2580-2870	x	0.4578	0.4813	0.4562	0.4373
			y	0.4101	0.4319	0.4260	0.3893
K30	3000K	2870-3220	x	0.4338	0.4562	0.4299	0.4147
			y	0.4030	0.4260	0.4165	0.3814
K35	3500K	3220-3710	x	0.4073	0.4299	0.3996	0.3889
			y	0.3917	0.4165	0.4015	0.3690

● BIN :  $\begin{matrix} x \\ x \end{matrix}$



Notes:

- Bin categories are established for classification of products. Products may not be available in all bin categories.

### ● Notes for designing:

Current limiting resistor or a constant current power supply must be used in the circuit to drive BRIGHT LEDs within the rated figures and not to overload BRIGHT LEDs with instantaneous voltage at the turning ON and OFF cycles.

When using pulse driving, the average current must be within the rated figures. And the circuit should be designed to avoid reverse voltage when turning off the BRIGHT LEDs.

Cautions: This product is not available for re-flow process.

### ● Storage:

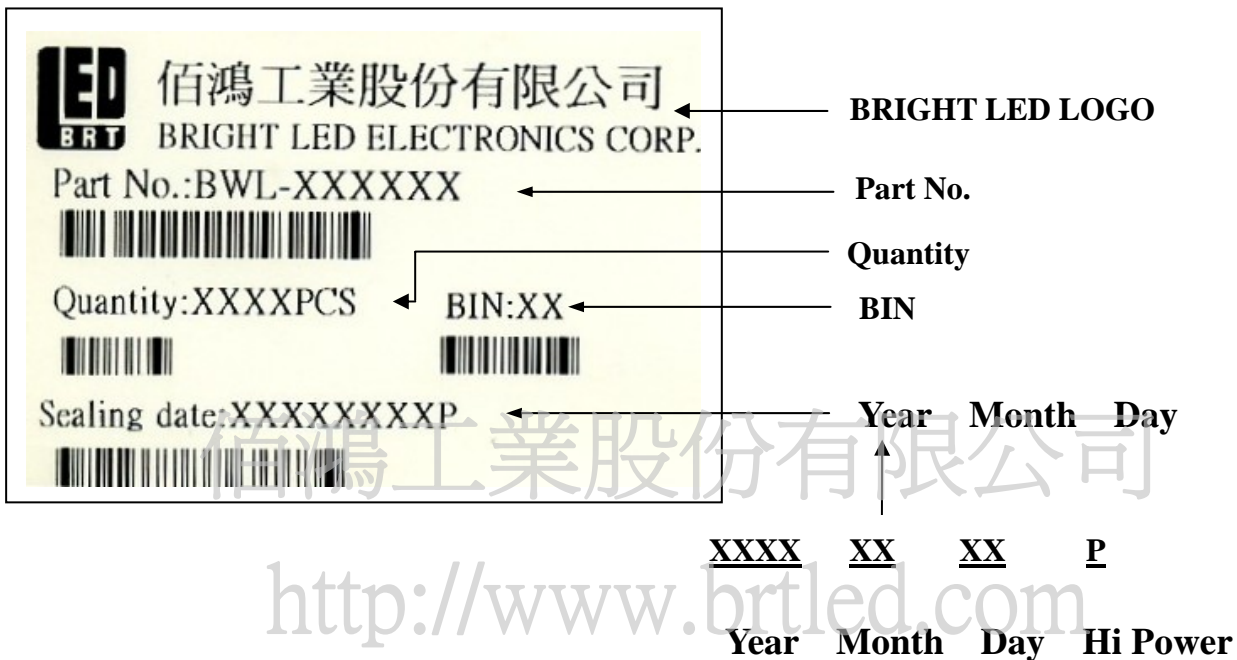
In order to avoid the absorption of moisture, it is recommended to solder BRIGHT LEDs as soon as possible after unpacking the sealed envelope.

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.
- (2) After this bag is opened:
  - a. Completed within 168 hours.
  - b. Stored at less than 30% RH.
- (3) Devices require baking before mounting, if:
  - (2) a or (2) b is not met.
- (4) If baking is required, devices must be baked under below conditions:
  - 48 hours at 60°C±3°C.

### ● Package and Label of Products:

- (1) Package: Products are packed in one bag of 1000 pcs (one taping reel) and a label is attached to each bag.
- (2) Label:



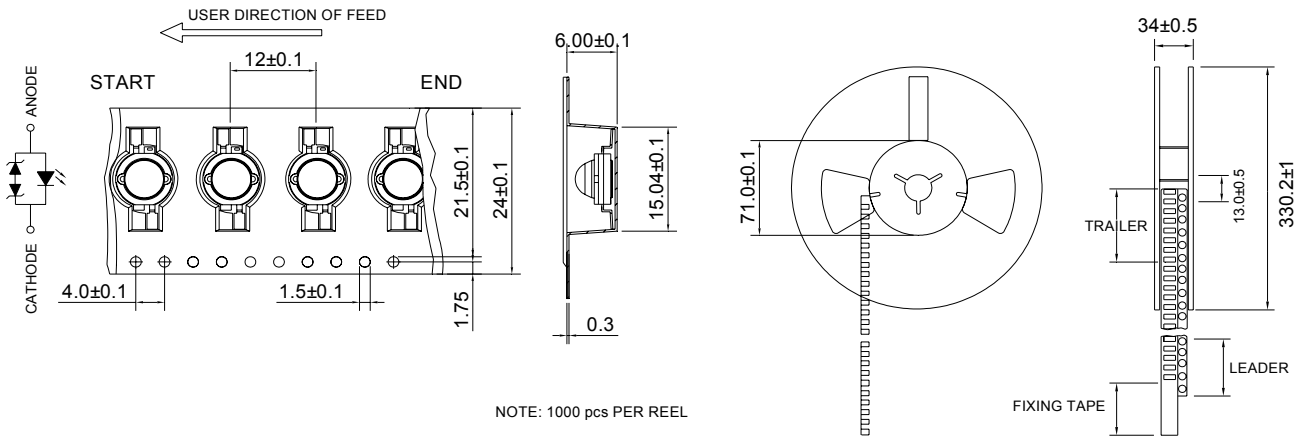
The diagram shows a rectangular label with the following fields and callouts:

- BRIGHT LED LOGO**: Points to the logo at the top left.
- Part No.**: Points to the text "Part No.:BWL-XXXXXX".
- Quantity**: Points to the text "Quantity:XXXXPCS".
- BIN**: Points to the text "BIN:XX".
- Year Month Day**: Points to the text "Sealing date:XXXXXXXXXP".

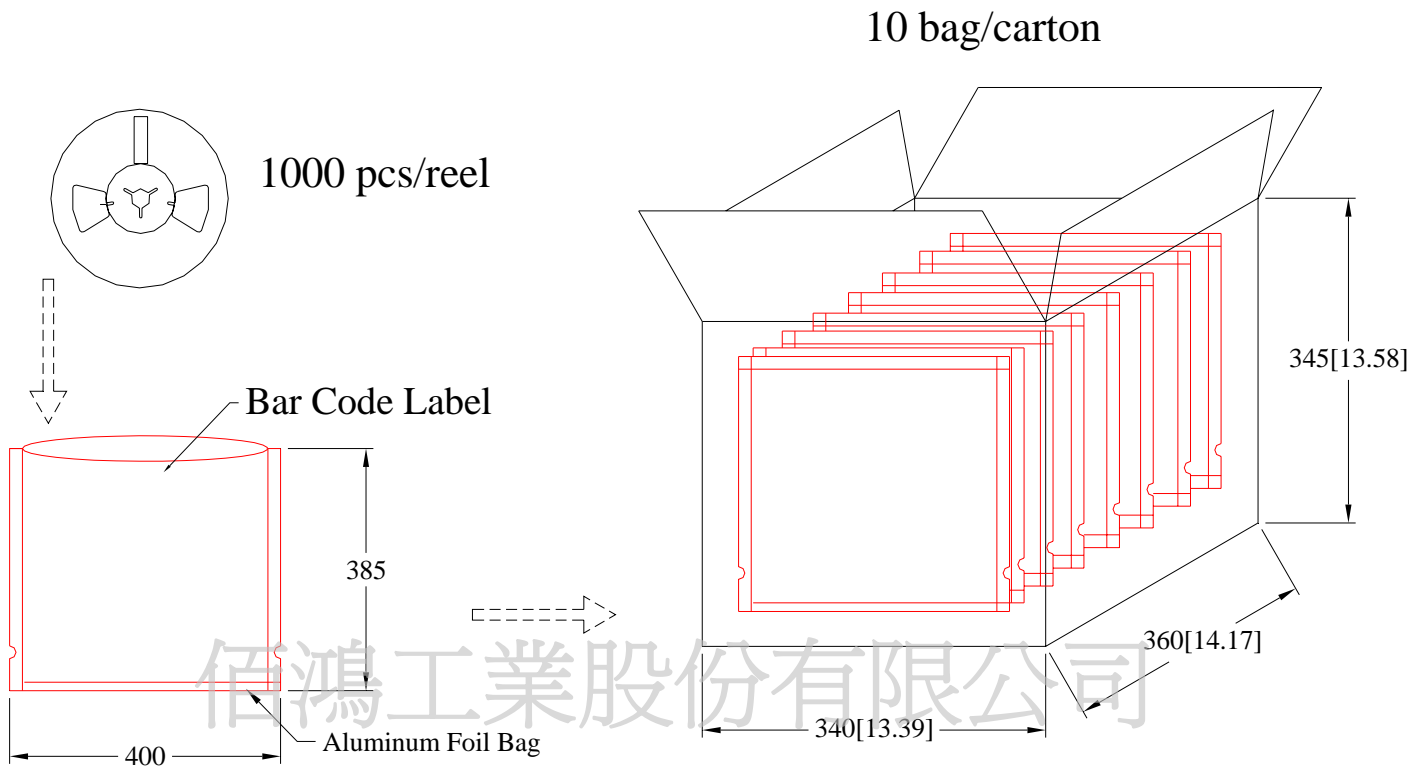
Below the label, the fields are further defined with examples:

XXXX XX XX P  
 Year Month Day Hi Power

● Tapping and packaging specifications(Units: mm)



● Package Method : (unit:mm)



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NOTES : Bag : Tolerance is ± 5 mm unless otherwise noted.

Carton : Tolerance is ± 10 mm unless otherwise noted.