BRIGHT LED ELECTRONICS CORP.

SINCE 1981

DATA SHEET

●DEVICE NUMBER：BWL-6C1A07

SHEET / DATE	1	2	3	4	5						CONTENTS
2006.09.04	1.0	1.0	1.0	1.0	1.0						Preliminary
2008.03.07	1.1	1.1	1.1	1.1	1.1						Total Flux
2009.03.19	1.2	1.2	1.2	1.2	1.2						Color Temperature Bin Limits

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BRIGHT LED ELECTRONICS CORP.

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APPROVED	DRAWER
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● Features:

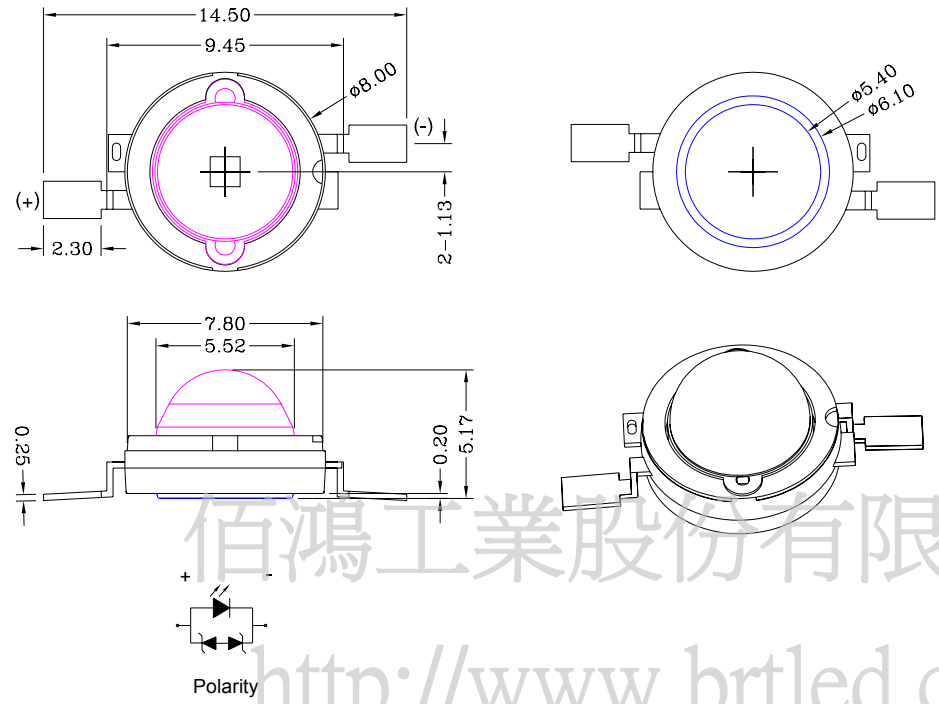
1. Input power: 1W.
2. Chip material: InGaN/Sapphire.
3. Emitted color: White.
4. High lumen output.
5. High flux density.
6. Low power consumption.
7. Efficient heat transfer.
8. Add extra heat sink is necessary.

* Must increasing heatsink, let the unit temperature below 60 ℃.

● Applications:

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

● Package dimensions：



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ±0.5mm unless otherwise specified.

● Absolute maximum ratings (T_J=25℃)

Parameter	Symbol	Rating	Unit
Power Dissipation	P_D	1.0	W
DC Forward Current*[1]	I_F	350	mA
Peak Pulsed Forward Current*[2]	I_{FP}	1.0	A
LED Junction Temperature	T_J	130	°C
Operating Temperature	Topr	-30~120	°C
Storage Temperature	Tstg	-40~120	°C
Reverse Voltage	V_R	5	V
Soldering Temperature (T=5 sec)	Tsol	300 ± 5	°C

*[1]Proper current derating must be followed to keep LED junction temperature (T_J) below the maximum.

*[2]Condition for I_{FP} is pulsed with 1/10 duty and 0.1msec width.

● Electrical & Optical Characteristics (T_J=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 350mA	-	3.5	4.0	V
Total Flux	Φ_v	I_F = 350mA	45	50	-	lm
Color Temperature	CCT	I_F = 350mA	4745	-	7040	K
Reverse Current	I_R	V_R=5V	-	-	50	μA
Thermal Resistance, Junction To Case	$R\theta_{J-C}$	I_F = 350mA	-	9	-	℃/W
Viewing Angle	$2\theta_{1/2}$	I_F = 350mA	-	120	-	degree

Typical electro-optical characteristics curves

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

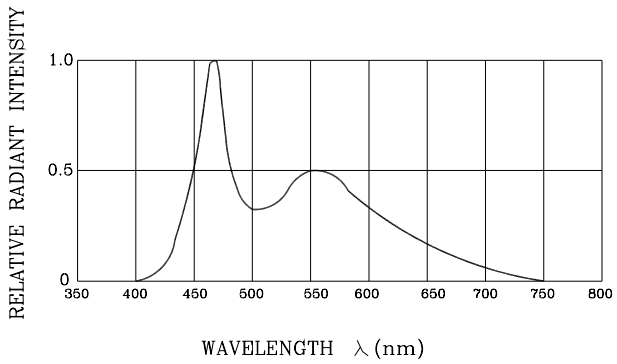


Fig.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

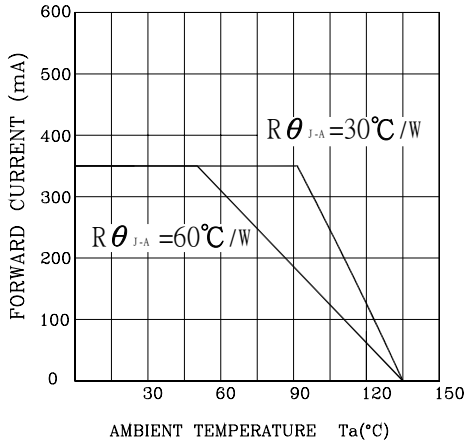


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

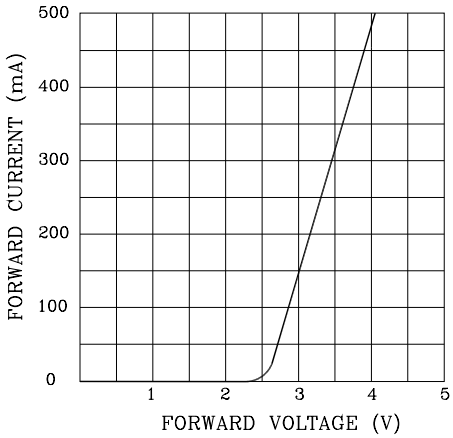


Fig.4 RELATIVE LUMINOUS INTENSITY VS. JUNCTION TEMPERATURE

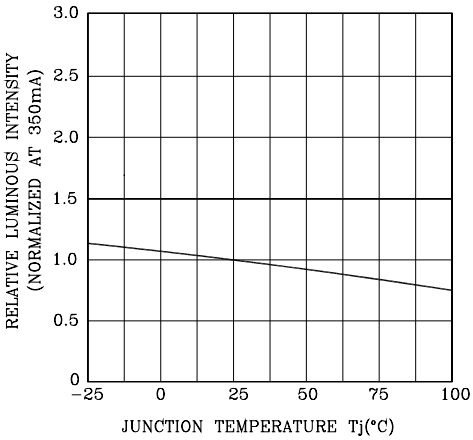


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

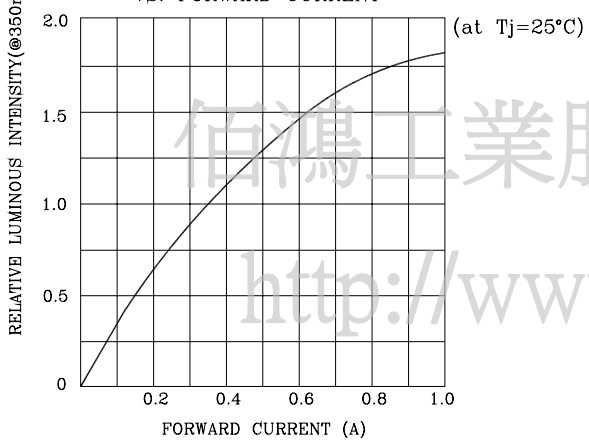
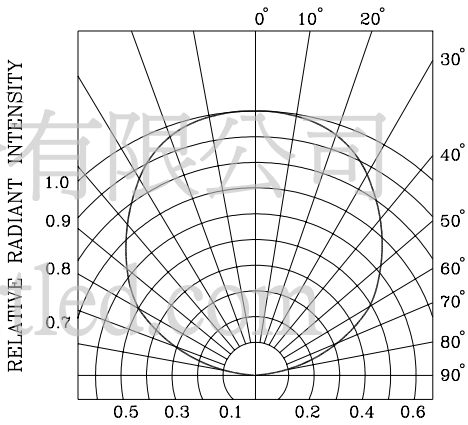
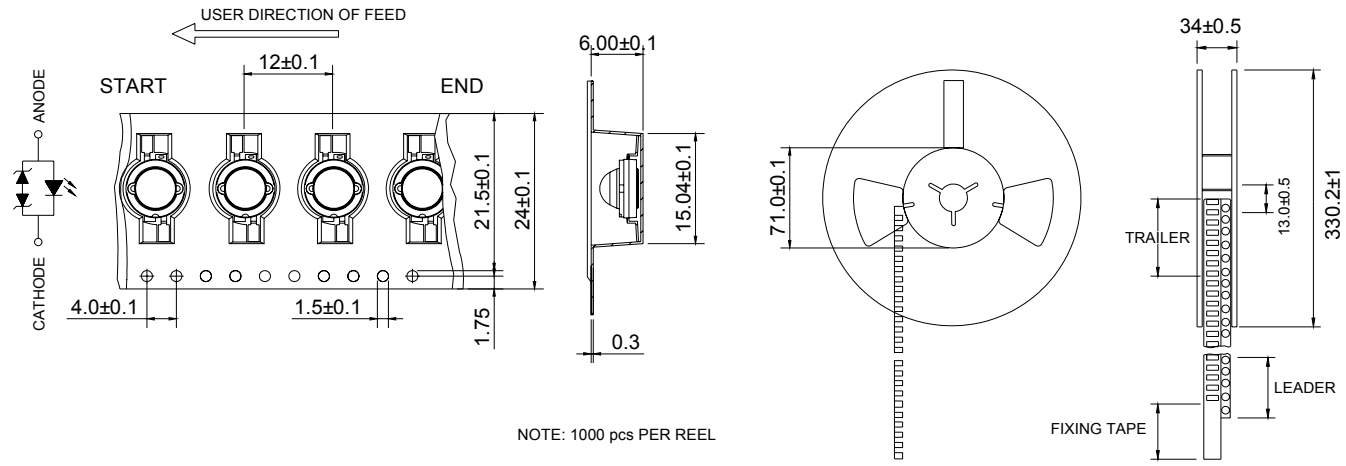


Fig.6 RADIATION DIAGRAM

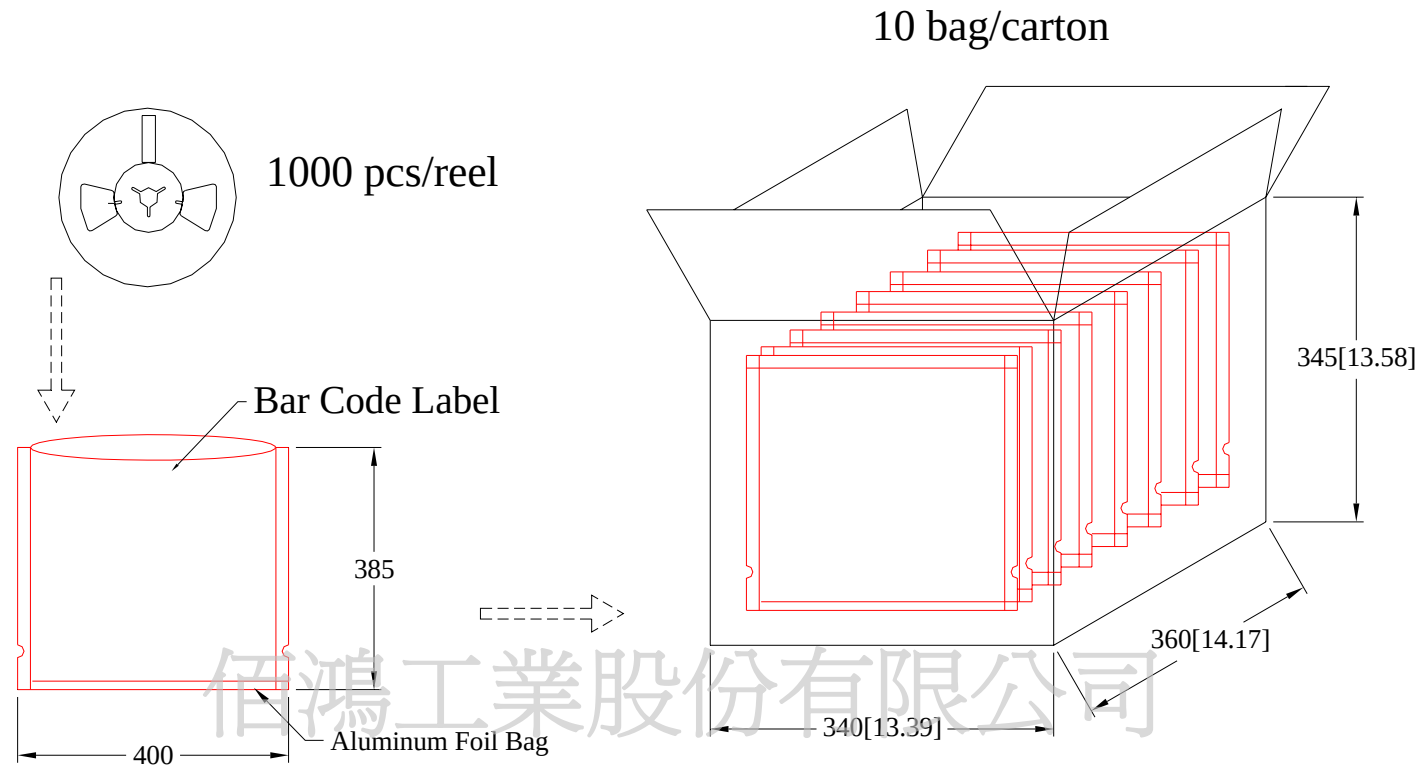


● Tapping and packaging specifications(Units: mm)



NOTE: 1000 pcs PER REEL

● Package Method : (unit:mm)



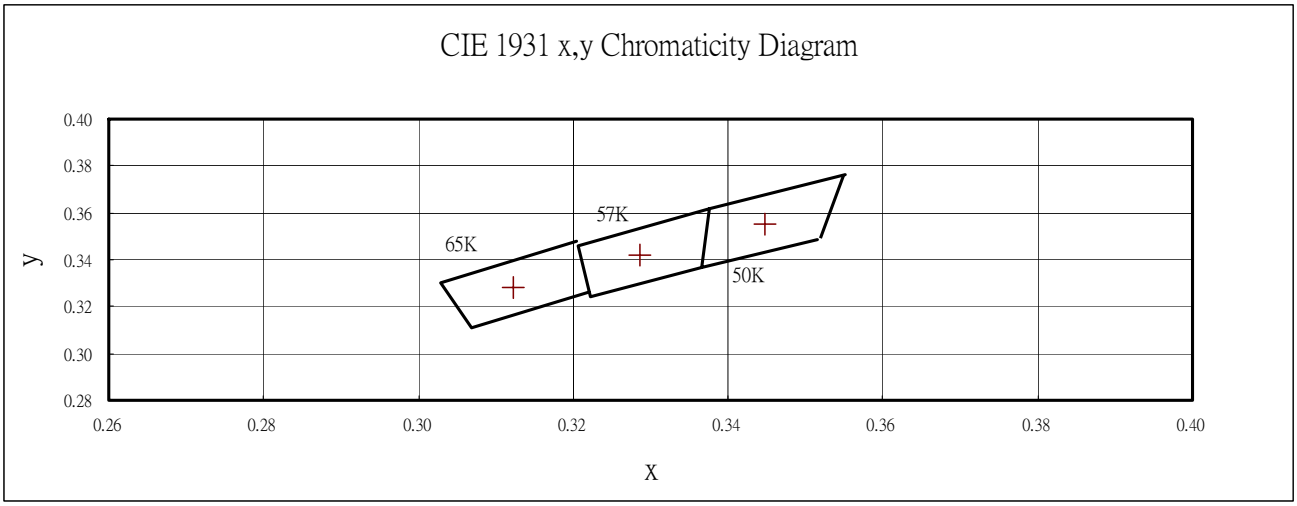
NOTES : Bag : Tolerance is ± 5 mm unless otherwise noted.
Carton : Tolerance is ± 10 mm unless otherwise noted.

● Total Flux Bin Limits (At 350mA)

BIN CODE	Min. (lm)	Max. (lm)
M	45	55
N	55	72

Tolerance for each Bin limit is ± 15 %

● Color Temperature Bin Limits(At 350mA)



BIN CODE	Nominal CCT	CCT Range	Chromaticity Coordinates				
K50	5000K	4745-5310	x	0.3447	0.3551	0.3376	0.3366
			y	0.3553	0.3760	0.3616	0.3369
K57	5700K	5311-6020	x	0.3287	0.3376	0.3207	0.3222
			y	0.3417	0.3616	0.3462	0.3243
K65	6500K	6021-7040	x	0.3123	0.3205	0.3028	0.3068
			y	0.3282	0.3481	0.3304	0.3113

● BIN : x x

Color Temperature BIN CODE

Total Flux BIN CODE

Notes:

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