

DATA SHEET

● DEVICE NUMBER : BWL-6C1A02-H2

SHEET DATE	1	2	3	4	5						CONTENTS
2007.04.12	1.0	1.0	1.0	1.0	1.0						Preliminary

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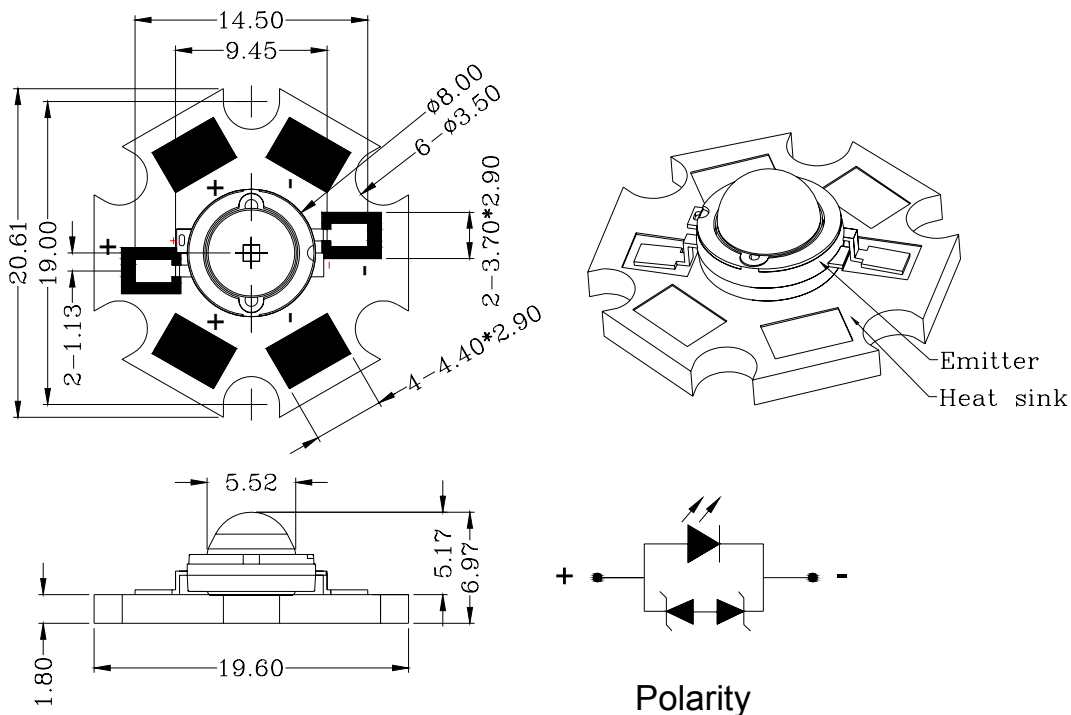
● Features:

1. Input power: 1W.
 2. Chip material: InGaN/Sapphire, Face up chip.
 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 °C.

● Applications:

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

● Package dimensions :



Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.5\text{mm}$ unless otherwise specified.

● Absolute maximum ratings ($T_J=25^{\circ}\text{C}$)

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	$^{\circ}\text{C}$
Operating Temperature	T_{opr}	-30~120	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40~120	$^{\circ}\text{C}$
Reverse Voltage	V_R	5	V
Soldering Temperature (T=5 sec)	T_{sol}	300 ± 5	$^{\circ}\text{C}$

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

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

● Electrical & Optical Characteristics ($T_J=25^{\circ}\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 350\text{mA}$	-	3.5	4.0	V
Total Flux	Φ_v	$I_F = 350\text{mA}$	55	60	-	lm
Color Temperature	CCT	$I_F = 350\text{mA}$	5000	6500	8000	K
Reverse Current	I_R	$V_R=5\text{V}$	-	-	50	μA
Thermal Resistance, Junction To Case	$R \theta_{J-C}$	$I_F = 350\text{mA}$	-	15	-	$^{\circ}\text{C}/\text{W}$
Viewing Angle	$2\theta_{1/2}$	$I_F = 350\text{mA}$	-	120	-	degree
Chromaticity Coordinates	x	$I_F = 350\text{mA}$	-	0.32	-	
	y	$I_F = 350\text{mA}$	-	0.31	-	

● Typical electro-optical characteristics curves

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

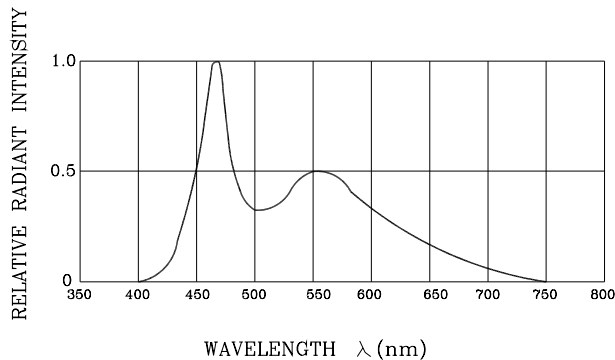


Fig.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

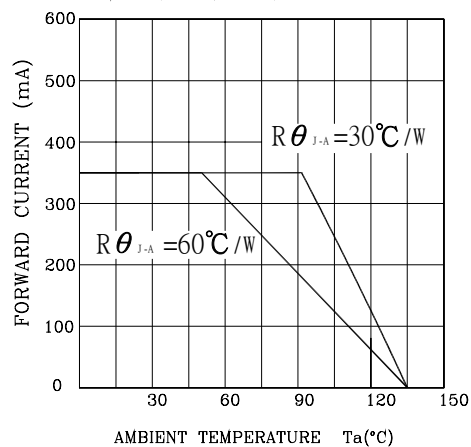


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

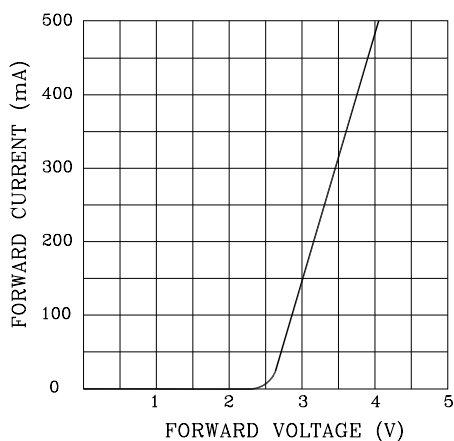


Fig.4 RELATIVE LUMINOUS INTENSITY VS. JUNCTION TEMPERATURE

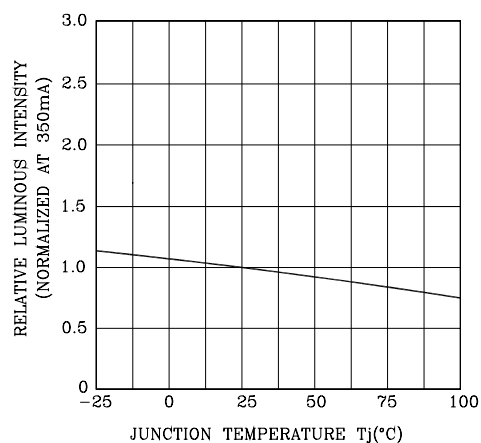


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

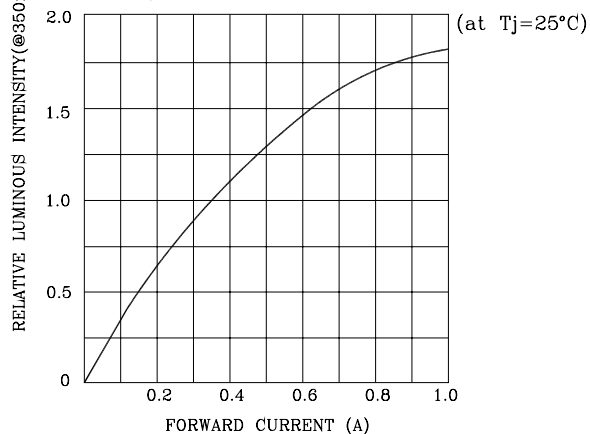
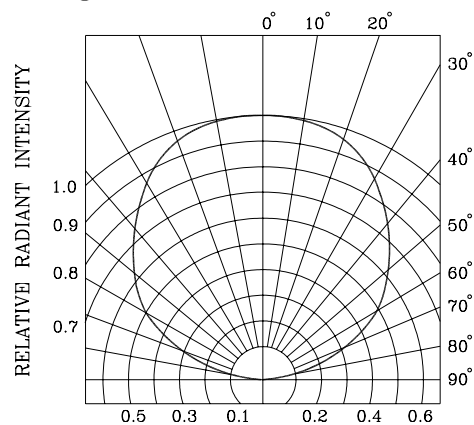
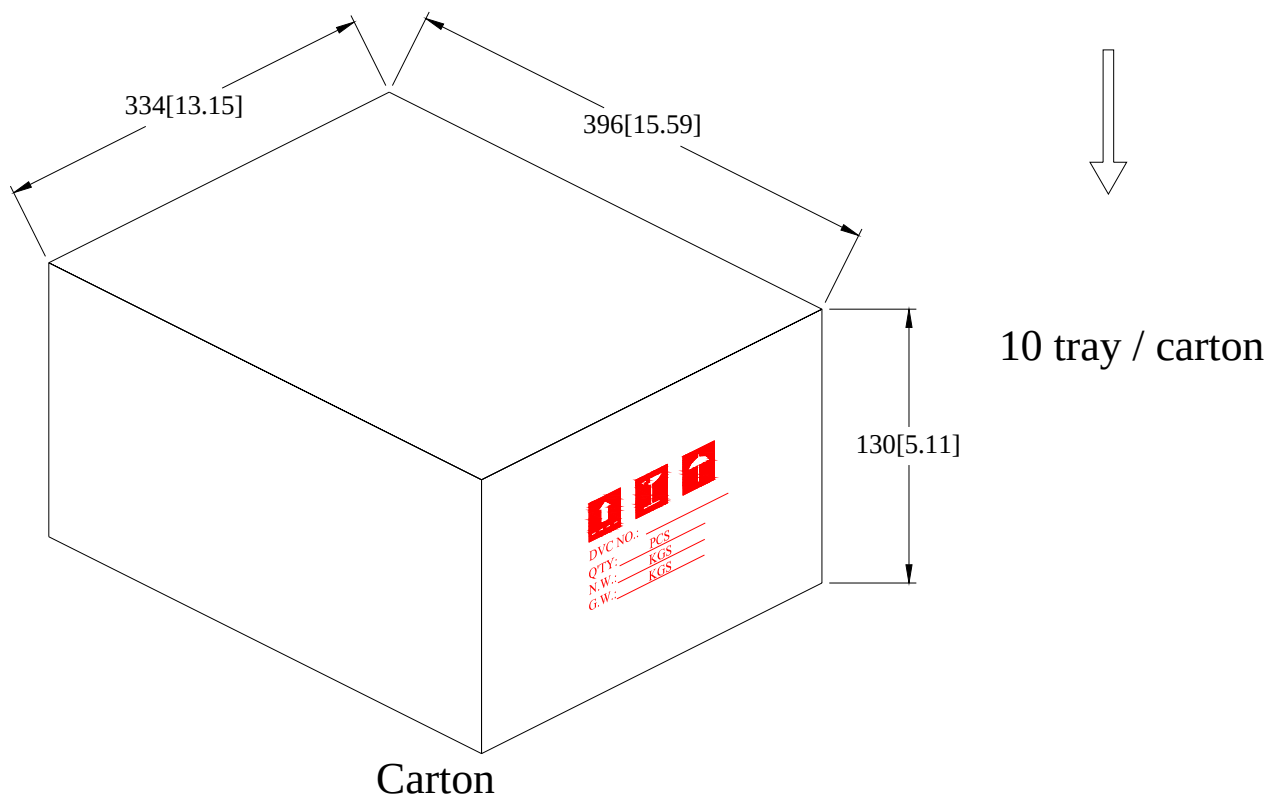
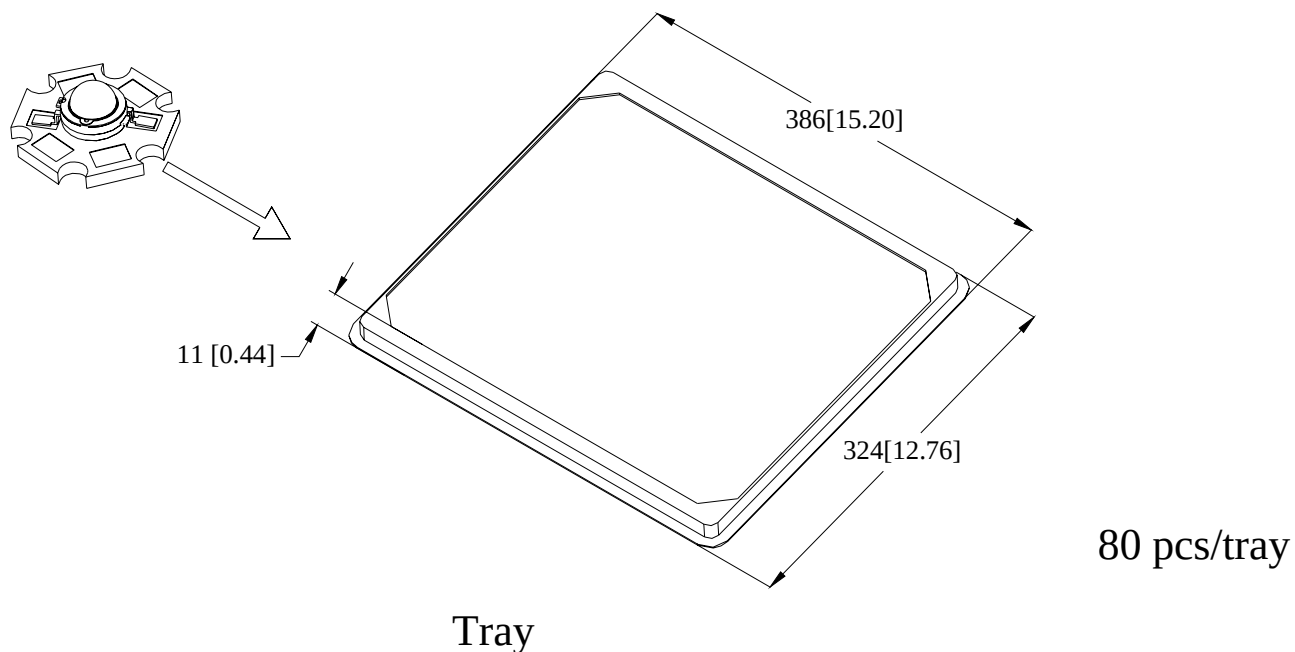


Fig.6 RADIATION DIAGRAM



● Package Method : (unit:mm)



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

Carton : Tolerance is ± 10 mm unless otherwise noted.

● Total Flux Bin Limits (At 350mA)

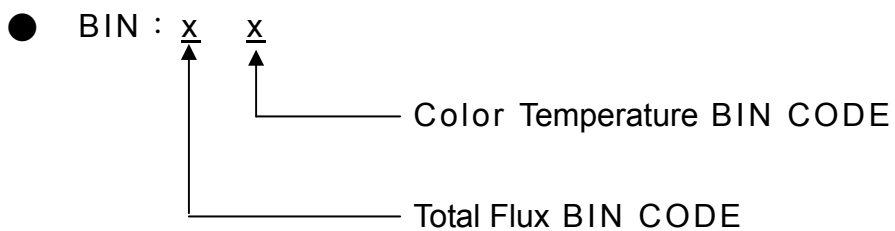
BIN CODE	Min. (lm)	Max. (lm)
N	55	72
P	72	93
Q	93	121

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

● Color Temperature Bin Limits(At 350mA)

BIN CODE	Min. (K)	Max. (K)
4	5000	6000
5	6000	7000
6	7000	8000

Tolerance for each Bin limit is $\pm 500\text{ K}$



Notes:

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