

DATA SHEET

● **DEVICE NUMBER : BWL-3A3R01-F1-LS2**

SHEET DATE	1	2	3	4	5						CONTENTS
2006.02.23	1.0	1.0	1.0	1.0	1.0						Preliminary

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APPROVED	DRAWER
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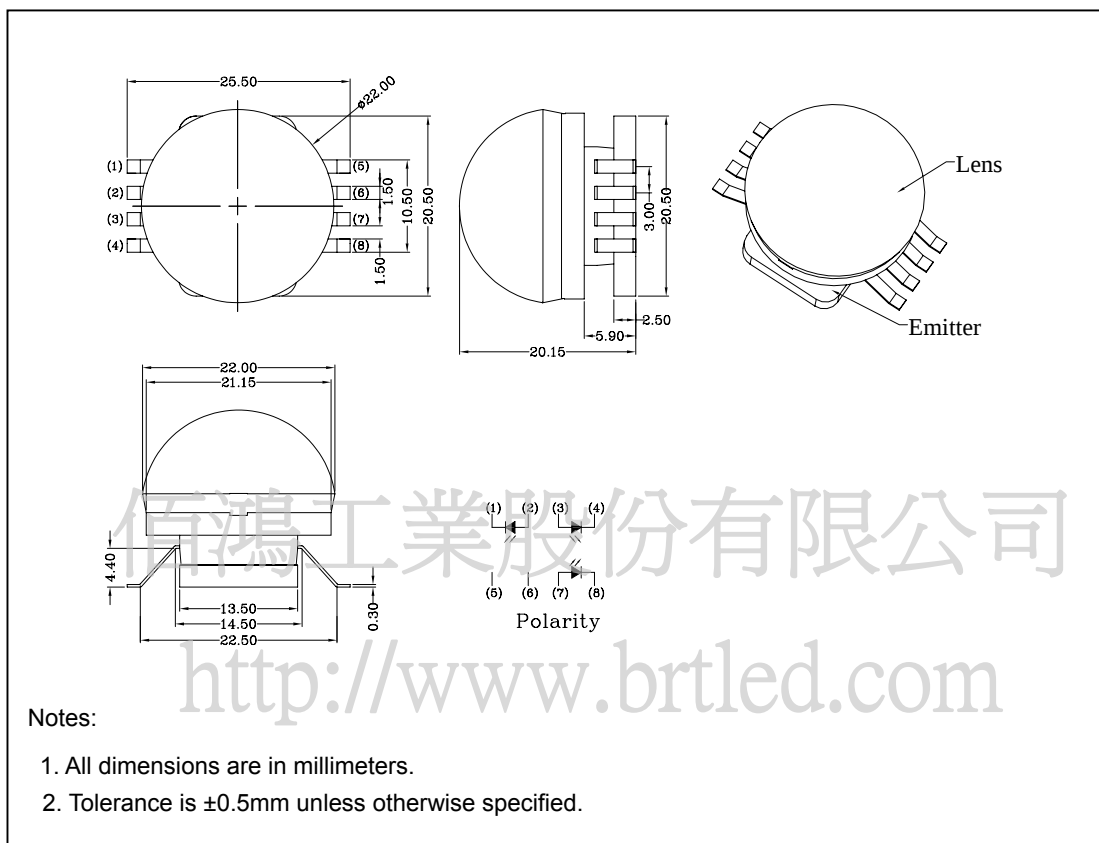
● Features:

1. Input power: 3W.
 2. Chip material: AlGaInP, Face up chip.
 3. Emitted color: Red.
 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. Desk Light.
2. Architectural Lighting.
3. LCD Backlight.
4. Special Area Lighting.

● Package dimensions :



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

Parameter	Symbol	Rating	Unit
Power Dissipation	P_D	3.0	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	
Operating Temperature	T_{opr}	-30~100	
Storage Temperature	T_{stg}	-40~120	
Reverse Voltage	V_R	5	V
Soldering Temperature (T=5 sec)	T_{sol}	300 ± 5	

*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* ¹	V_F	$I_F = 350\text{mA}$	-	2.2	2.6	V
Total Flux* ²	Φ_v	$I_F = 350\text{mA}$	60	75	-	lm
Peak Wavelength* ²	λ_p	$I_F = 350\text{mA}$	-	635	-	nm
Dominant Wavelength* ²	λ_d	$I_F = 350\text{mA}$	620	-	630	nm
Spectral Line Half-width* ²	$\Delta\lambda$	$I_F = 350\text{mA}$	-	20	-	nm
Reverse Current* ¹	I_R	$V_R = 5\text{V}$	-	-	50	μA
Thermal Resistance, Junction To Case* ²	$R_{\theta_{JC}}$	$I_F = 350\text{mA}$	-	6	-	$^{\circ}\text{C/W}$
Viewing Angle	$2\theta_{1/2}$	$I_F = 350\text{mA}$	-	60	-	degree

*¹ The values are based on 1-die performance.

*² The values are based on 3-dice performance.

● Typical electro-optical characteristics curves

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

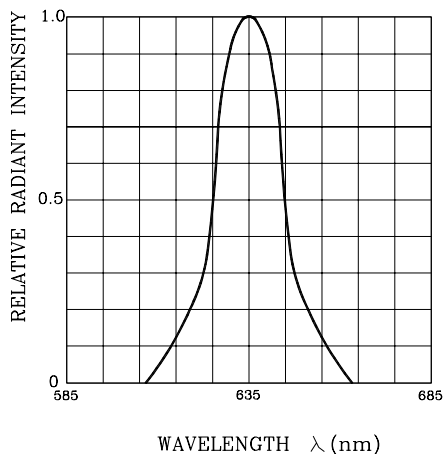


Fig.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

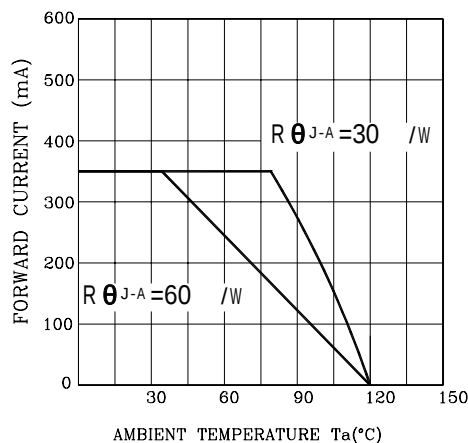


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

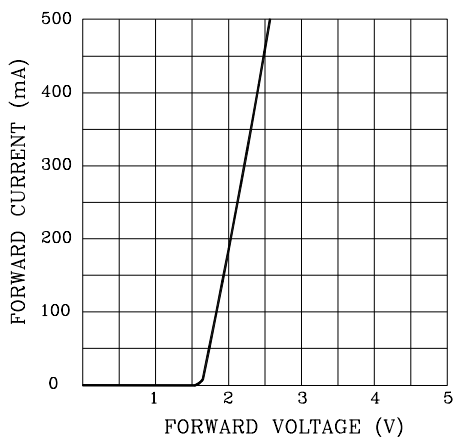


Fig.4 RELATIVE LUMINOUS INTENSITY VS. JUNCTION TEMPERATURE

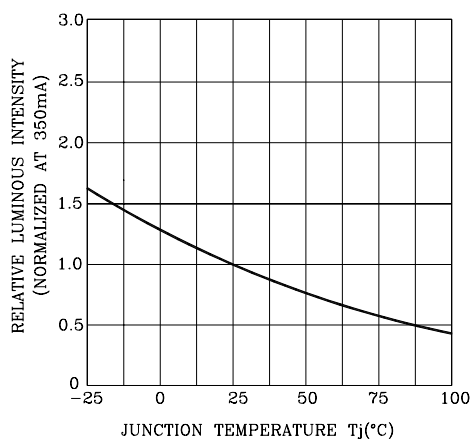


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

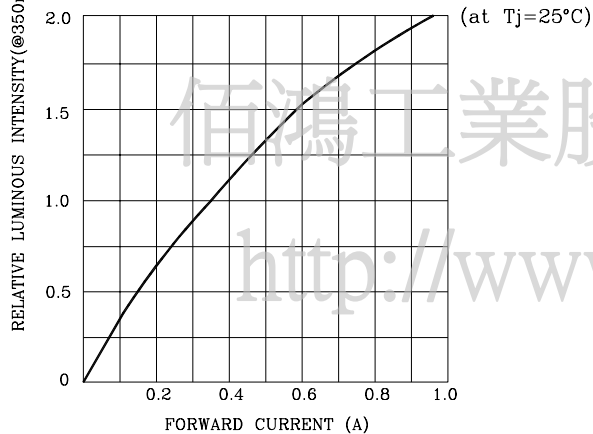
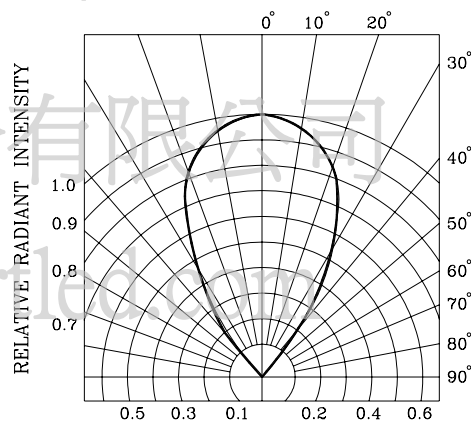
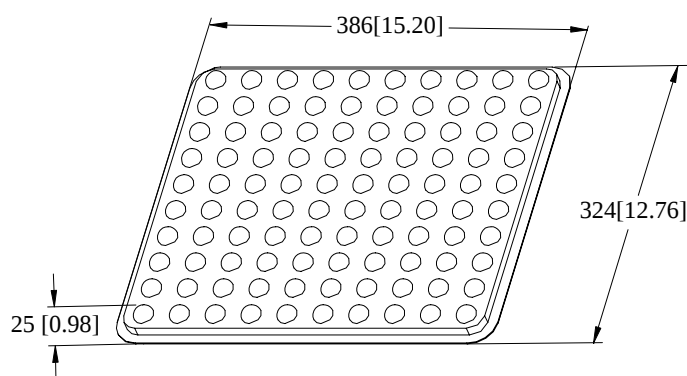
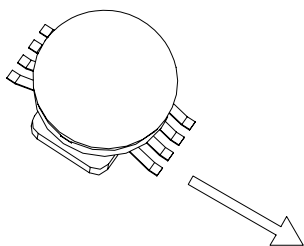


Fig.6 RADIATION DIAGRAM

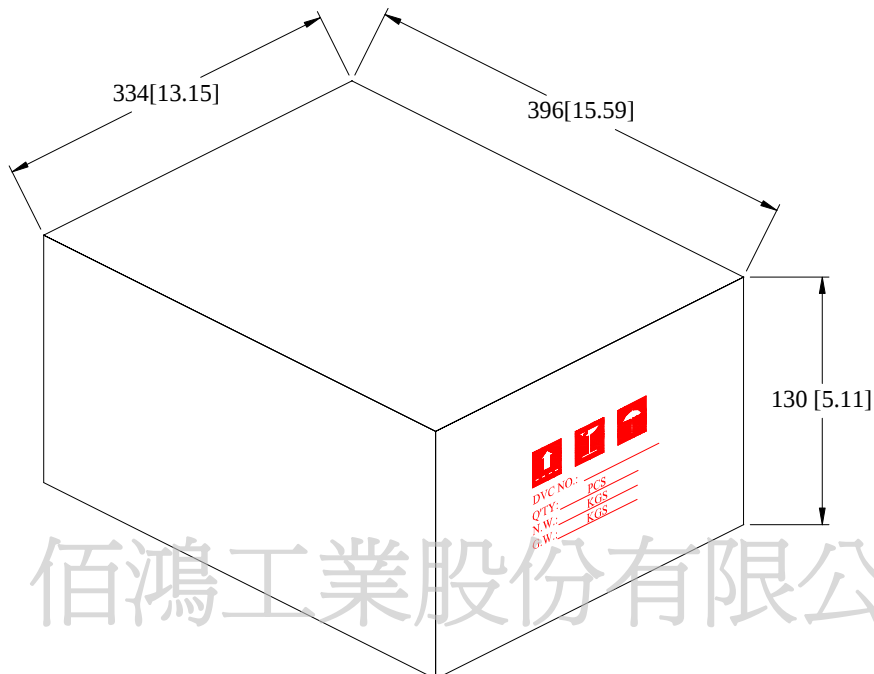


● Package Method : (unit:mm)



Tray

100 pcs/tray



Carton

5 tray / carton

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

Carton : Tolerance is ± 10 mm unless otherwise noted.

● Total Flux Bin Limits (At 350mA)

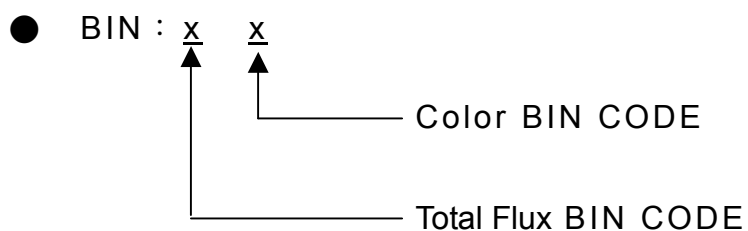
BIN CODE	Min. (lm)	Max. (lm)
N	60	72
P	72	93
Q	93	121

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

● Color Bin Limits(At 350mA)

BIN CODE	Min. (nm)	Max. (nm)
6	620	624
7	624	628
8	628	632

Tolerance for each bin limit is $\pm 1\text{ nm}$



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Notes:

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