

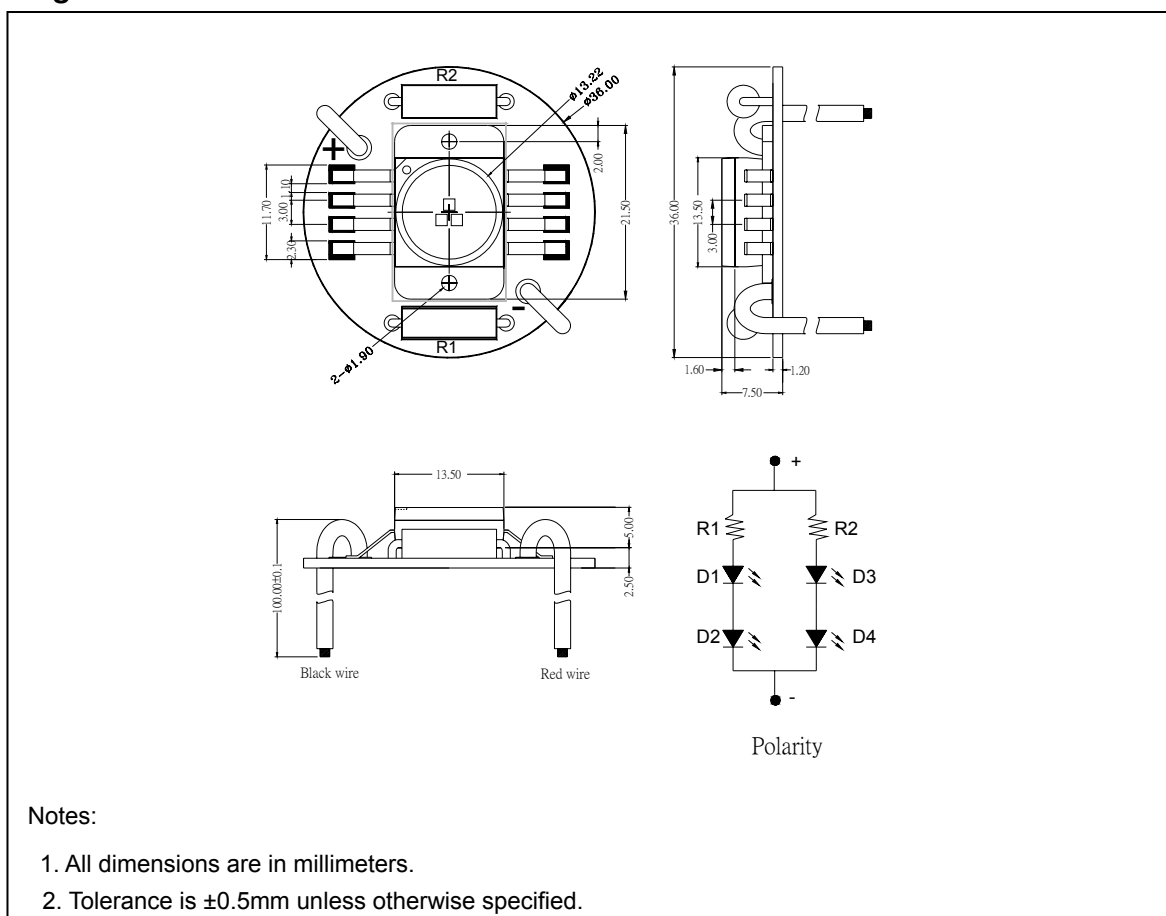
### ● Features:

1. Input Voltage: 12VDC.
2. Input power: 4W.
3. Chip material: AlInGaN.
4. Emitted color: White.
5. High lumen output.
6. High flux density.
7. Low power consumption.
8. Efficient heat transfer.
9. The emitting color meets SAE standard.

### ● Applications:

1. Light engine.
2. Torch.
3. Desk lamp.
4. General lighting.

### ● Package dimensions :



### ● Absolute maximum ratings(Ta=25°C)

| Parameter                                 | Symbol           | Rating  | Unit |
|-------------------------------------------|------------------|---------|------|
| Power Dissipation                         | P <sub>D</sub>   | 4.0     | W    |
| DC Forward Current* <sup>1</sup>          | I <sub>F</sub>   | 700     | mA   |
| Peak Pulsed Forward Current* <sup>2</sup> | I <sub>FP</sub>  | 2.5     | A    |
| LED Junction Temperature                  | T <sub>j</sub>   | 130     | °C   |
| Operating Temperature                     | T <sub>opr</sub> | -30~100 | °C   |
| Storage Temperature                       | T <sub>stg</sub> | -40~120 | °C   |
| Reverse Voltage                           | V <sub>R</sub>   | 10      | V    |
| Soldering Temperature (T=5 sec)           | T <sub>sol</sub> | 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 LED (Ta=25°C)

| Parameter                               | Symbol             | Condition                                                   | Min. | Typ. | Max. | Unit   |
|-----------------------------------------|--------------------|-------------------------------------------------------------|------|------|------|--------|
| Forward Voltage                         | V <sub>F</sub>     | I <sub>F</sub> = 700mA                                      | -    | 12.0 | 12.5 | V      |
| Total Flux                              | Φ <sub>v</sub>     | I <sub>F</sub> = 700mA                                      | 100  | 120  | -    | lm     |
| Color Temperature                       | CCT                | I <sub>F</sub> = 700mA                                      | 5000 | 6500 | 8000 | K      |
| Reverse Current                         | I <sub>R</sub>     | V <sub>R</sub> = 10V                                        | -    | -    | 100  | μA     |
| Thermal Resistance,<br>Junction To Case | R θ <sub>J-C</sub> | T <sub>J</sub> = 25°C ,<br>I <sub>F</sub> = 350mA(each die) | -    | 4.5  | -    | °C/W   |
| Viewing Angle                           | 2θ <sub>1/2</sub>  | I <sub>F</sub> = 700mA                                      | -    | 120  | -    | degree |
| Chromaticity<br>Coordinates             | x                  | I <sub>F</sub> = 700mA                                      | -    | 0.32 | -    |        |
|                                         | y                  | I <sub>F</sub> = 700mA                                      | -    | 0.31 | -    |        |

### ● Typical electro-optical characteristics curves

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

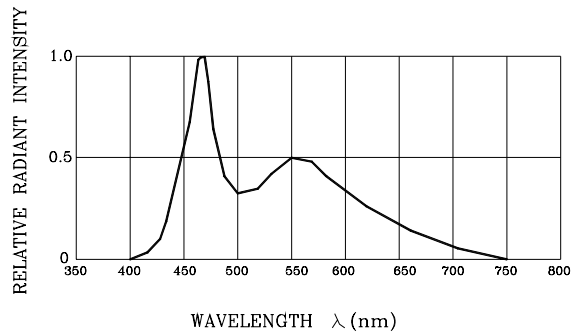


Fig.2 FORWARD CURRENT DERATING CURVE

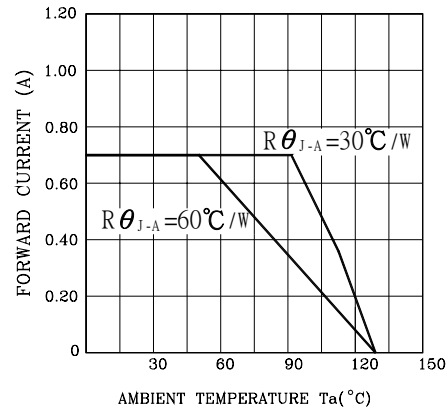


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

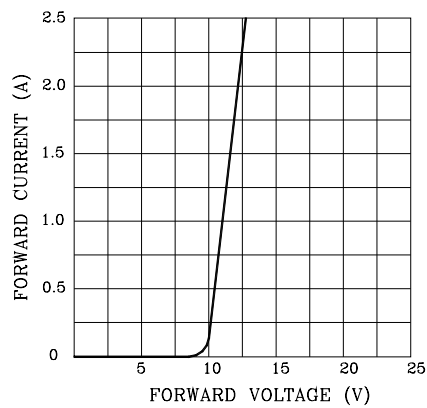


Fig.4 RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

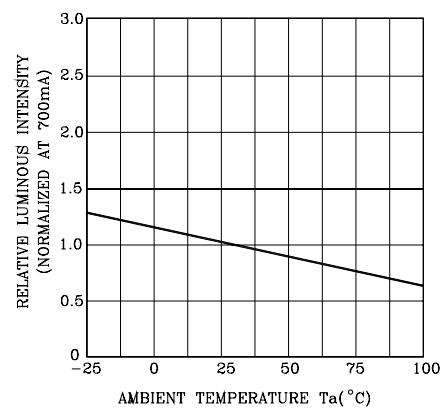


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

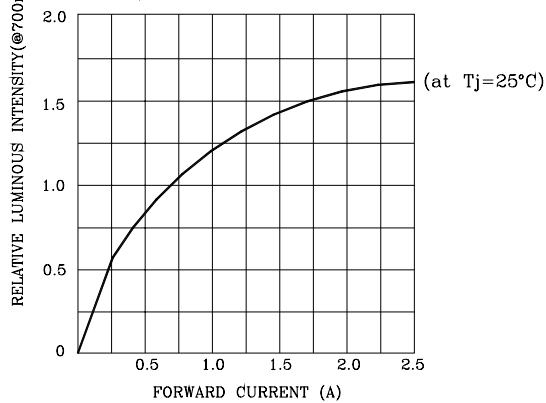
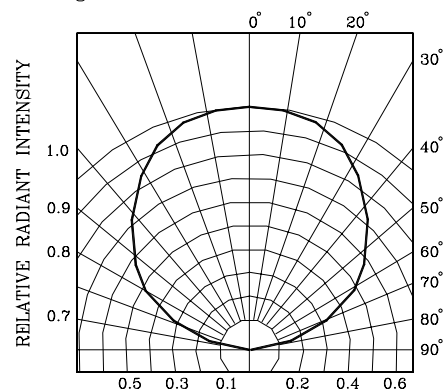
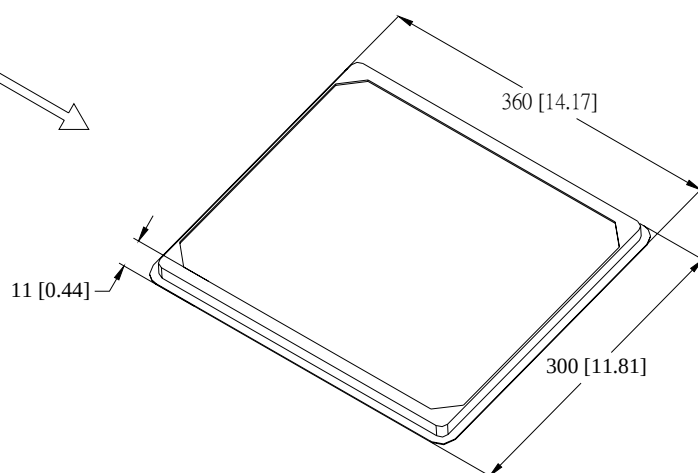
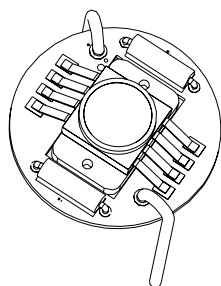


Fig.6 RADIATION DIAGRAM

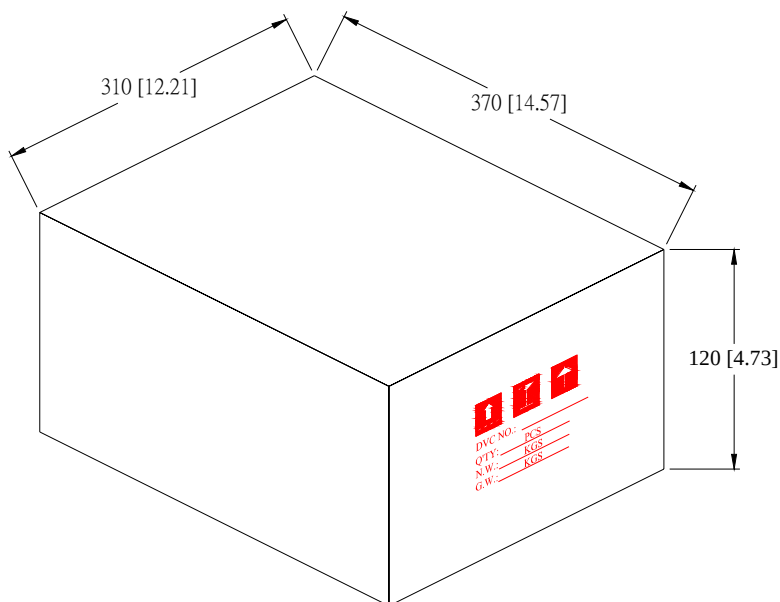


● Package Method : (unit:mm)



40 pcs/tray

Tray



10 tray / carton

Carton

NOTES : Tray : Tolerance is  $\pm 5$  mm unless otherwise noted.

Carton : Tolerance is  $\pm 10$  mm unless otherwise noted.

● Total Flux Bin Limits (At 700mA)

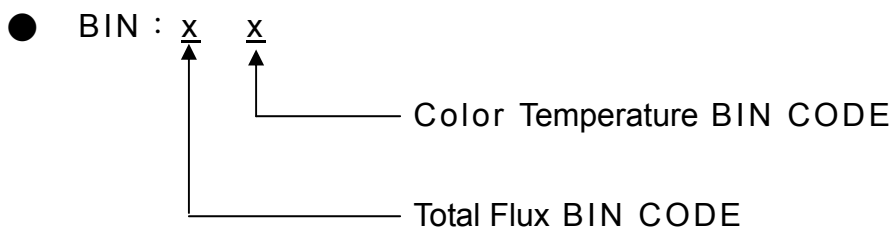
| BIN CODE | Min. (lm) | Max. (lm) |
|----------|-----------|-----------|
| Q        | 100       | 121       |
| R        | 121       | 157       |
| S        | 157       | 205       |

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

● Color Temperature Bin Limits(At 700mA)

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

Tolerance for each Bin limit is  $\pm 500K$ .



Notes:

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