**Feature:**

- Clear lens
- Package in tape and reel
- 3W high power
- InGaN technology for IB/IG
- AlInGaP technology for R

**Description:**

These 3W high power LEDs have a height profile of 5.0mm. With super high flux and high luminance, these LEDs are ideal for lighting.

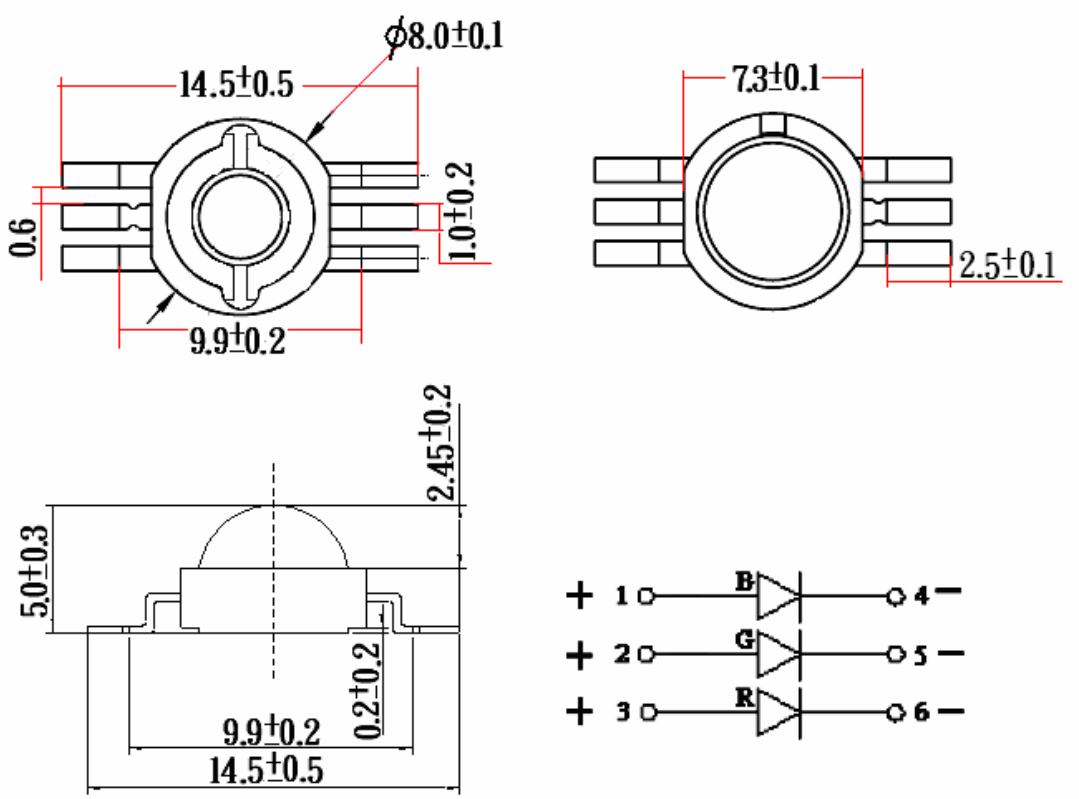
**Application:**

- Architectural lighting
- Projector light source
- Traffic signal
- Pathway lighting
- Household appliance

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant

**Dimension:**




Units: mm / tolerance = +/-0.1mm

## Electrical / Optical Characteristic ($T_A$=25 °C)

| Product | Color | $I_F$(mA) | $V_F$(V) | | λ(nm) | | | $\Phi^*_V$(lm) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Typ. | max | $\lambda_D$ | $\lambda_P$ | Δλ | min | typ. |
| QBHP682-RGBU | Blue (IB) | 350 | 3.5 | 4.0 | 465 | 468 | 25 | - | 12 |
| | Green (IG) | | 3.5 | 4.0 | 525 | 518 | 35 | - | 60 |
| | Red (R) | | 2.4 | 3.0 | 627 | 632 | 20 | - | 27 |

Luminous Intensity Tolerance is ±10%

## Absolute Maximum Rating

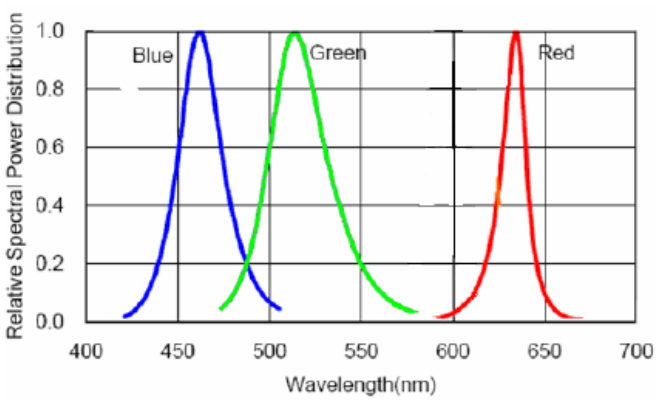
| Part # | $P_d$ (mW) | $I_F$ (mA) | $I_{FP}$ (mA)* | $V_R$ (V) | $T_{OP}$ (°C) | $T_{ST}$ (°C) | $T_{SOL}$ (°C)** |
|---|---|---|---|---|---|---|---|
| InGaN (IB/IG) | 1295 | 350 | 500 | 5 | -30 to +85 | -40 to +100 | 240 |
| AlInGaP (R) | 1295 | 350 | 500 | 5 | -30 to +85 | -40 to +100 | |

*Duty 1/10 @ 1KHz

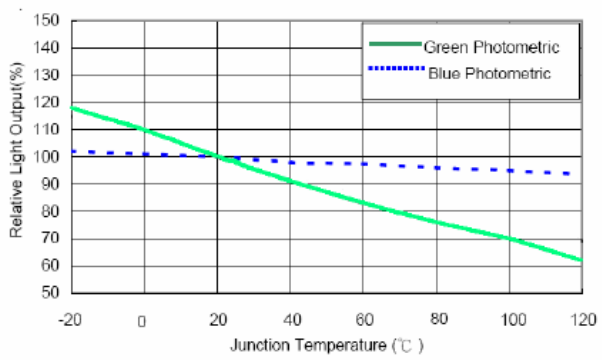
** IR Reflow for no more than 10 sec @ 240 °C

## Characteristic Curves:

Wavelength Characteristics, Tj=25℃

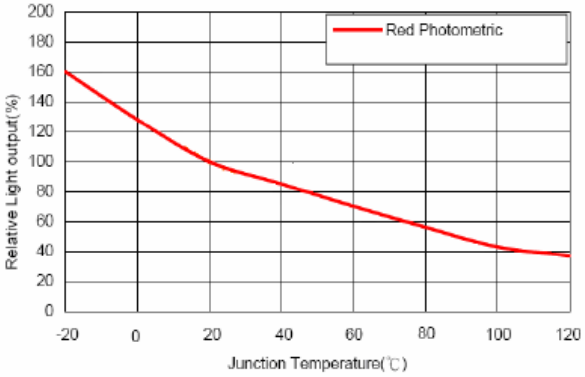



Light Output Characteristics



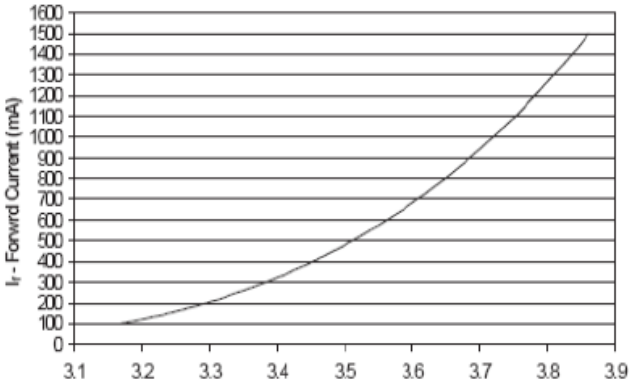

Relative Light VS.Junction Temperature

Light Output Characteristics

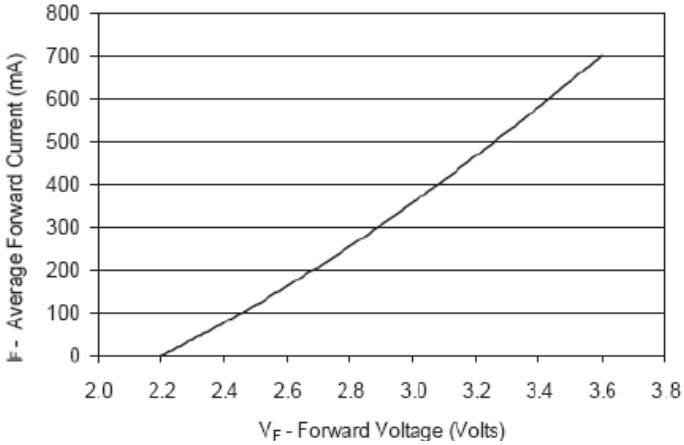



Relative Light Output VS. Junction Temperature

Forward Current Characteristics, Tj=25℃

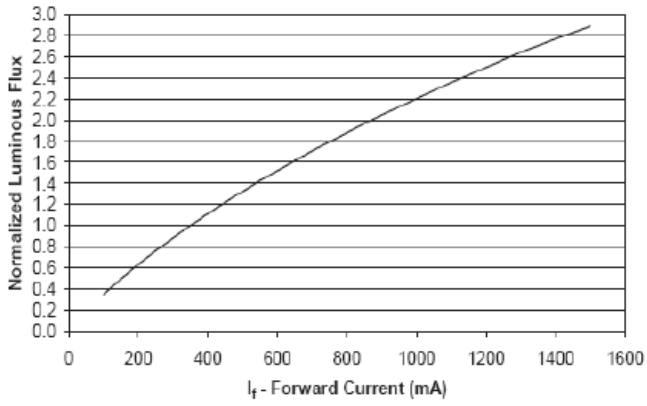



Forward Current Characteristics, Tj=25℃



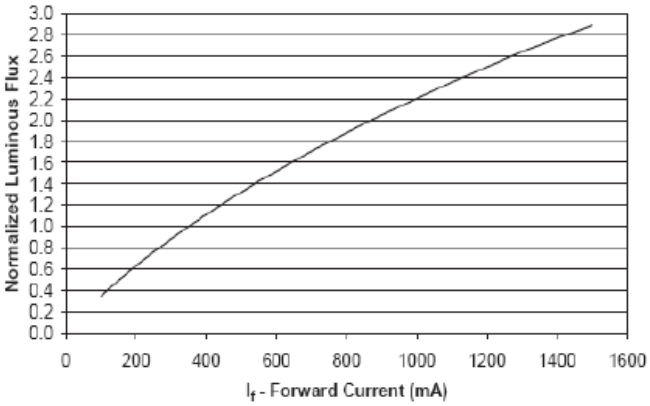

Forward Current VS.Forward Voltage for Red

Relative Luminous Flux



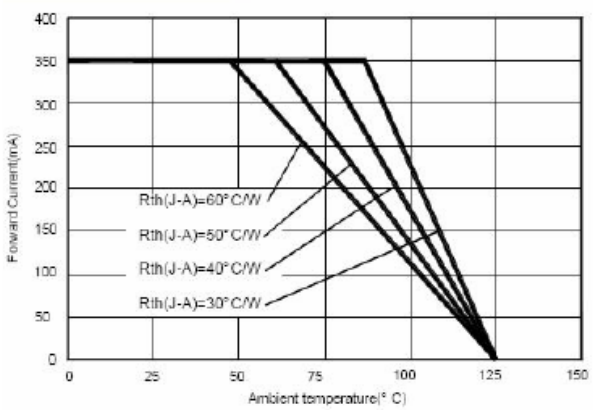

Relative Luminous Flux VS. Forward Current for Blue and Green at Tj=25℃ Test Current 350mA

**Relative Luminous Flux**



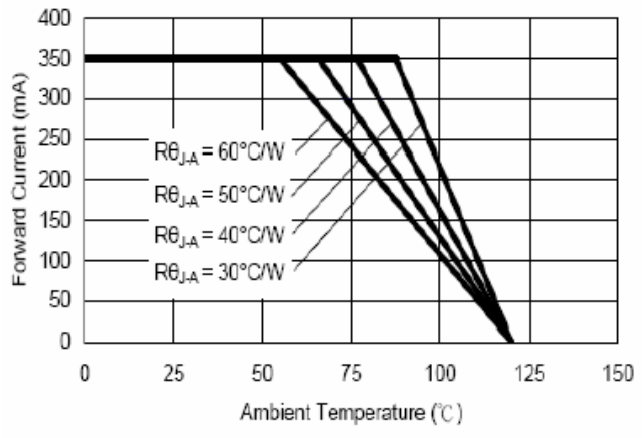

**Relative Luminous Flux VS. Forward Current for Red at Tj=25℃ Test Current 350mA**

**Current Derating Curves**



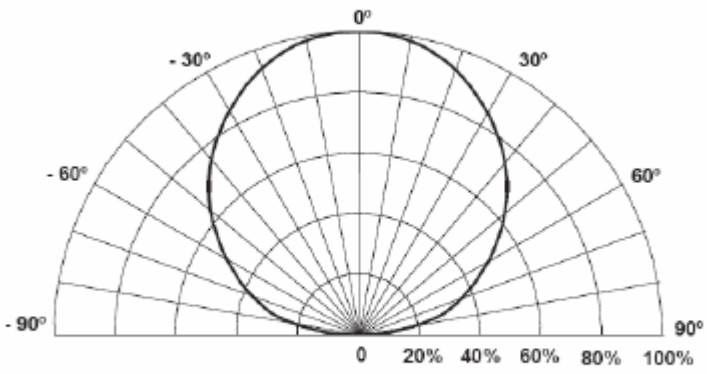

**Maximum Forward Current VS. Ambient Temperature bassed on Tjmax=125℃ for Blue and Green**

**Current Derating Curves**




**Maximum Forward Current VS. Ambient Temperature bassed on Tjmax=120℃ for Red**

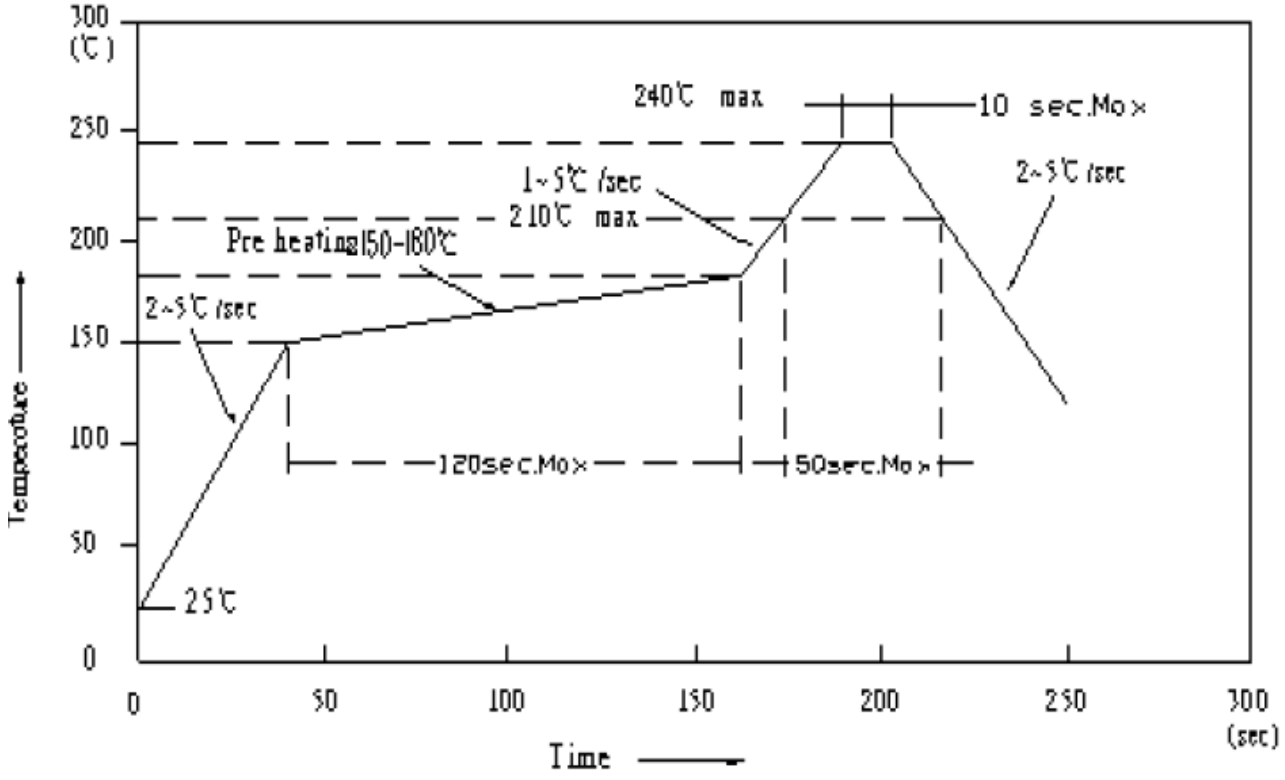
**Typical Radiation Patterns**



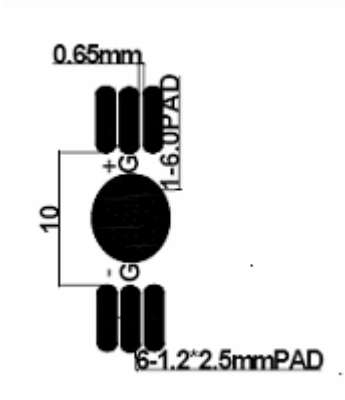

**Typical Polar Radiation Pattern**

## Solder Profile:

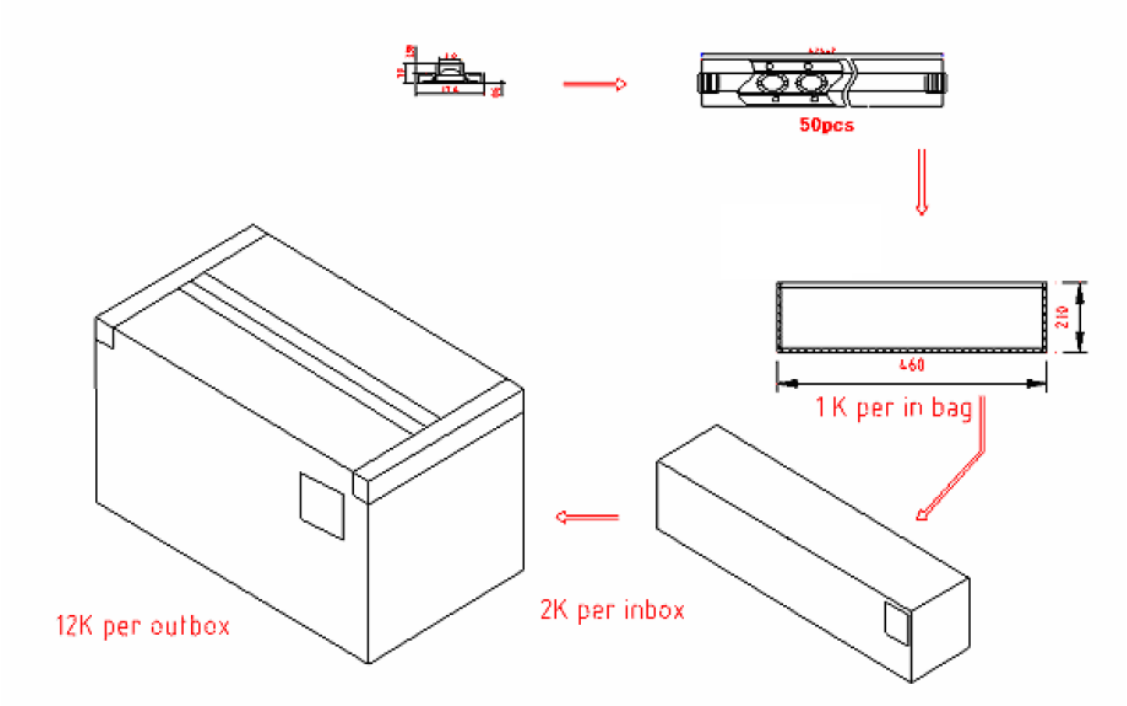
-Recommended tin glue specifications: melting temperature in the range of 178~192 $^{O}$C
-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



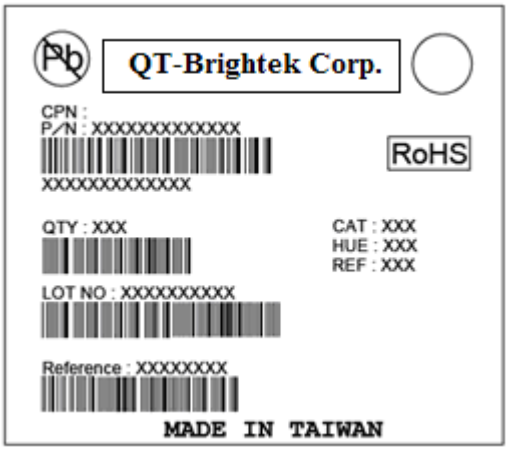

## Soldering Footprint:



## Packing:




## Labeling:




## Ordering Information:

| Part # | Orderable Part # | Spec Range | Quantity per tube |
|---|---|---|---|
| QBHP682-RGBU | QBHP682-RGBU | -- | 50 units |

## Revision History:

| Description: | Revision # | Revision Date |
|---|---|---|
| New Release of QBHP682-RGBU | V1.0 | 9/28/2010 |
| Information Updates | V1.1 | 1/14/2011 |
| | | |
| | | |

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.

2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.