

# QT-Brightek High Power Series

## 1.0 W High Power LED

**Part No.: QBHP684-RGBCWBU**

**B: 120° Viewing Angle  
U = 350mA**

Product: QBHP684-RGBCWBU	Date: March 29, 2021	Page 1 of 9
	Version# 1.0	

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## Introduction

### Feature:

- 1W High Power RGB LED
- Thermal Resistance Rth (Junction / Solder Point): 20 ° C/W typ.
- Packed in tape and reel
- Viewing Angle: 120° typ.

### Description:

This 1W high bright high power LED has compact size of 3.45 x 3.45mm. It is ideal for both indoor and outdoor lighting

### Application:

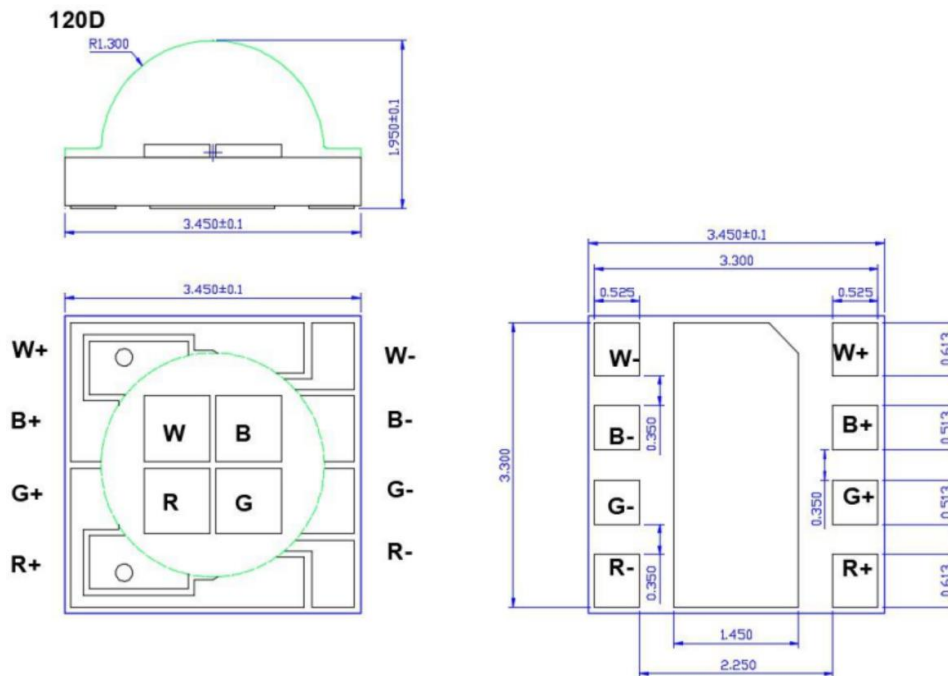
- Architectural and outdoor lighting
- Household appliances
- General lighting

### Certification & Compliance:

- ISO9001
- RoHS Compliant



## Dimensions:



Units: mm / tolerance = +/-0.2mm

**Electrical / Optical Characteristic ( $T_A=25^{\circ}\text{C}$ )**

Product Number	Color	$I_F$ (mA)	$V_F$ (V)			$\lambda_D$ (nm)			$\Phi_v$ (lm)		
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	
QBHP684-RGBCWBU	Red	350	1.8	2.4	2.8	620	630	635	30	35	
	Green	350	2.8	3.2	3.6	515	520	530	70	75	
	Blue	350	2.8	3.2	3.6	450	460	465	10	15	
							CCT (K)			$\Phi_v$ (lm)	
	Cool White (CW)	350	2.8	3.2	3.6	5300	6500	8000	180	200	

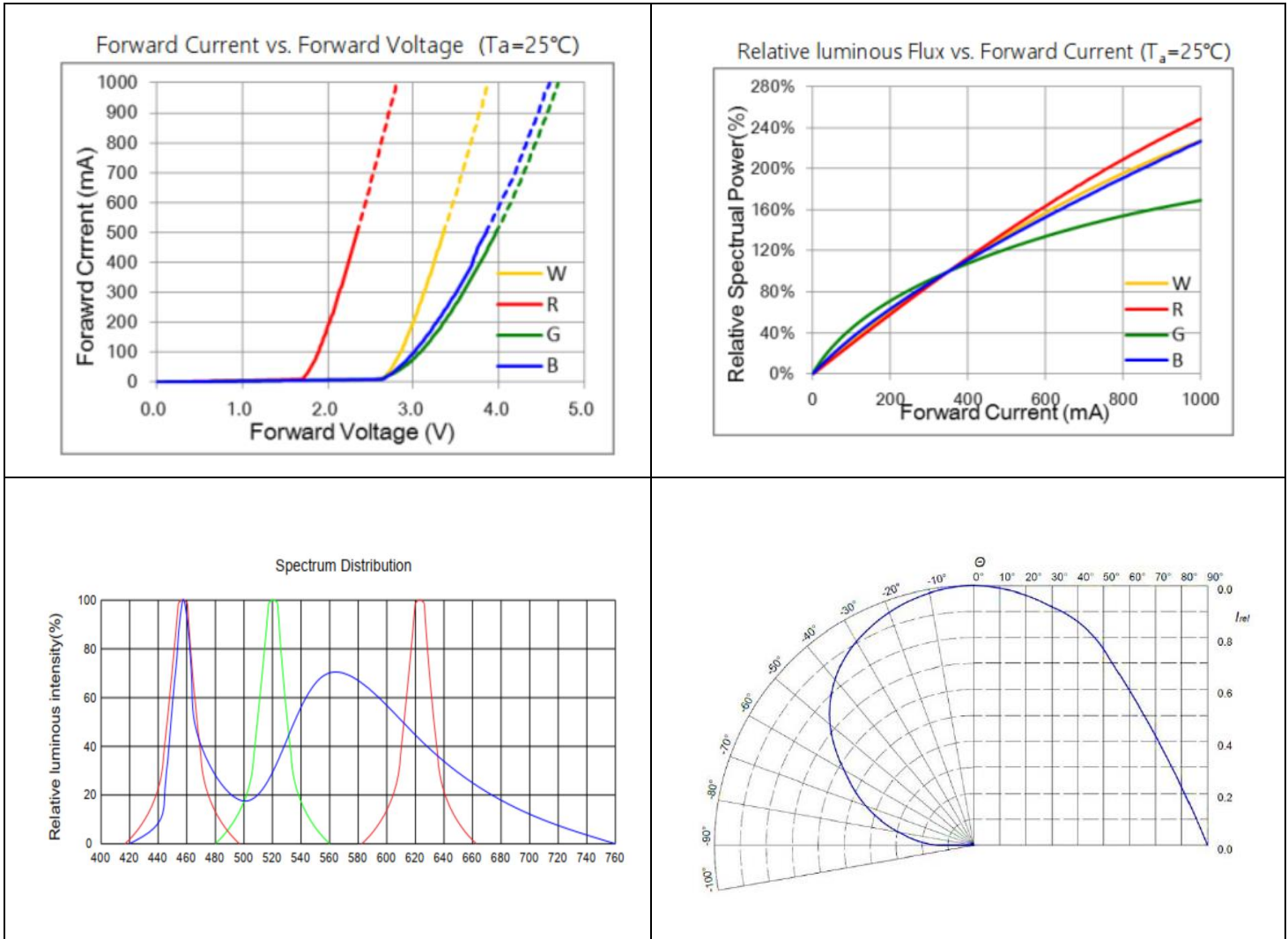
**Absolute Maximum Rating**

Material	$P_d$ (W)	$I_F$ (mA)	$I_{FP}$ (mA)*	$V_R$ (V)	$T_{OP}$ ( $^{\circ}\text{C}$ )	$T_{ST}$ ( $^{\circ}\text{C}$ )	$T_{SOL}$ ( $^{\circ}\text{C}$ )**
InGaN	2.38	350	500	5	-40 to +85	-40 to +100	260

\*Duty 1/10 @ 0.01s Pulse Width

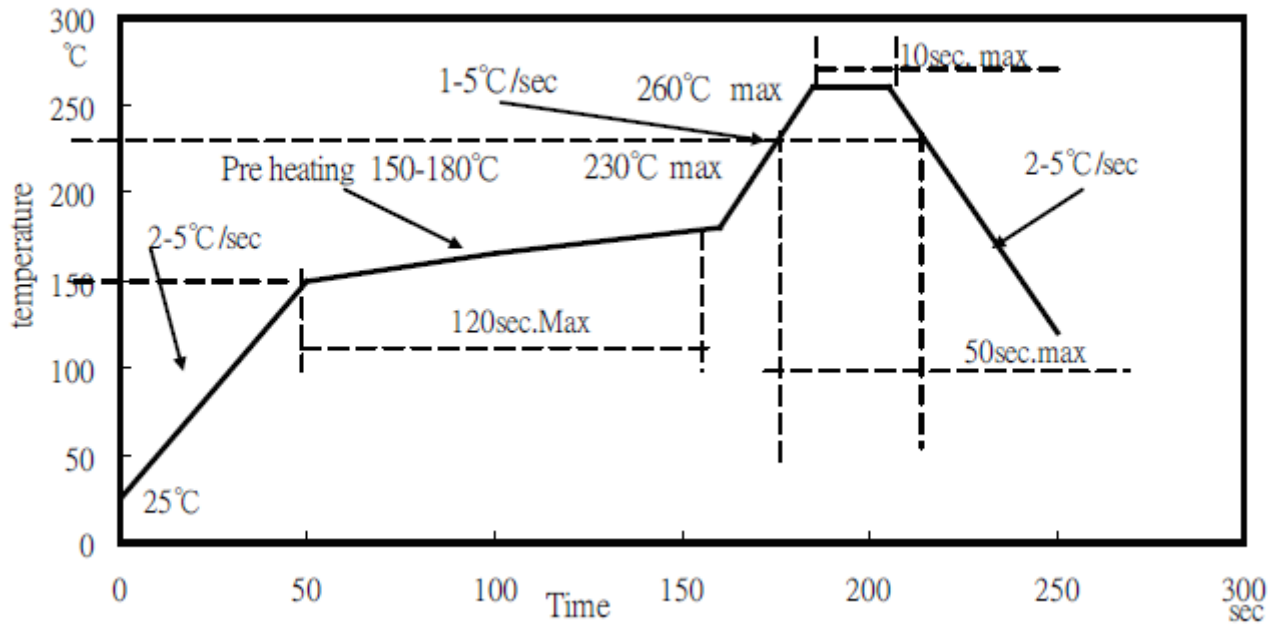
\*\*IR Reflow for no more than 10 sec @ 260  $^{\circ}\text{C}$

## Characteristic Curves

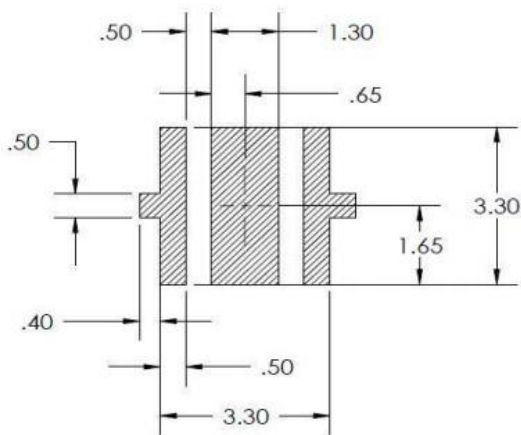


**IR Reflow Soldering Profile**

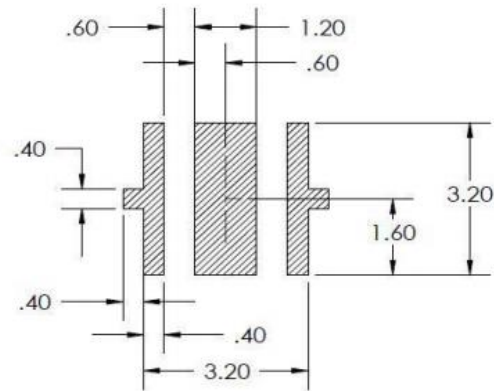
**Lead Free solder**



**Recommended Soldering Pad:**



RECOMMENDED PCB SOLDER PAD

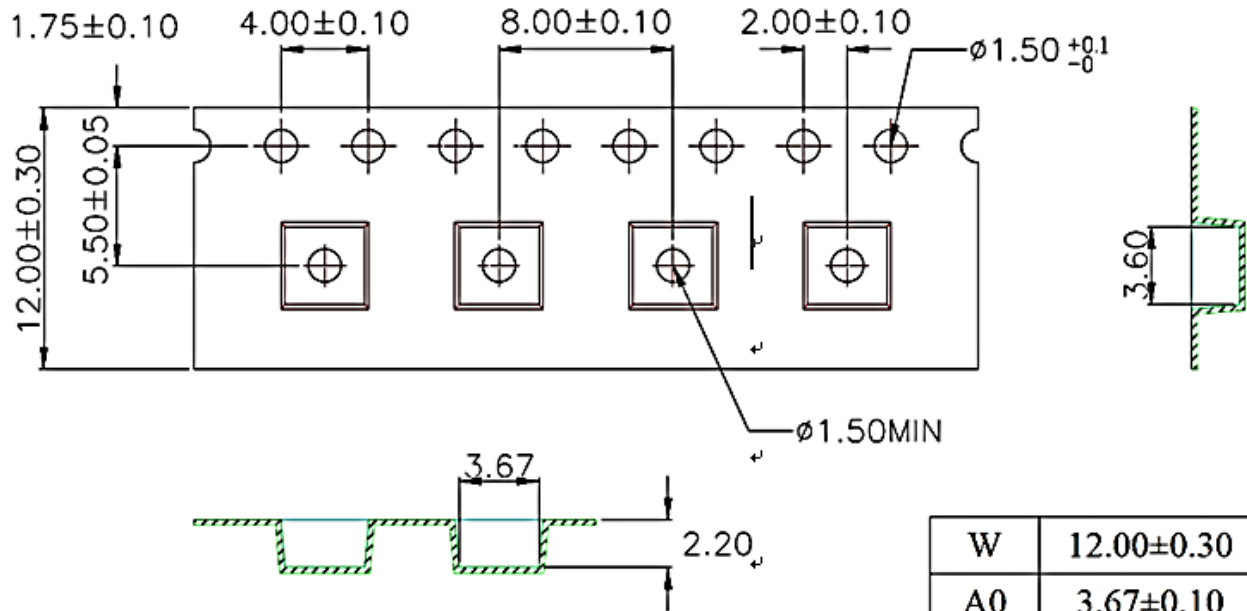


RECOMMENDED STENCIL PATTERN  
(HATCHED AREA IS OPENING)

Unit: mm

## Packing

### Tape and Reel:



1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.20$ .
2. Carrier camber is within 1 mm in 250 mm.
3. Material : Black Conductive Polystyrene Alloy.
4. All dimensions meet EIA-481-D requirements.
5. Thickness :  $0.30 \pm 0.05$ mm.

Unit: mm

W	12.00±0.30
A0	3.67±0.10
B0	3.60±0.10
K0	2.20±0.10

**Labeling**

**Part No:** \_\_\_\_\_  
**Customer P/N:** \_\_\_\_\_  
**Item:** \_\_\_\_\_  
**Q'ty:** \_\_\_\_\_  
**Vf:** \_\_\_\_\_  
**Iv:** \_\_\_\_\_  
**WI:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**Made in Taiwan****Ordering Information**

Part #	Orderable Part #	Spec Range	Quantity per reel
QBHP684-RGBCWBU	QBHP684-RGBCWBU	---	500 units



**Revision History**

Description:	Revision #	Revision Date
New Release of QBHP684-RGBCWBU	V1.0	03/29/2021

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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.