

QT-Brightek High Power Series

3W High Power UV LED

Part No.: QBHP684E-UVXXXYS Series

Y: Viewing Angle
XXX: UV Wavelength
S: 500mA

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Introduction

Feature:

- 3W High Power UV LED
- Clear Lens
- Packed in tape and reel
- ESD rating: 8KV (HBM)
- Viewing Angle: A=60°, B=120°

Description:

This 3W high power UV LED has compact size of 3.5 x 3.5mm. It is ideal for various UV applications.

Application:

- UV curing
- UV marking
- Purification
- Inspection
- Sterilization and Disinfection

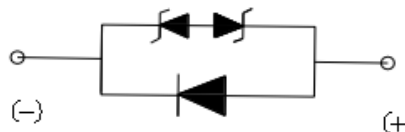
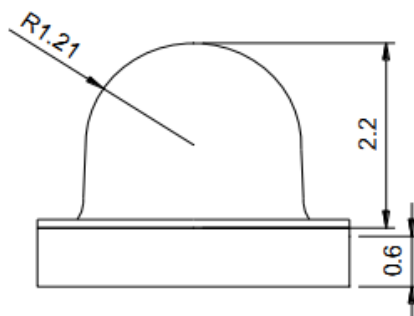
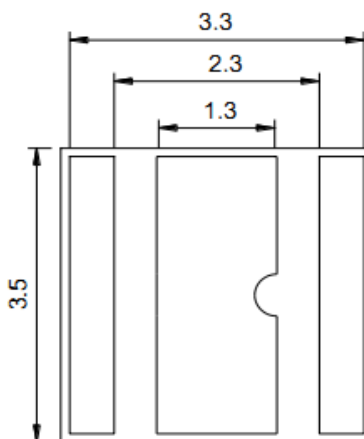
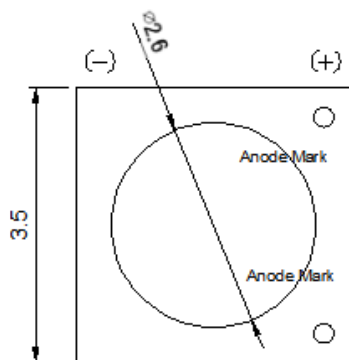
Certification & Compliance:

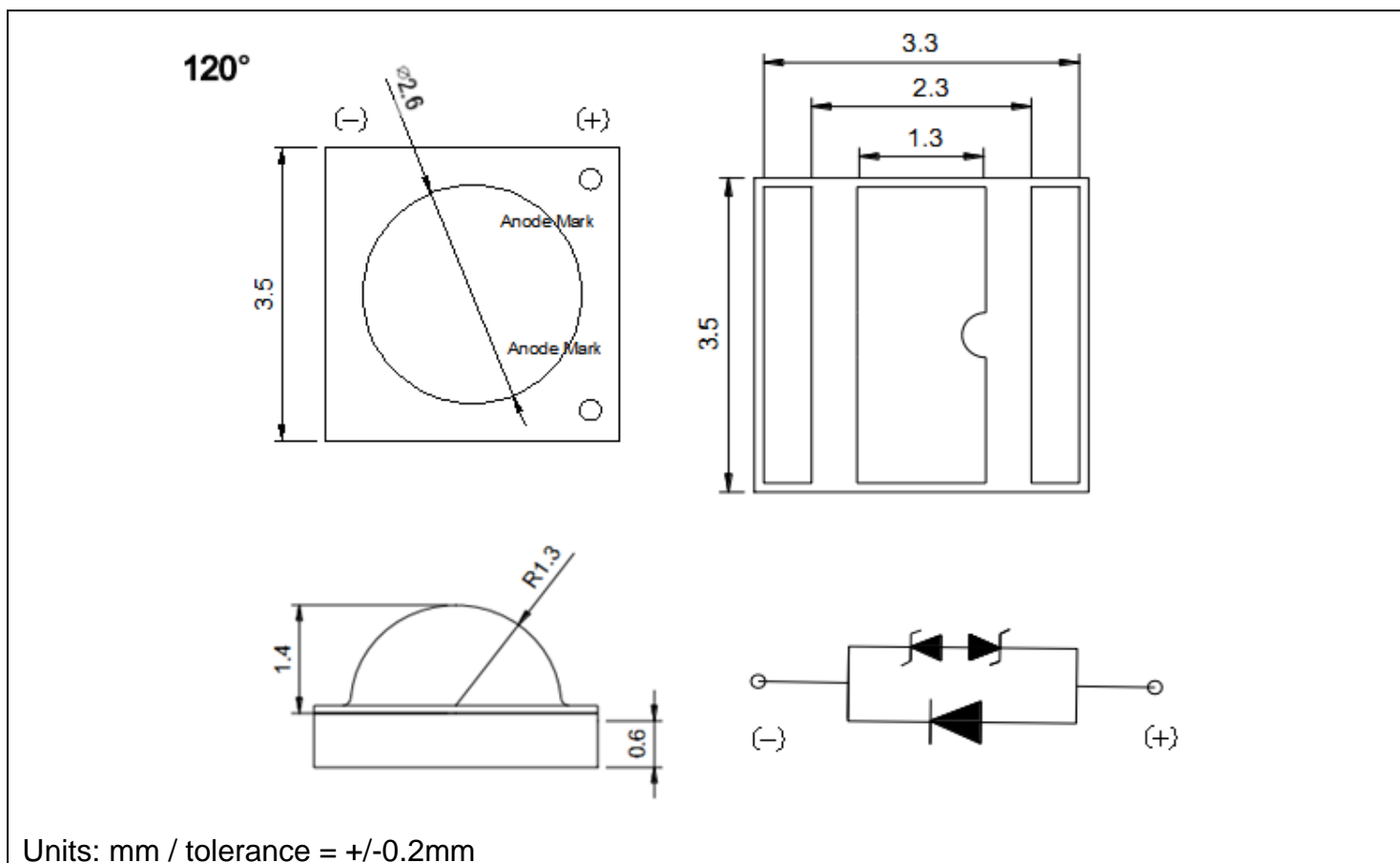
- TS16949
- ISO9001
- RoHS Compliant



Outline Dimensions:

60°





Electrical / Optical Characteristic (Ta=25 °C)

Part Number	Color	I _F (mA)	V _F (V)			λ _p (nm)			P _o (mW)		
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
QBHP684E-UV365AS	UV	500	3.0	3.4	3.8	365	367	370	300	400	500
QBHP684E-UV365BS											
QBHP684E-UV385AS											
QBHP684E-UV385BS											
QBHP684E-UV395AS											
QBHP684E-UV395BS											
QBHP684E-UV405AS											
QBHP684E-UV405BS											

Absolute Maximum Rating

Material	P _d (W)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)
InGaN	2.8	700	1000	5	-40 to +80	-40 to +100	260

*Duty 1/10 @ 10ms Pulse Width

Forward Voltage V_F @ $I_F=500\text{mA}$

Bin	Min.	Max.	Unit
A	3.0	3.2	V
B	3.2	3.4	
C	3.4	3.6	
D	3.6	3.8	

Radiometric Power P_O for UV365S @ $I_F=500\text{mA}$

Bin	Min.	Max.	Unit
A1	300	340	mW
A2	340	380	
A3	380	420	
A4	420	460	
A5	460	500	

Radiometric Power P_O for UV385S, UV395S & UV405S @ $I_F=500\text{mA}$

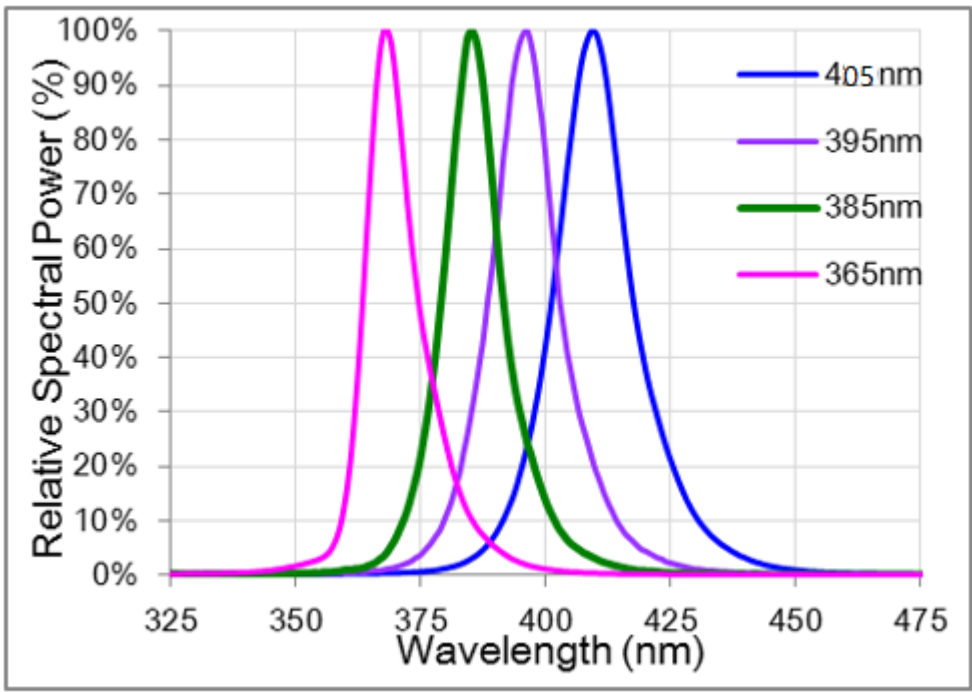
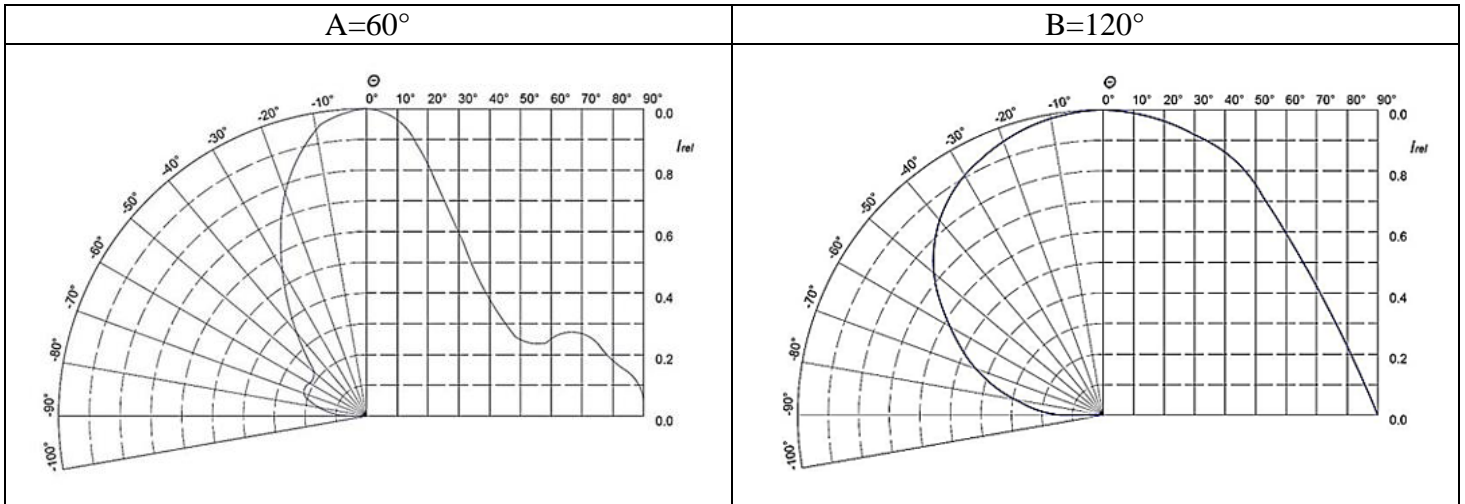
Bin	Min.	Max.	Unit
B2	700	740	mW
B3	740	780	
B4	780	820	
B5	820	860	

Tolerance of measurement of forward voltage: $\pm 0.1\text{V}$

Tolerance of measurement of luminous intensity: $\pm 15\%$

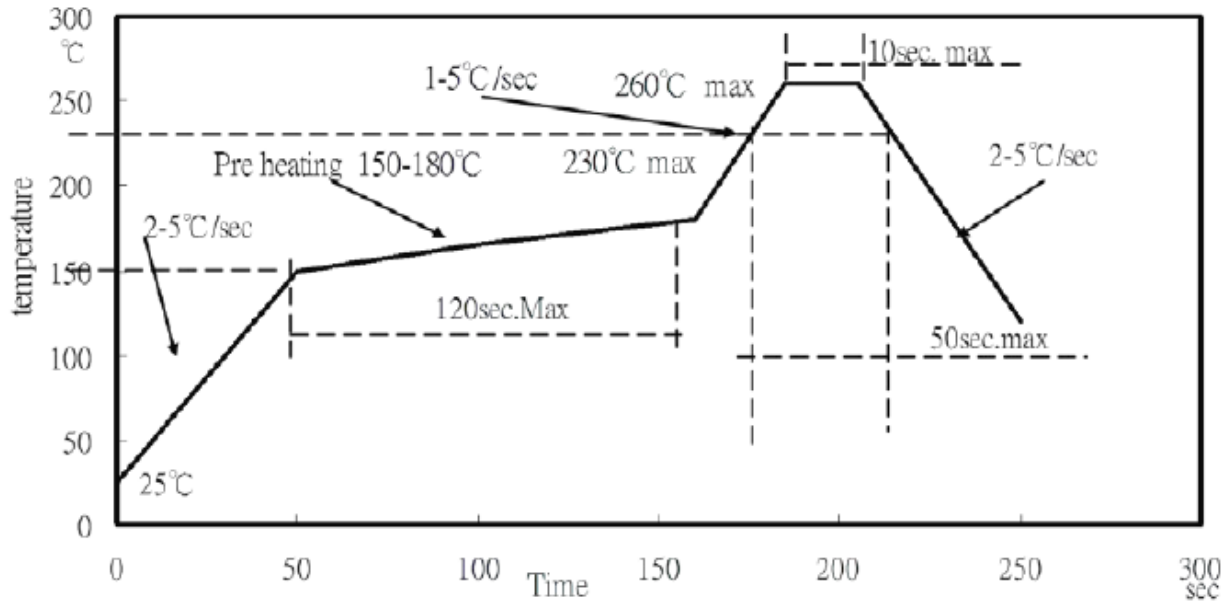
Tolerance of measurement of dominant wavelength: $\pm 2\text{nm}$

Characteristic Curves

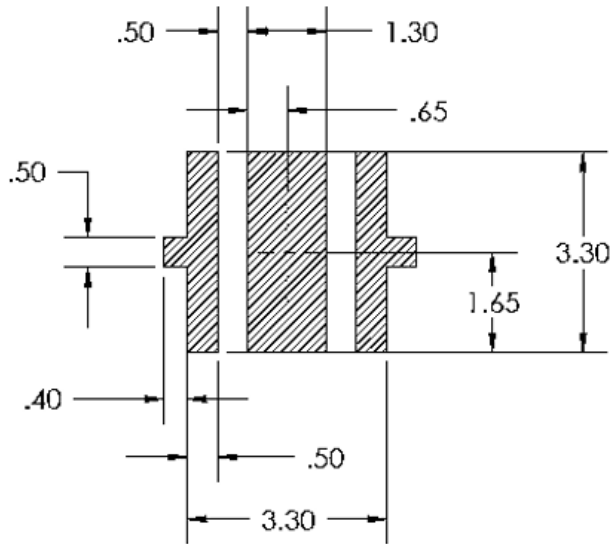


IR Reflow Soldering Profile

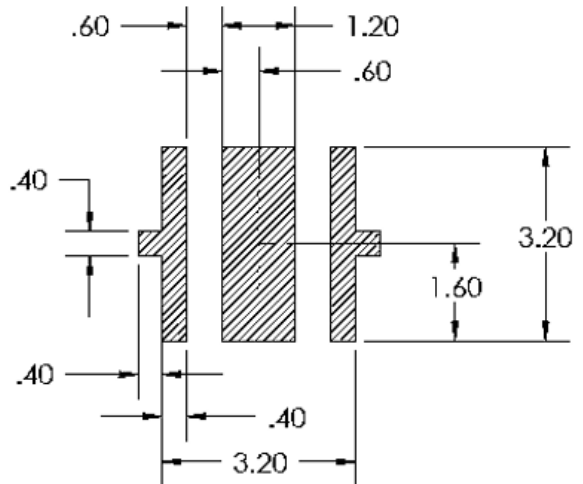
Lead Free solder



Recommended Soldering Pad:



RECOMMENDED PCB SOLDER PAD



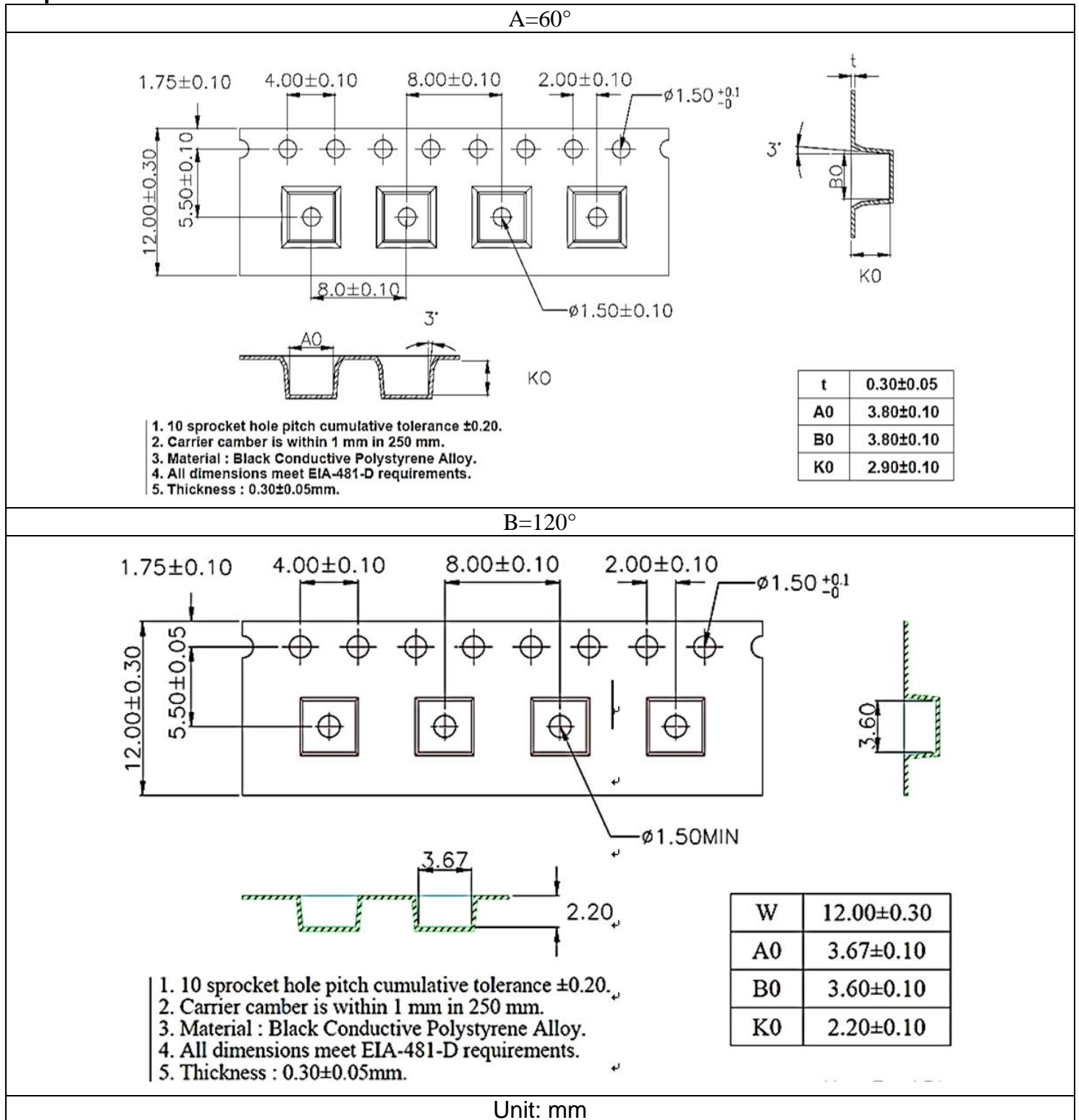
RECOMMENDED STENCIL PATTERN (HATCHED AREA IS OPENING)

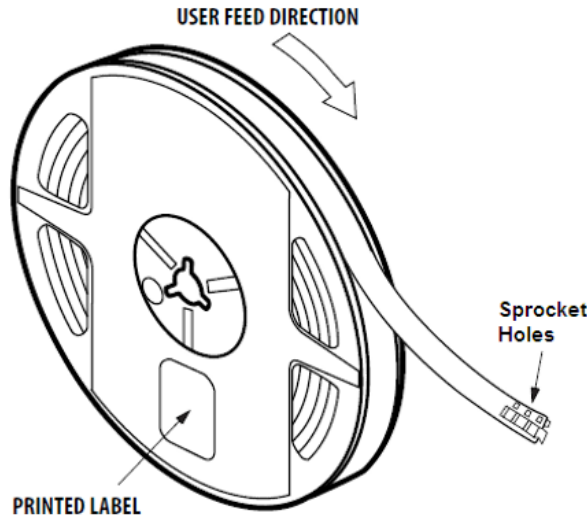
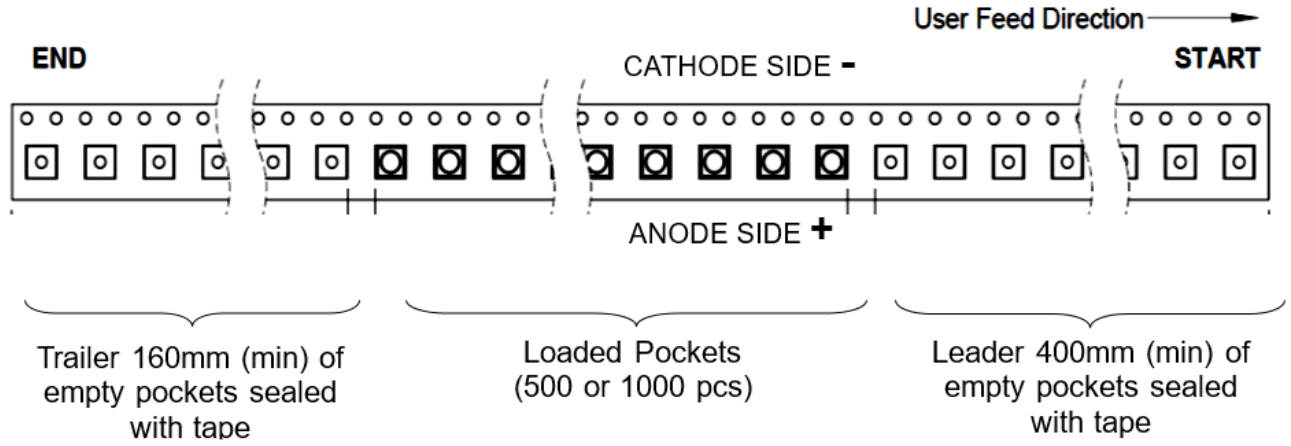
§ Suggest stencil t = 0.12 mm

Unit: mm

Packing

Tape and Reel:



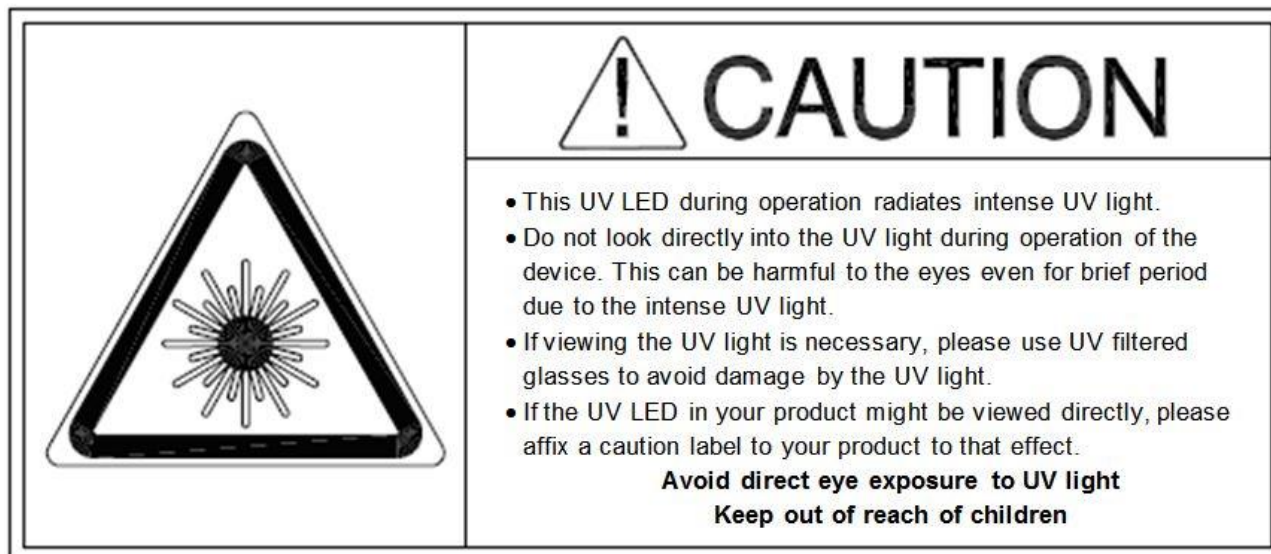


Labeling



Part No: _____
 Customer P/N: _____
 Item: _____
 Q'ty: _____
 Vf: _____
 Iv: _____
 WI: _____
 Date: _____

Made in Taiwan

Caution

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBHP684E-UV365AS	QBHP684E-UV365AS	$P_o=400\text{mW typ. @ } I_f=500\text{mA,}$ $\lambda_p=365\text{nm to } 370\text{nm}$	500 units
QBHP684E-UV365BS	QBHP684E-UV365BS		1000 units
QBHP684E-UV385AS	QBHP684E-UV385AS	$P_o=800\text{mW typ. @ } I_f=500\text{mA,}$ $\lambda_p=380\text{nm to } 390\text{nm}$	500 units
QBHP684E-UV385BS	QBHP684E-UV385BS		1000 units
QBHP684E-UV395AS	QBHP684E-UV395AS	$P_o=800\text{mW typ. @ } I_f=500\text{mA,}$ $\lambda_p=390\text{nm to } 400\text{nm}$	500 units
QBHP684E-UV395BS	QBHP684E-UV395BS		1000 units
QBHP684E-UV405AS	QBHP684E-UV405AS	$P_o=800\text{mW typ. @ } I_f=500\text{mA,}$ $\lambda_p=400\text{nm to } 410\text{nm}$	500 units
QBHP684E-UV405BS	QBHP684E-UV405BS		1000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBHP684E-UVXXXYS_series	V1.0	02/01/2016
Update VF binning and dimension drawing	V1.1	08/16/2016

Disclaimer

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

Life Support Policy

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

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.