

QT-Brightek Chip LED Series

SMD 0603 BI-Color LED

Part No.: QBLP601-AGIB

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Introduction

Feature:

- Water clear lens
- Package in tape and reel
- Ultra bright 0603 LED package
- AlInGaP technology for Yellow Green (AG)
- InGaN technology for blue (IB)
- Viewing angle: 140 deg typ.

Description:

These ultra bright 0603 AGIB bi-color LEDs have a height profile of 0.55mm. Combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting, status indication, and color mixing applications.

Application:

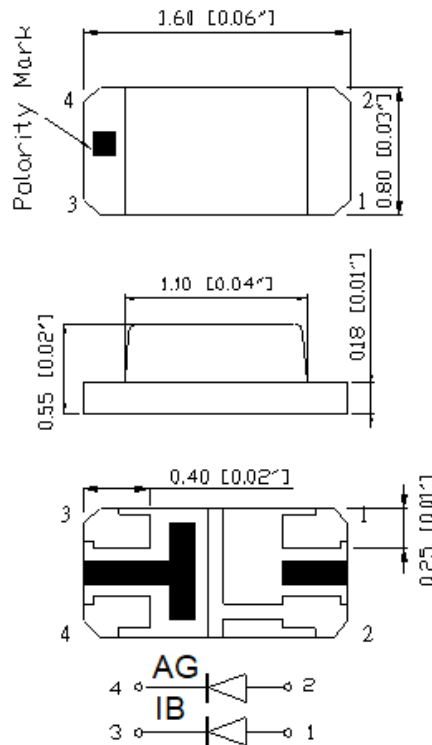
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I _F (mA)	V _F (V)		λ _D (nm)			I _V (mcd)	
			Typ.	Max	Min.	Typ.	Max.	Min.	Typ.
QBLP601-AGIB	Yellow Green	20	2.0	2.5	565	572	576	40	63
	Blue	20	3.1	3.7	465	470	475	40	75

Absolute Maximum Rating

Material	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SO L} (°C)**
AllnGaP	75	30	125	5	-40 ~ +80	-40 ~ +85	260
InGaN	111	30	125	5	-40 ~ +80	-40 ~ +85	260

*Duty 1/8 @ 1kHz

**IR Reflow for no more than 10 sec @ 260 °C

Forward Voltage V_F for AllnGaP @ I_F=20mA

Bin	Min.	Max.	Unit
□	1.7	2.5	V

Forward Voltage V_F for InGaN @ I_F=20mA

Bin	Min.	Max.	Unit
f	2.8	3.1	V
g	3.1	3.4	
h	3.4	3.7	

Luminous Intensity I_V for Yellow Green @ I_F=20mA

Bin	Min.	Max.	Unit
F2	40	63	mcd
G2	63	100	

Luminous Intensity I_V for Blue @ I_F=20mA

Bin	Min.	Max.	Unit
F2	40	63	mcd
G2	63	100	

Dominant Wavelength λ_D for Yellow Green @ $I_F=20mA$

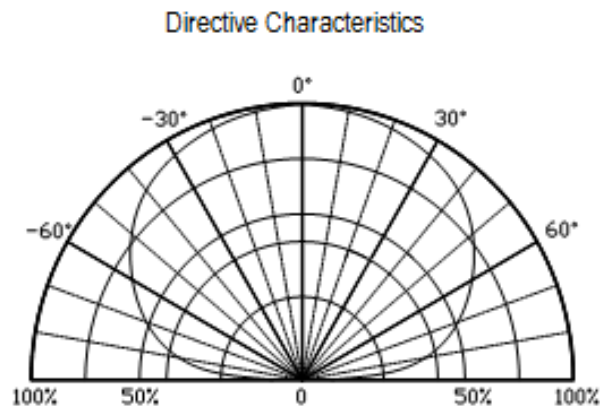
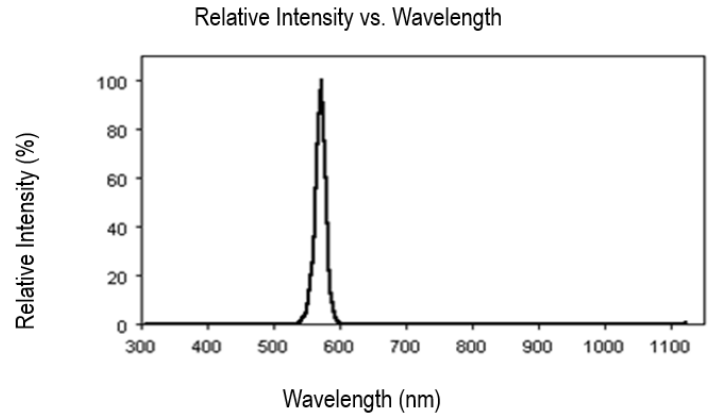
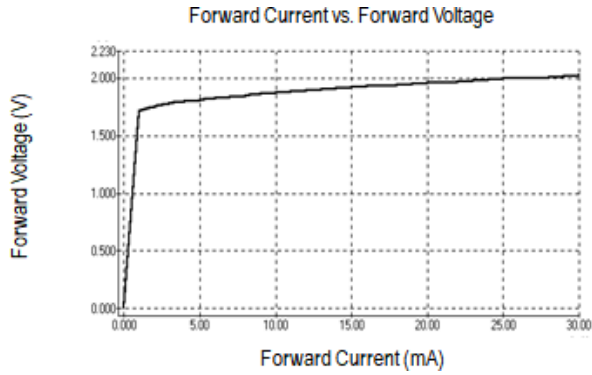
Bin	Min.	Max.	Unit
h	565	568	nm
i	568	572	
j	572	576	

Dominant Wavelength λ_D for Blue @ $I_F=20mA$

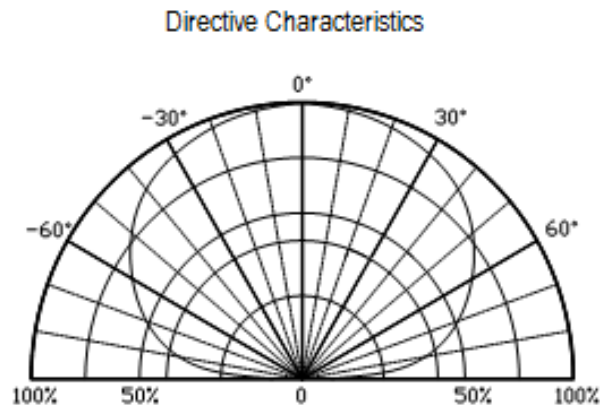
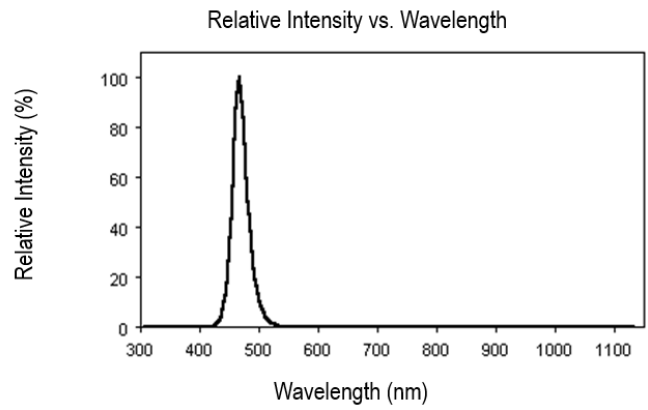
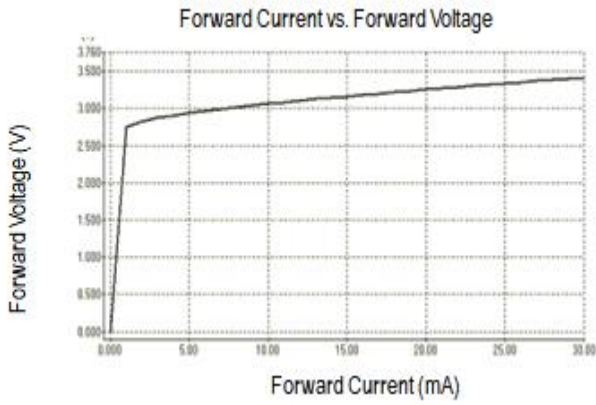
Bin	Min.	Max.	Unit
G	465	467.5	nm
H	467.5	470	
I	470	472.5	
J	472.5	475	

Characteristic Curves

Yellow Green

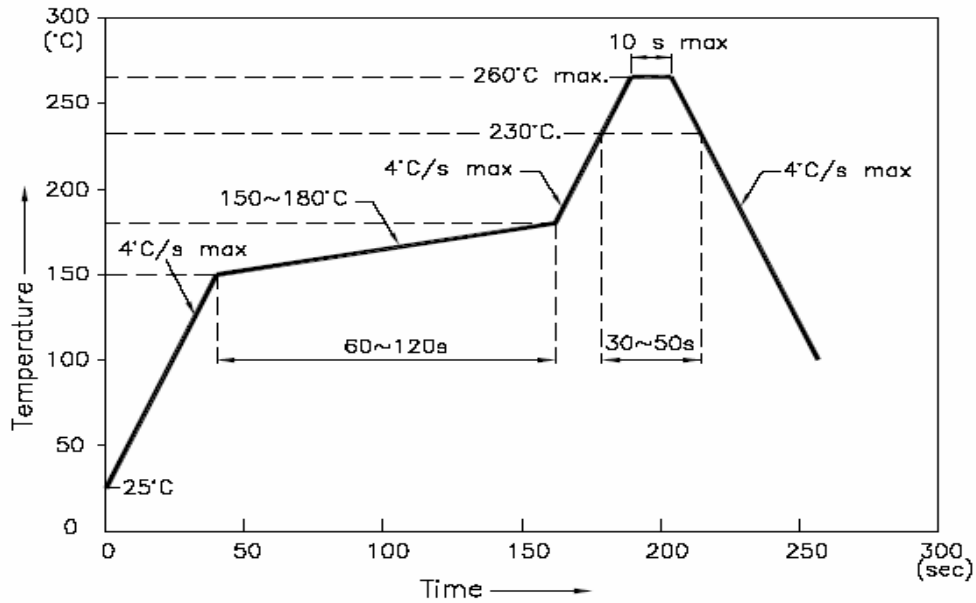


Blue

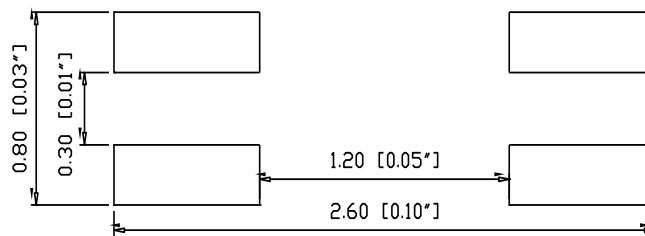


Solder Profile & Footprint

-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



RECOMMEND PAD LAYOUT

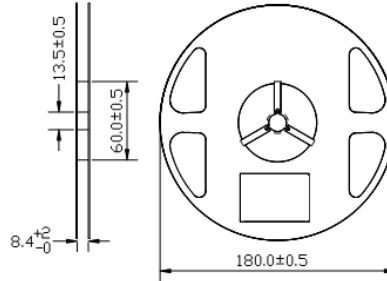


Units: mm

tolerance: +/- 0.1mm

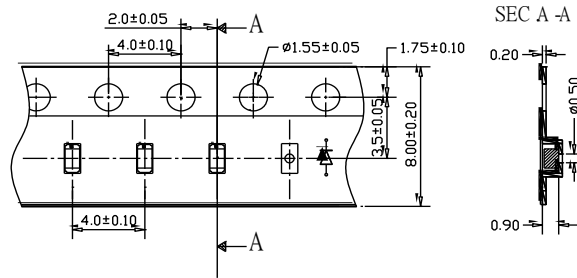
Packing

Reel Dimension:



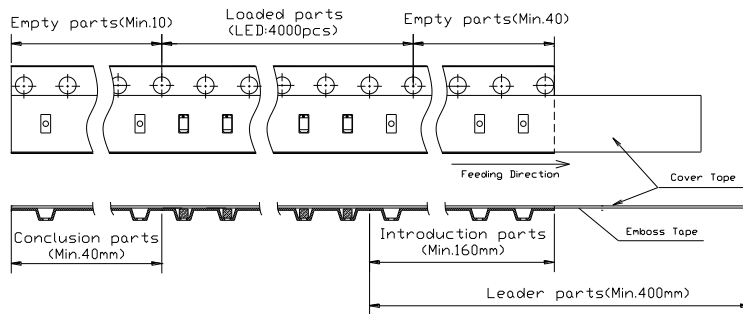
Unit: mm

Tape Dimension:

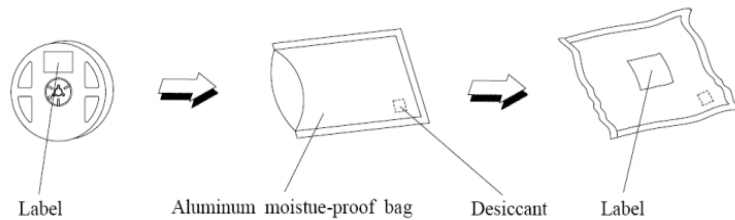


Unit: mm

Arrangement of Tape:



Packaging Specifications:





Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP601-AGIB	QBLP601-AGIB	Yellow Green (AG): $I_V=63\text{mcd typ. @ } 20\text{mA}$ / $\lambda_D: 565\text{nm to } 576\text{nm}$	4000pcs
		Blue (IB): $I_V=75\text{mcd typ. @ } 20\text{mA}$ / $\lambda_D: 465\text{nm to } 475\text{nm}$	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP601-AGIB	V1.0	05/02/2019

Disclaimer

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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.