QT-Brightek PLCC Series

PLCC4 RGB LED with Lens

Part No.: QBLP677AD-RGB5

RGB5: White Face, Clear Lens

Table of Contents:

Introduction

Feature:

- Clear lens
- White face
- Package in tape and reel
- Ultra bright PLCC4 RGB LED
- Common Anode
- InGaN technology for IB/IG
- AlInGaP technology for R
- Viewing angle: 30 deg typ.

Description:

This PLCC4 RGB LEDs have a built in lens that provides narrow viewing angle. It is suitable for signage application.

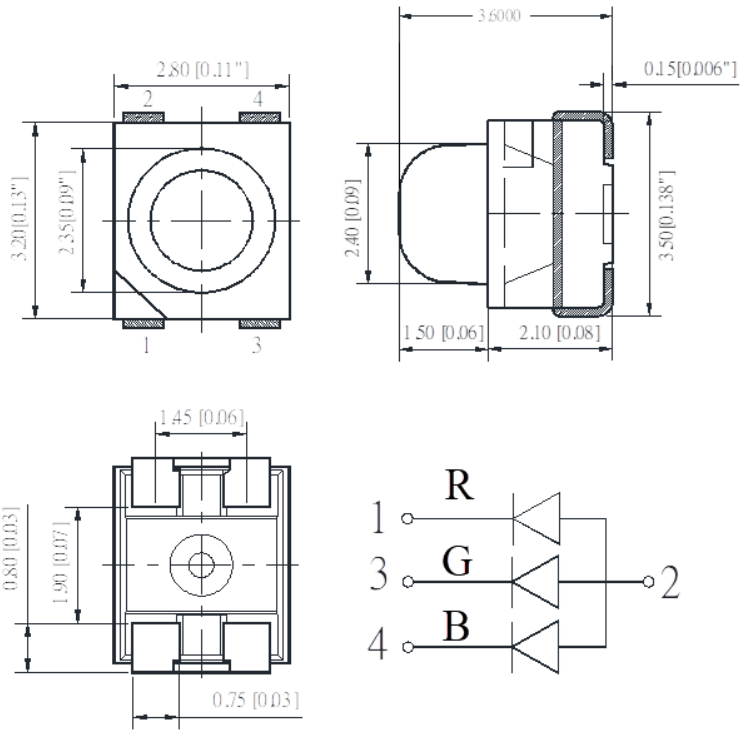
Application:

- Status indication
- Signage
- Signaling

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant

Dimension:



Units: mm / tolerance = +/-0.2mm

Electrical / Optical Characteristic (T_A=25 °C)

Product	Color	I_F (mA)	V_F (V)			λ_D (nm)			I_V (mcd)	
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP677AD-RGB5	Red	20	1.7	2.0	2.5	615	622	630	250	550
	True Green	20	2.5	2.8	3.4	520	525	530	2000	4500
	Blue	20	2.8	3.1	3.7	460	465	470	250	500

Absolute Maximum Rating

Material	P_d (mW)	I_F (mA)	I_{FP} (mA)*	V_R (V)	T_{OP} (°C)	T_{ST} (°C)	T_{SOL} (°C)**
AlInGaP (R)	75	30	125	5	-40 to +80	-40 to +85	240
InGaN (IB/IG)	111	30	125	5	-40 to +80	-40 to +85	240

*Duty 1/8 @ 1kHz

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

Luminous Intensity I_V for Red @ I_F=20mA

Bin	Min.	Max.	Unit
A	250	450	mcd
B	450	650	
C	650	800	

Luminous Intensity I_V for True Green @ I_F=20mA

Bin	Min.	Max.	Unit
D	2000	3300	mcd
E	3300	5000	
F	5000	6800	

Luminous Intensity I_V for Blue @ I_F=20mA

Bin	Min.	Max.	Unit
G	250	400	mcd
H	400	640	
I	640	800	

Dominant Wavelength λ_D for Red @ I_F=20mA

Bin	Min.	Max.	Unit
s	615	620	nm
t	620	625	
u	625	630	

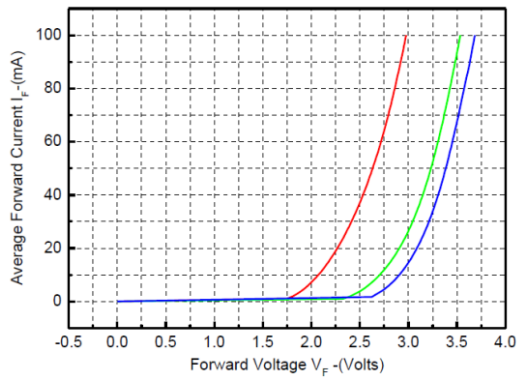
Dominant Wavelength λ_D for True Green @ I_F=20mA

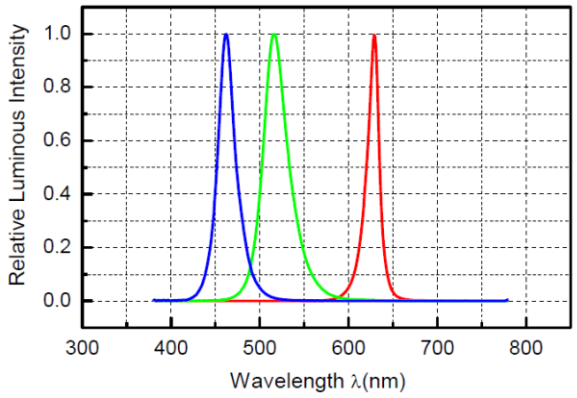
Bin	Min.	Max.	Unit
a	520	525	nm
b	525	530	

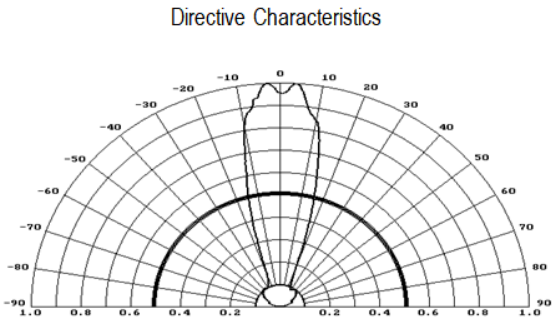
Dominant Wavelength λ_D for Blue @ I_F=20mA

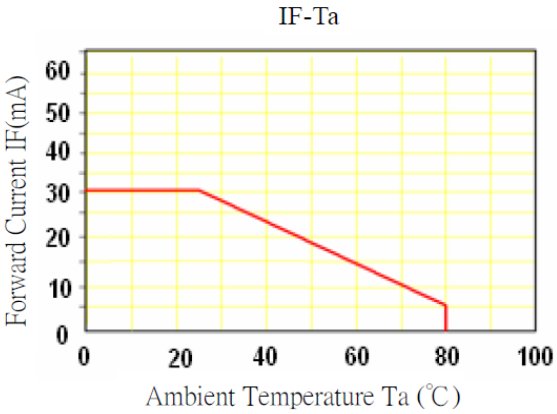
Bin	Min.	Max.	Unit
c	460	465	nm
d	465	470	

Characteristic Curves



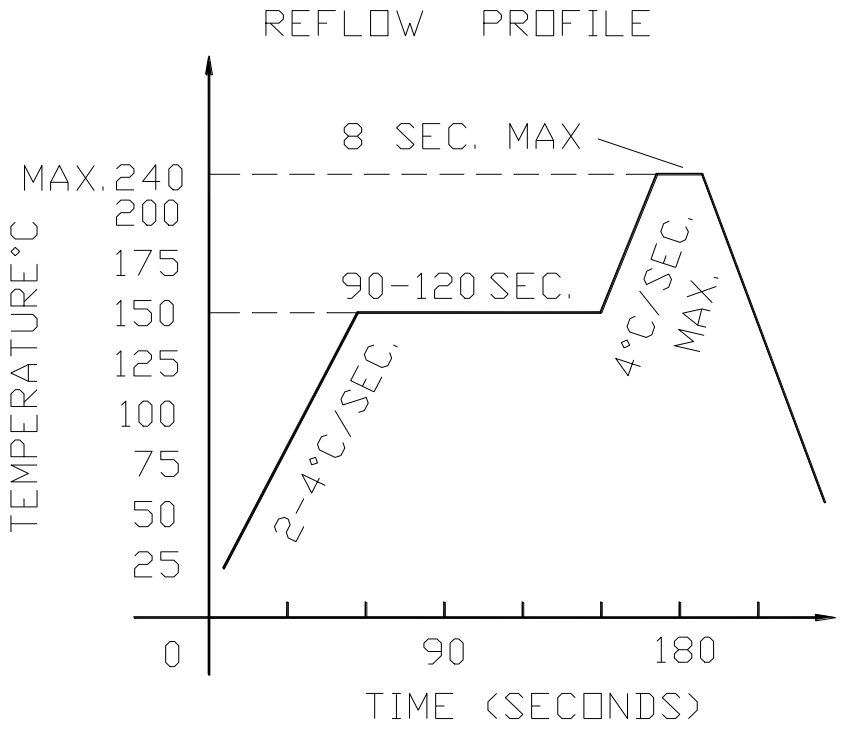




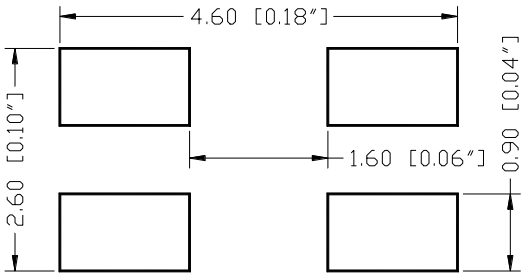


Solder Profile & Footprint

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



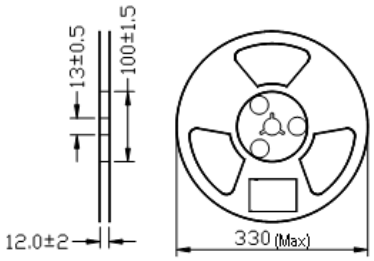
Recommended Pad Layout



Units: mm

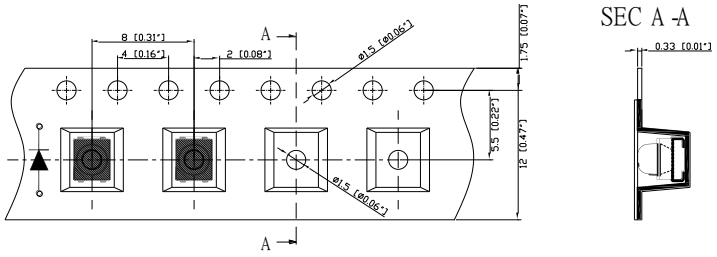
Packing

Reel Dimension:



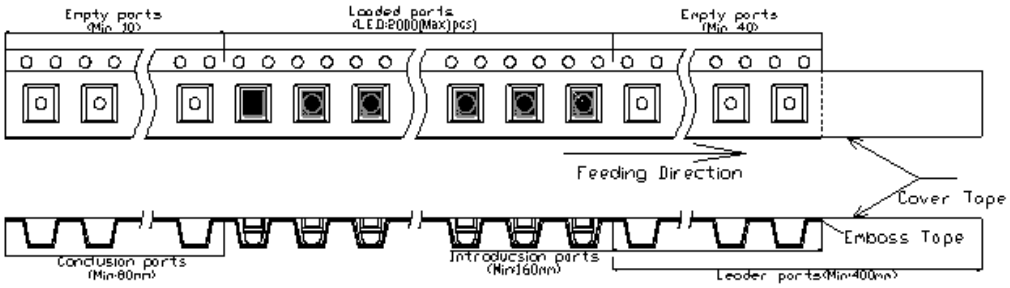
Unit: mm

Tape Dimension:

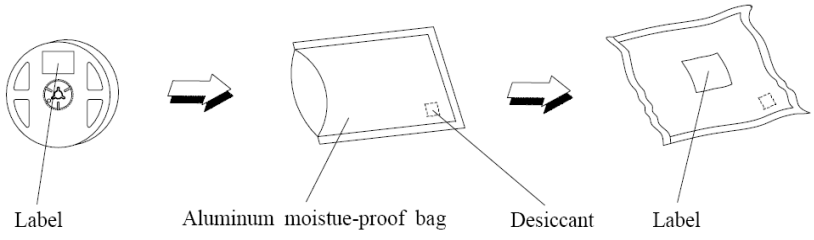


Unit: mm

Arrangement of Tape:



Packaging Specifications:



Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP677AD-RGB5	QBLP677AD-RGB5	Based on page 4 and 5	2,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP677AD-RGB5	V1.0	06/20/2018
Error correction on the drawing dimension	V1.1	11/23/2020
Update brightness and wavelength binning	V1.2	11/20/2022

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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.