QT-Brightek PLCC2 Series

PLCC2 White LED

Part No.: QBLP669E-IW-XX

XX = NW/CW

Table of Contents:

Introduction

Feature:

- Package in tape and reel
- Ultra bright reflector type PLCC2 LED
- InGaN technology
- CRI: 70 typ.
- With ESD protection diode
- Viewing angle: 120 degree typ.

Description:

These ultra bright reflector type PLCC2 LEDs have a height profile of 1.90mm. With a combination of high brightness output and robust package, these LEDs are ideal for architecture lighting, status indication, and industrial equipment lighting applications.

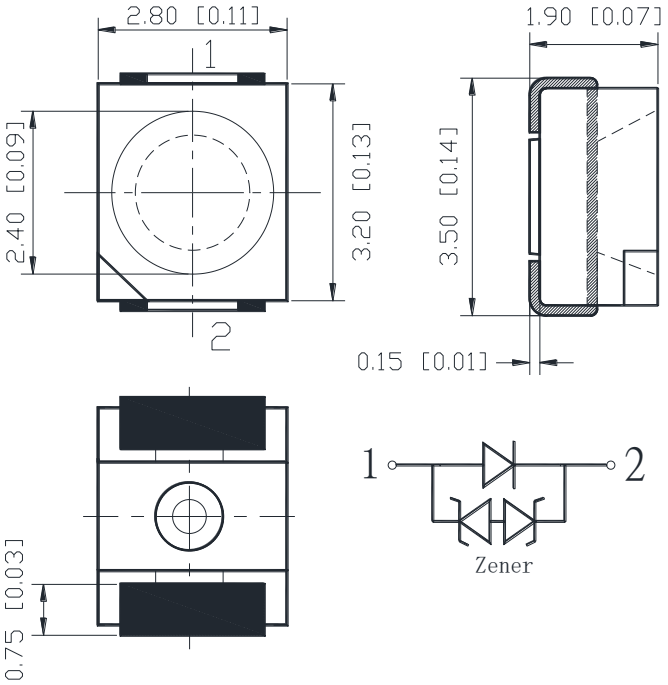
Application:

- Status indication
- Industrial equipment backlighting
- Architecture lighting

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)		CIE Coordinates	I_V (mcd)	
			Typ.	Max.	Typ.	Min.	Typ.
QBLP669E-IW-NW	Natural White	20	3.0	3.4	X=0.3818, Y=0.3797 CCT: 4000K	2400	2650
QBLP669E-IW-CW	Cool White	20	3.0	3.4	X=0.3213, Y=0.3282 CCT: 6500K	2100	2500

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)**
InGaN	102	30	125	5	-40 to +105	-40 to +105	260

*Duty 1/8 @ 1KHz

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

Forward Voltage V_F @ I_F=20mA

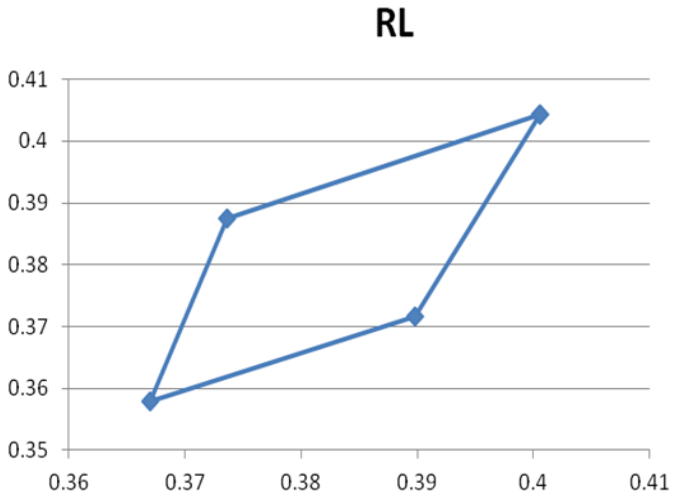
Bin	Min.	Max.	Unit
H	2.8	3.0	V
J	3.0	3.2	
K	3.2	3.4	

Luminous Intensity I_V @ I_F=20mA

Bin	Min.	Max.	Unit
L0	2100	2400	mcd
L1	2400	2900	
L2	2900	3400	

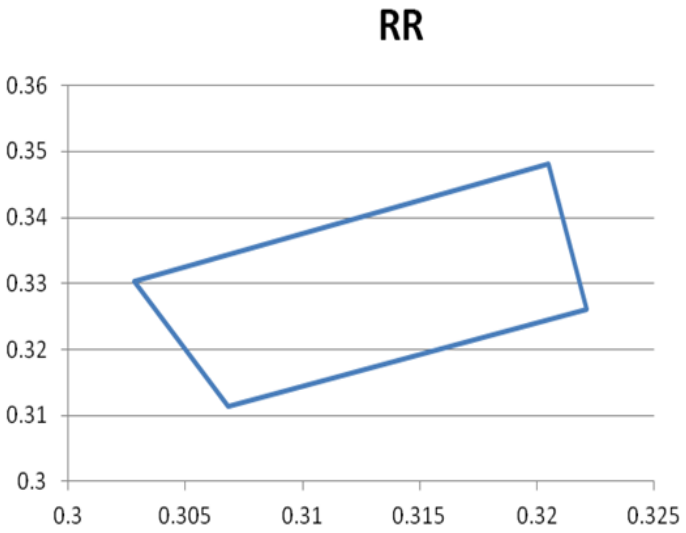
Correlated Color Temperature Chart

Natural White (NW)



Rank	Chromaticity coordinates				
RL	X	0.4006	0.3736	0.367	0.3898
	Y	0.4044	0.3874	0.3578	0.3716

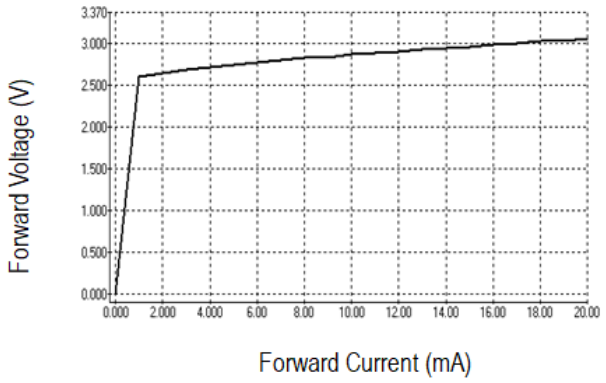
Cool White (CW)



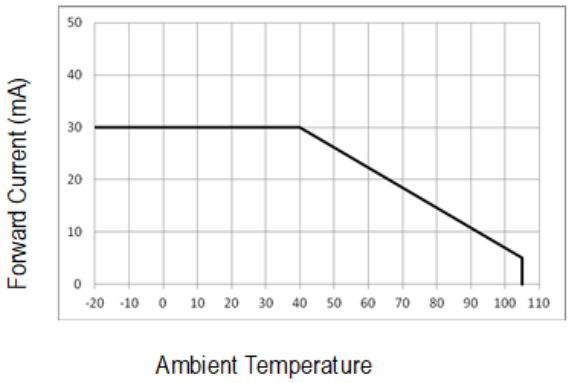
Rank	Chromaticity coordinates				
RR	X	0.3206	0.3028	0.3068	0.3221
	Y	0.3481	0.3304	0.3113	0.3261

Characteristic Curves

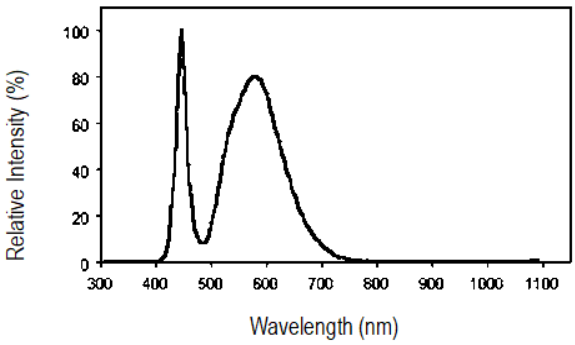
Forward Current vs. Forward Voltage



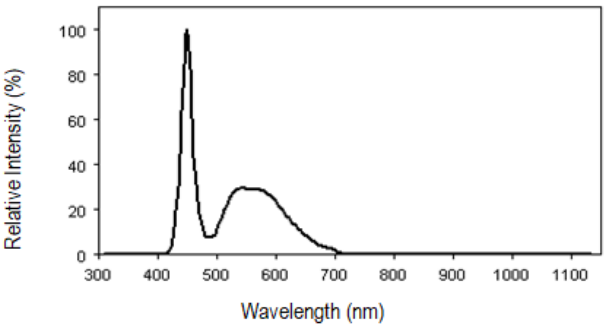
Forward Current vs. Ambient Temperature



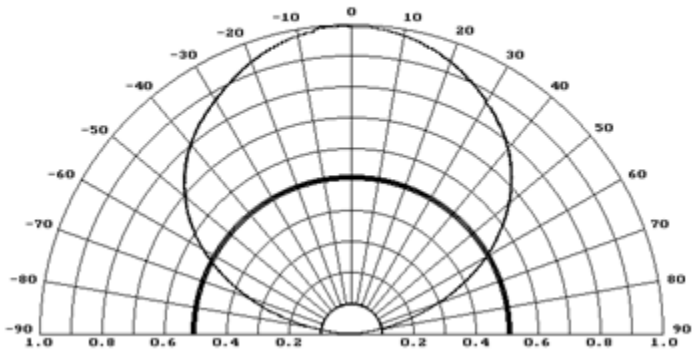
Relative Intensity vs. Wavelength (NW)



Relative Intensity vs. Wavelength (CW)

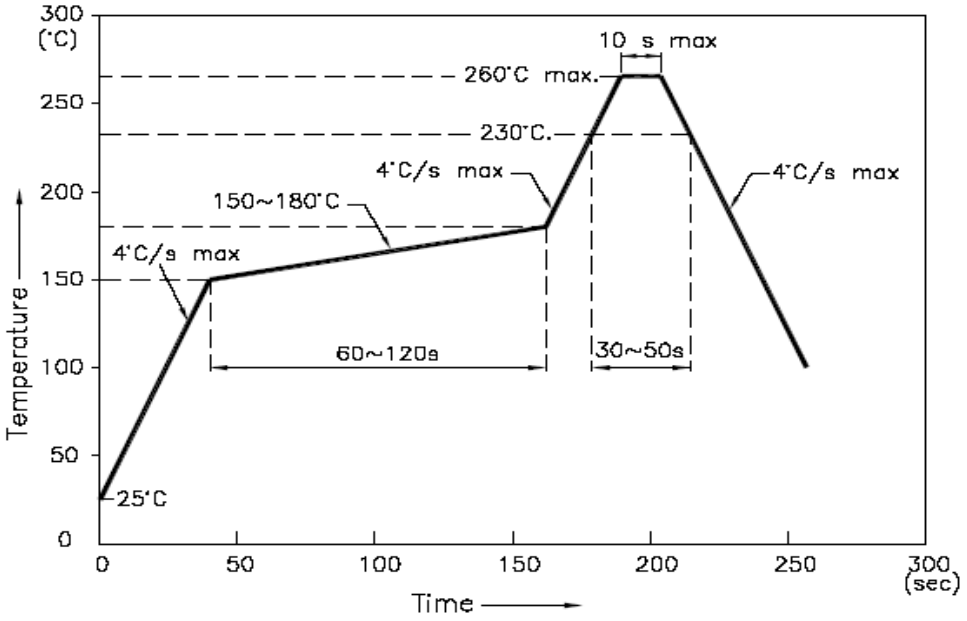


Directive Characteristics

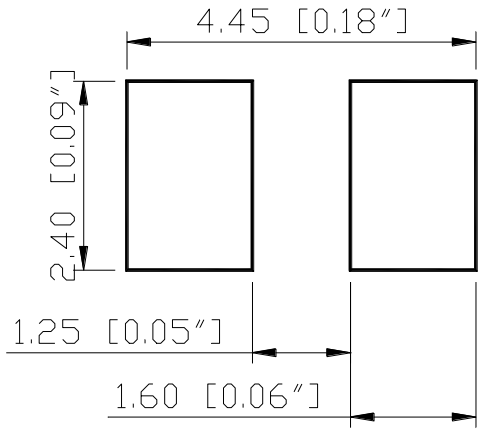


Solder Profile & Footprint

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



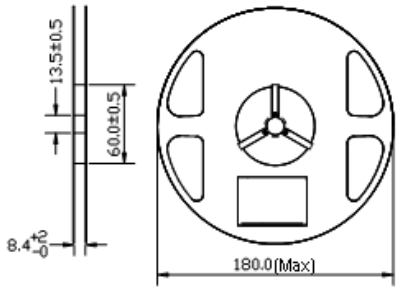
Recommended Pad Layout



Units: mm

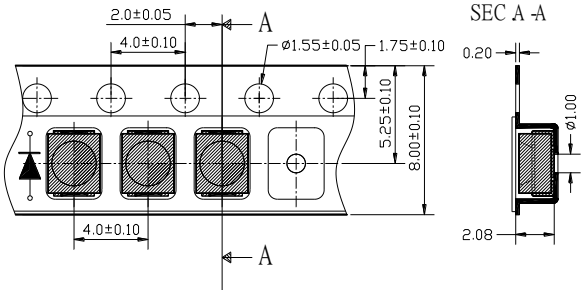
Packing

Reel Dimension:



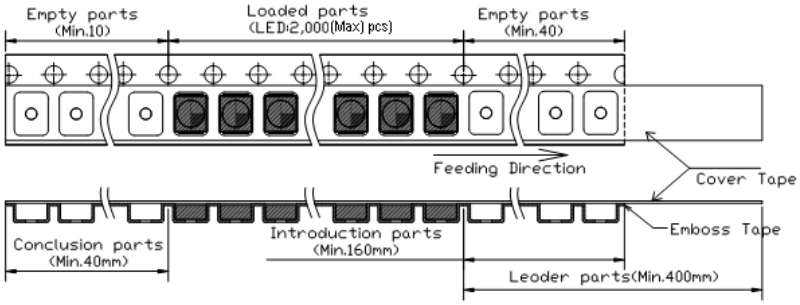
Unit: mm

Tape Dimension:

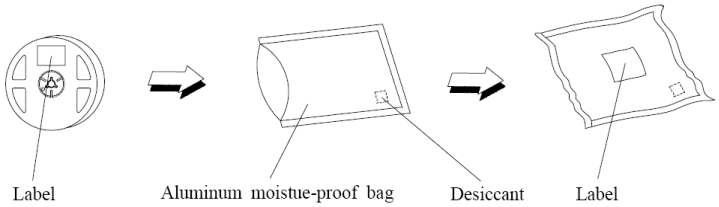


Unit: mm

Arrangement of Tape:



Packaging Specification:



Labeling

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP669E-IW-NW	QBLP669E-IW-NW	Iv=2650 mcd typ. @ 20mA / CIE Coordinate: (X=0.3818, Y=0.3797) typ.	2,000 units
QBLP669E-IW-CW	QBLP669E-IW-CW	Iv=2500 mcd typ. @ 20mA / CIE Coordinate: (X=0.3213, Y=0.3282) typ.	2,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP669E-IW-XX	V1.0	09/08/2021

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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.