Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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QT-Brightek Chip LED Series

SMD Side View 0802 LED

Part No.: QBLP612 Series

Table of Contents:

Introduction

Feature:

- Water clear lens (except for white color)
- Yellow lens for White
- Package in tape and reel
- Side View Ultra bright 0802 LED package
- AlInGaP technology for R/AG
- InGaN technology for IG/IW
- Viewing Angle = 150°

Description:

These ultra bright 0802 LEDs have a height profile of 0.6mm. With higher packing density and smaller footprint, these LEDs are ideal for smaller equipment and miniature application.

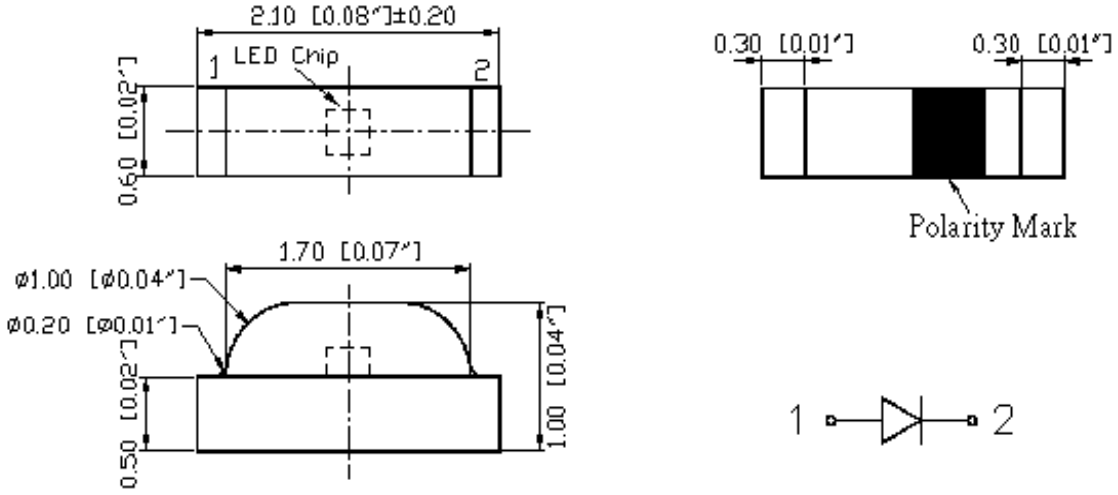
Application:

- Status indication
- Back lighting application
- General Use

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.
QBLP612-R	Red	20	2.0	2.5	625	630	635	40	70
QBLP612-AG	Yellow Green	20	2.0	2.5	565	570	576	25	40
QBLP612-IG	True Green	20	3.2	3.7	520	525	530	250	430
QBLP612-IW-CW	Cool White	20	3.2	3.7	X=0.25 Y=0.24	-	X=0.33 Y=0.34	160	320

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	75	30	125	5	-40 to +80	-40 to +85	260
InGaN	111	30	125	5	-40 to +80	-40 to +85	260

*Duty 1/8 @ 1kHz
**IR Reflow for no more than 10 sec @ 260 °C

Forward Voltage V_F for AlInGaP @ 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 IV @ IF=20mA

Bin	Min.	Max.	Unit
D	25	32	mcd
E	32	40	
F	40	50	
G	50	63	
H	63	80	
I	80	100	
J	100	125	
K	125	160	
L	160	200	
M	200	250	
N	250	320	
O	320	400	
P	400	500	
Q	500	630	
R	630	800	

Dominant Wavelength λ_D for Red @ I_F=20mA

Bin	Min.	Max.	Unit
u	625	630	nm
v	630	635	

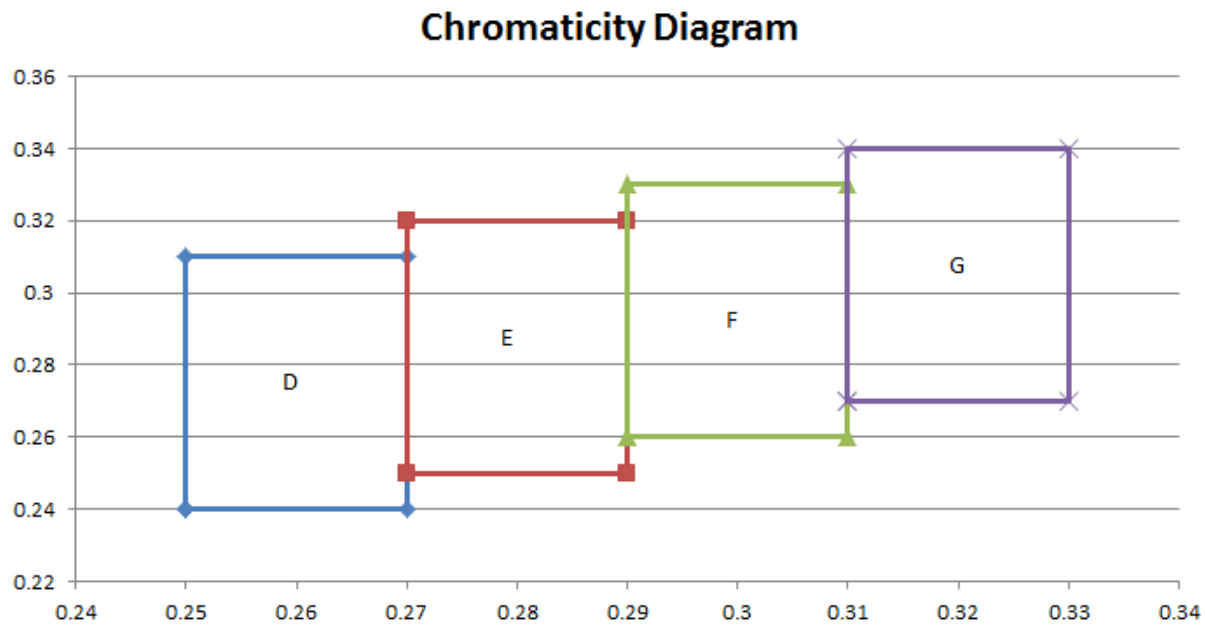
Dominant Wavelength λ_D for Yellow Green @ I_F=20mA

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

Dominant Wavelength λ_D for True Green @ I_F=20mA

Bin	Min.	Max.	Unit
U	520	522.5	nm
V	522.5	525	
W	525	527.5	
X	527.5	530	

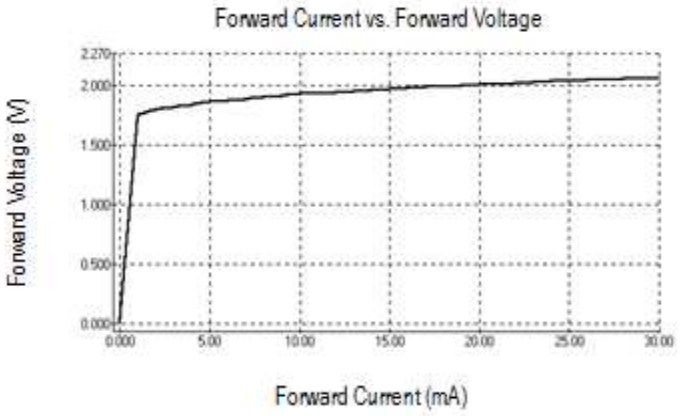
CIE Chromaticity Diagram

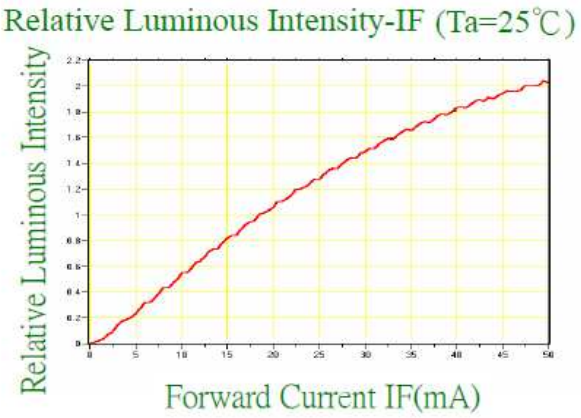


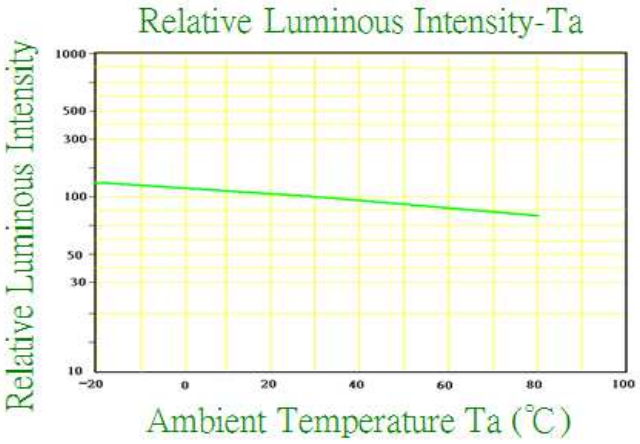
D		E		F		G	
0.25	0.24	0.27	0.25	0.29	0.26	0.31	0.27
0.25	0.31	0.27	0.32	0.29	0.33	0.31	0.34
0.27	0.31	0.29	0.32	0.31	0.33	0.33	0.34
0.27	0.24	0.29	0.25	0.31	0.26	0.33	0.27
0.25	0.24	0.27	0.25	0.29	0.26	0.31	0.27

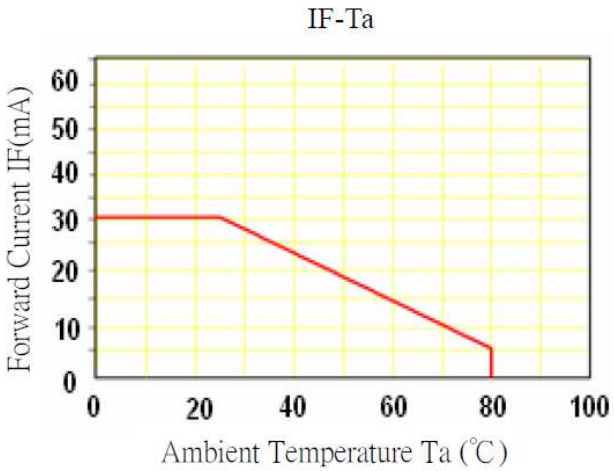
Characteristic Curves

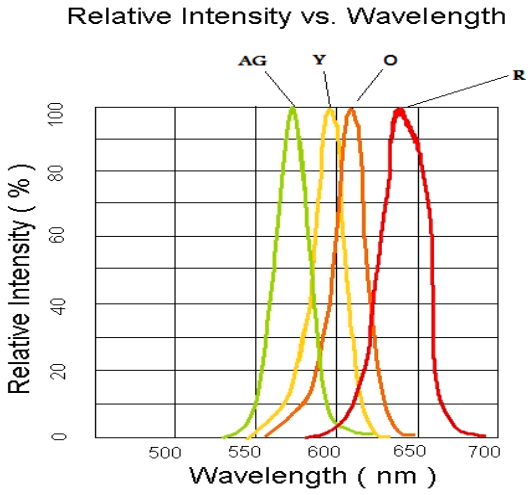
AlInGaP Technology (R/AG)

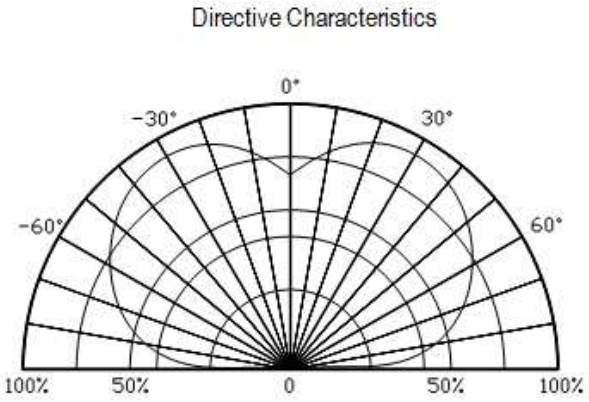




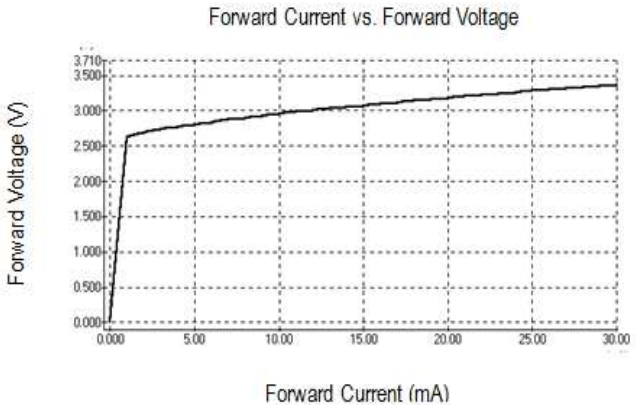


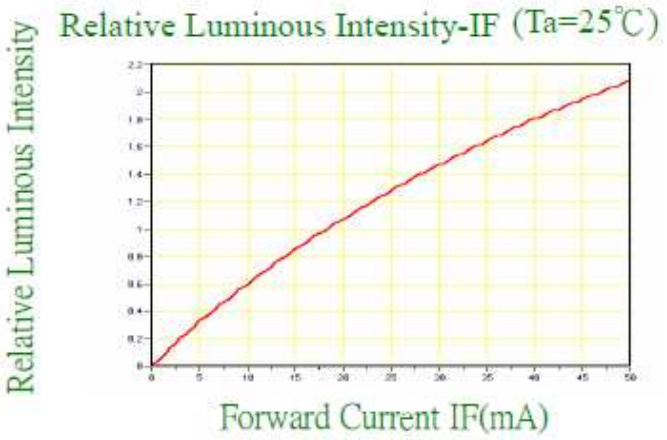


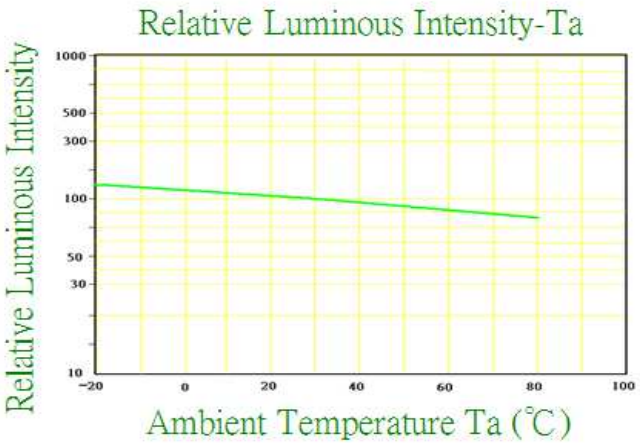


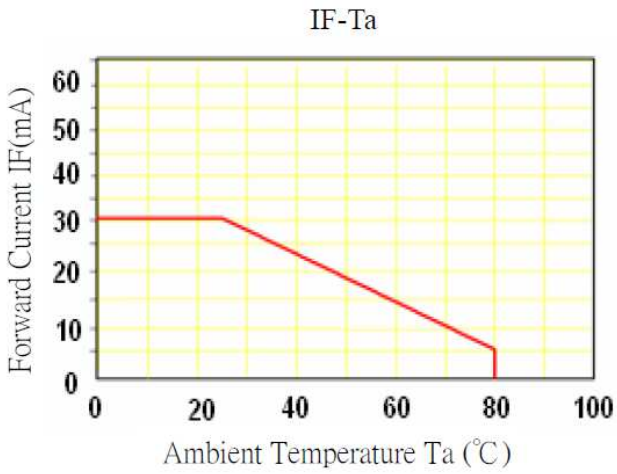


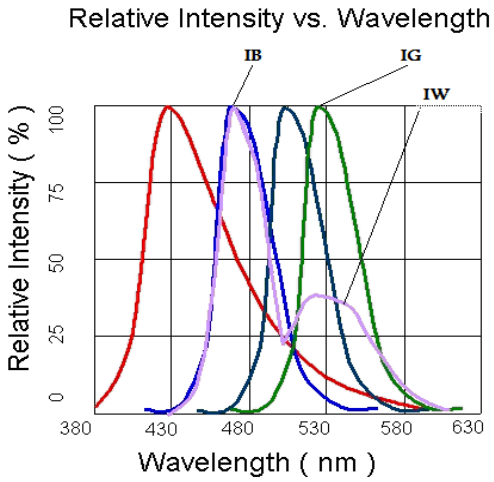
InGaN Technology (IB/IG/IW)

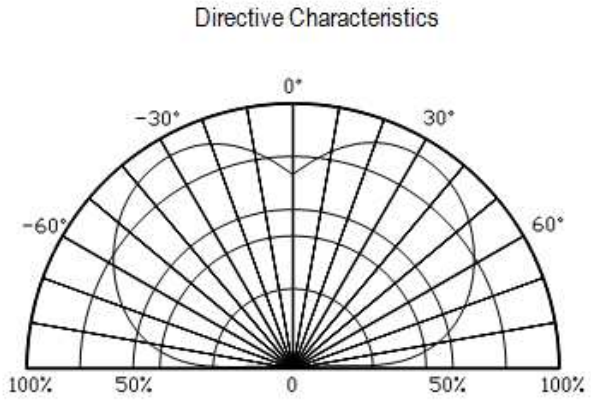






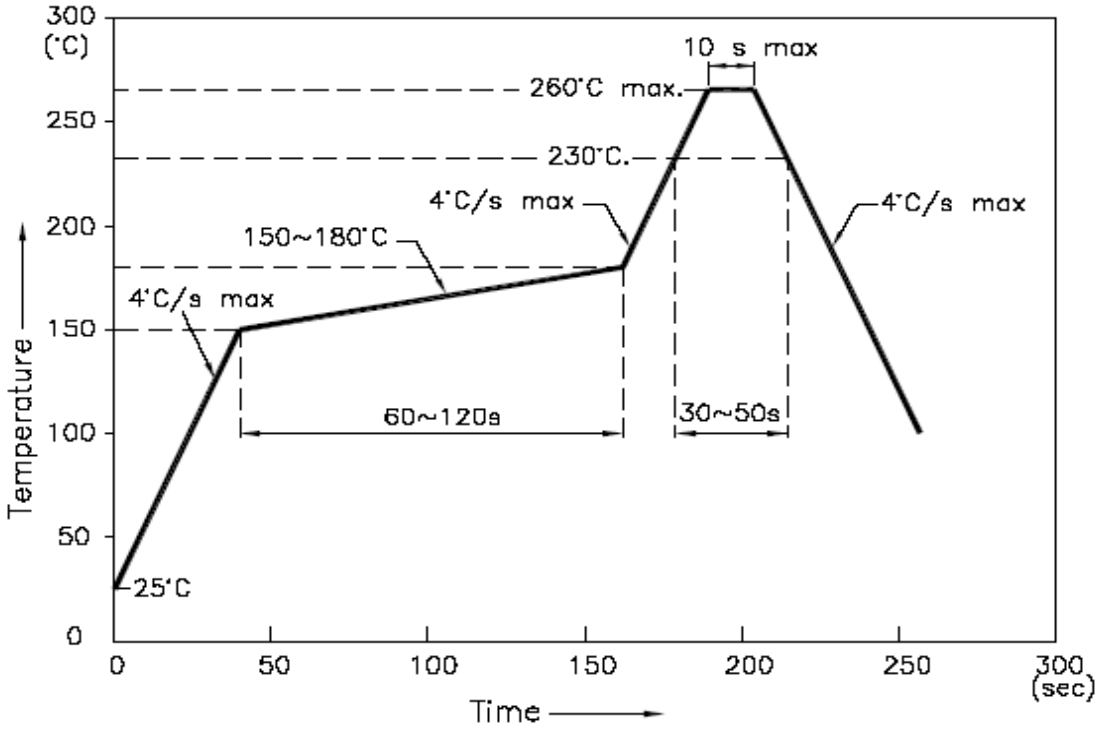




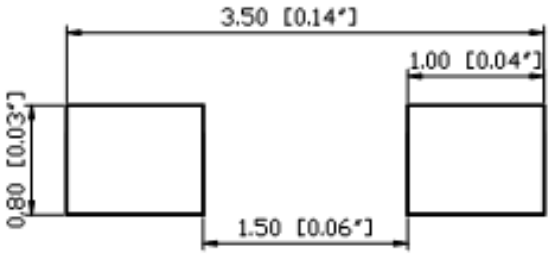


Solder Profile & Footprint

-Recommended tin solder specifications: melting temperature in the range of 178~192 ^{O}C
-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



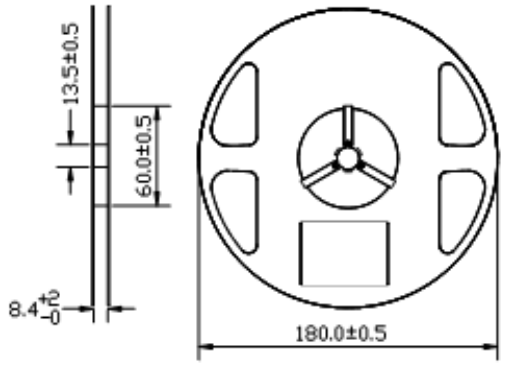
Recommended Pad Layout



Units: mm Tolerance: ± 0.1mm

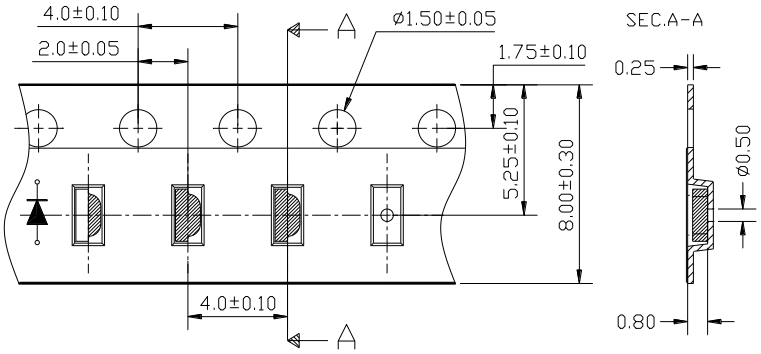
Packing

Reel Dimension:



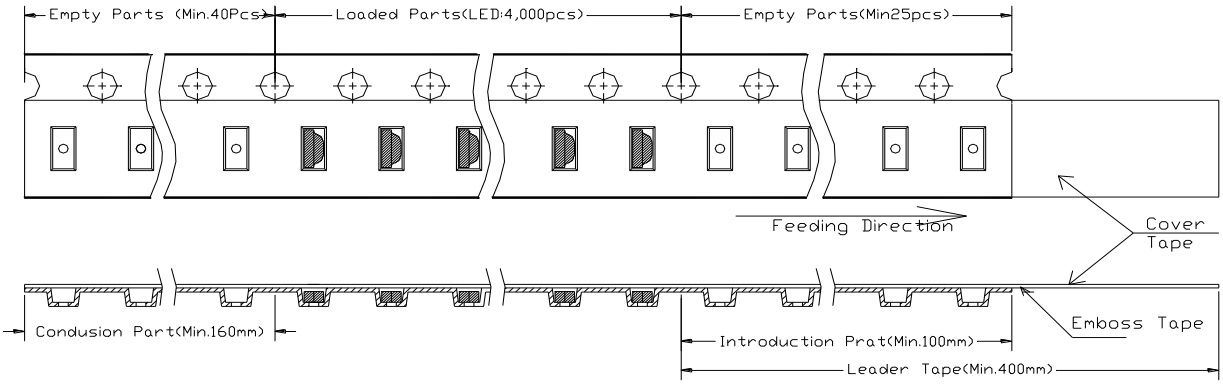
Unit: mm

Tape Dimension:

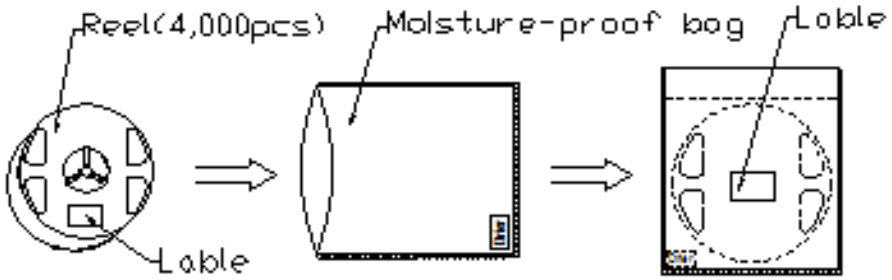


Unit: mm

Arrangement of Tape:



Packaging Specifications:



Labeling

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP612-R	QBLP612-R	Iv=70mcd typ. @ I_F=20mA, λ_D: 625nm ~ 635nm	4,000 units
QBLP612-AG	QBLP612-AG	Iv=40mcd typ. @ I_F=20mA, λ_D: 565nm ~ 576nm	4,000 units
QBLP612-IG	QBLP612-IG	Iv=430mcd typ. @ I_F=20mA, λ_D: 520nm ~ 530nm	4,000 units
QBLP612-IW-CW	QBLP612-IW-CW	Iv=320mcd typ. @ I_F=20mA, Chromaticity Coordinate: (X=0.25, Y=0.24) min.	4,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP612 Series	V1.0	09/16/2014

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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.