

Feature:

- Water clear lens
- Package in tape and reel
- Ultra bright 1205 package
- InGaN technology for IB/IG/IW
- AlInGaP technology for R/AG/ Y/O
- Viewing angle: 140 degrees
- Reverse Mountable

Description:

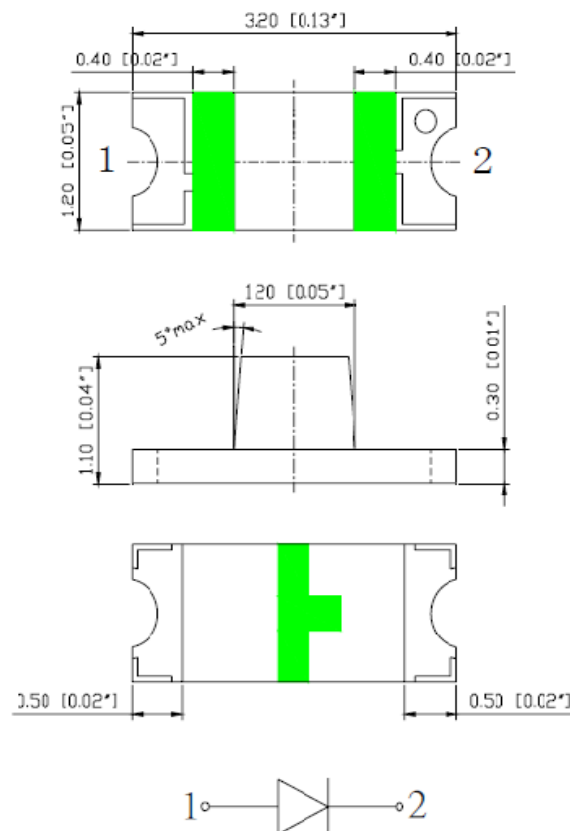
These ultra-bright 655 LEDs have a height profile of 1.10mm. With a combination of high brightness output and small footprint, these LEDs are ideal for keypad backlighting and status indication.

Application:

- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant


Dimension:


Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (T=25 °C)

Product	Color	I _F (mA)	V _F (V)		λ _D (nm)			I _V (mcd)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP655R-IB	Blue	20	3.1	3.7	465	470	475	32	60
QBLP655R-IG	True Green	20	3.1	3.7	515	520	525	200	330
QBLP655R-IW	White	20	3.1	3.7	-	X=0.29 Y=0.28	-	100	180
QBLP655R-R	Red	20	2.0	2.4	615	625	630	63	100
QBLP655R-AG	Yellow Green	20	2.0	2.5	565	570	576	16	25
QBLP655R-Y	Yellow	20	2.0	2.5	585	590	595	40	65
QBLP655R-O	Orange	20	2.0	2.5	600	605	610	63	100

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 (IB/IG/IW)	120	30	125	5	-40 ~ +85	-40 ~ +100	260
AlInGaP (R/AG/Y/O)	75	30	125	5	-40 ~ +85	-40 ~ +100	260

*Duty 1/10 @ 10KHz

** 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 I_V @ $I_F=20mA$

Bin	Min.	Max.	Unit
B	16	20	mcd
C	20	25	
D	25	32	
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	

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	

Dominant Wavelength λ_D For Green @ $I_F=20mA$

Bin	Min.	Max.	Unit
S	515	517.5	nm
T	517.5	520	
U	520	522.5	
V	522.5	525	

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 Yellow Green @ $I_F=20\text{mA}$

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

Dominant Wavelength λ_D For Yellow @ $I_F=20\text{mA}$

Bin	Min.	Max.	Unit
m	585	590	nm
n	590	595	

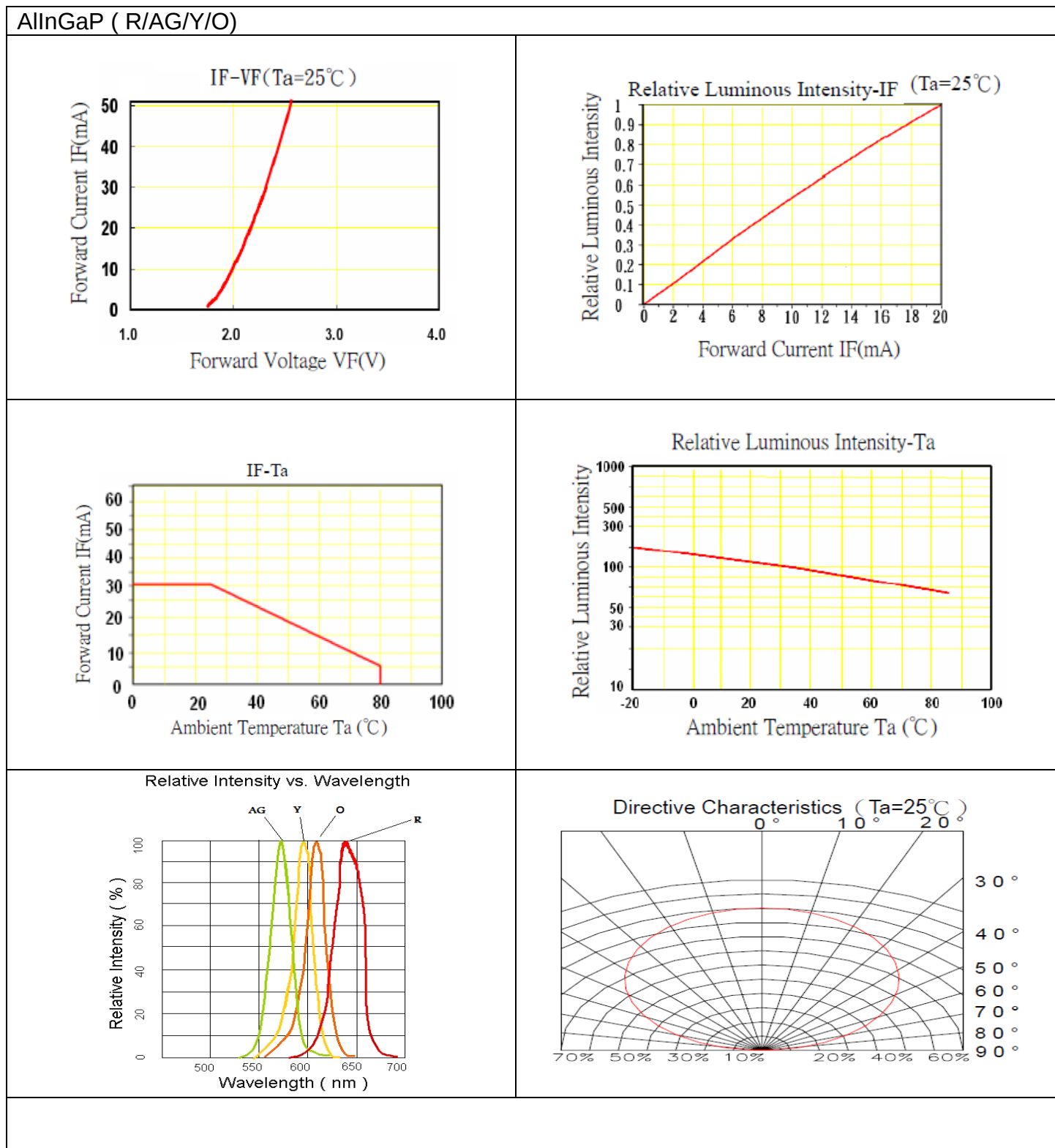
Dominant Wavelength λ_D For Orange @ $I_F=20\text{mA}$

Bin	Min.	Max.	Unit
p	600	605	nm
q	605	610	

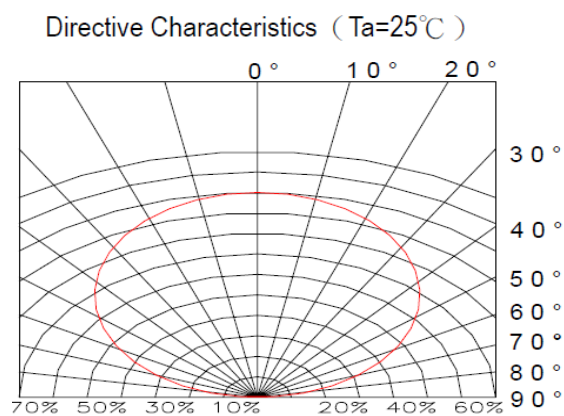
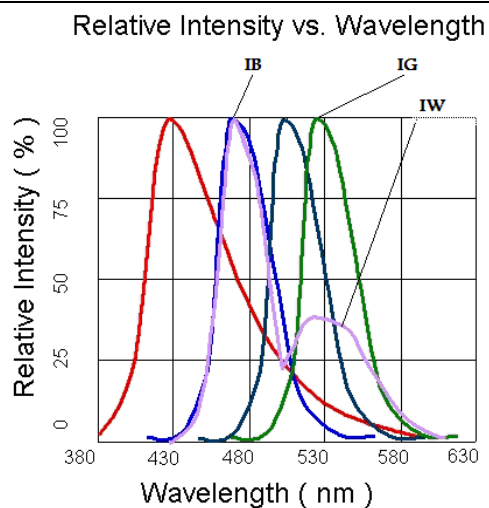
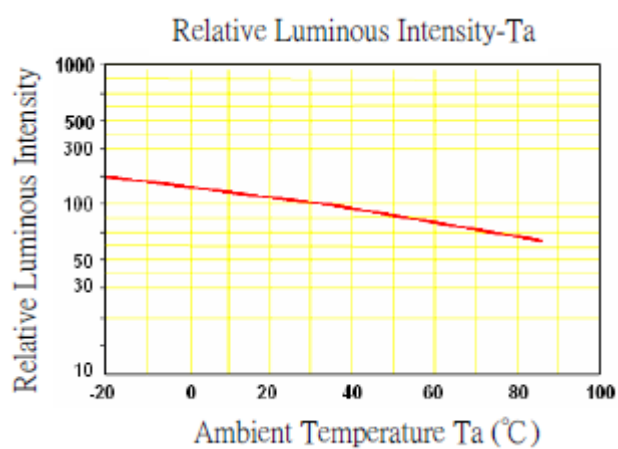
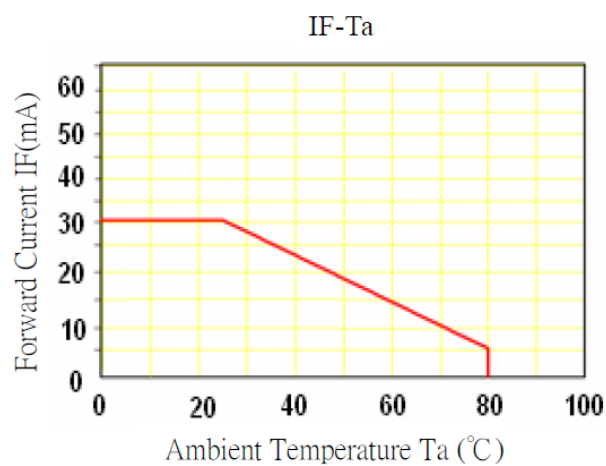
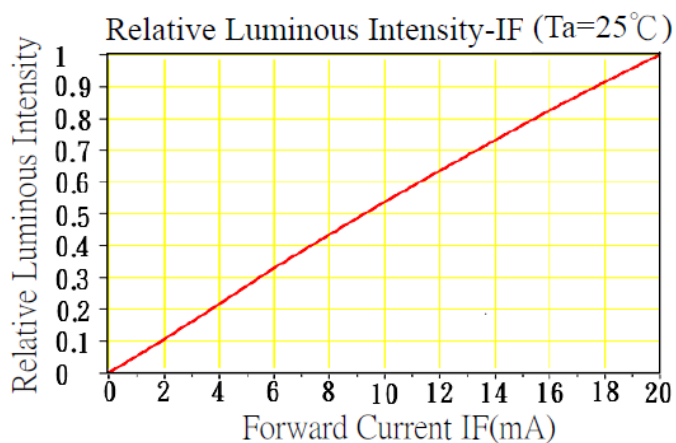
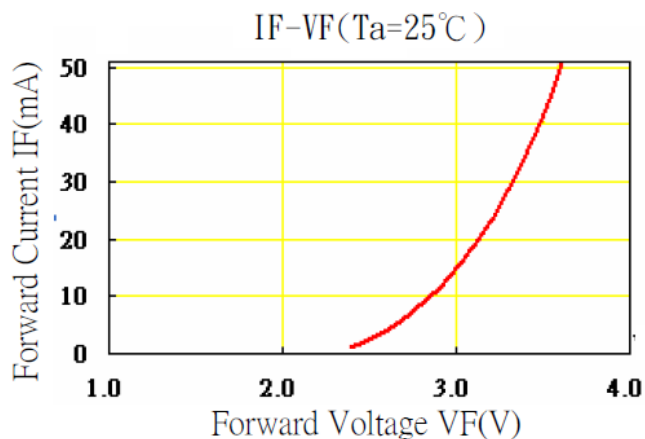
Chromaticity Coordinates For White @ $I_F=20\text{mA}$

Rank	Chromaticity coordinates				
C1	X	0.2500	0.2700	0.2700	0.2500
	Y	0.2500	0.2775	0.2325	0.2050
C2	X	0.2700	0.2900	0.2900	0.2700
	Y	0.2775	0.3050	0.2600	0.2325
D1	X	0.2900	0.3100	0.3100	0.2900
	Y	0.3050	0.3325	0.2875	0.2600
D2	X	0.3100	0.3300	0.3300	0.3100
	Y	0.3325	0.3600	0.3150	0.2875

Characteristic Curves:

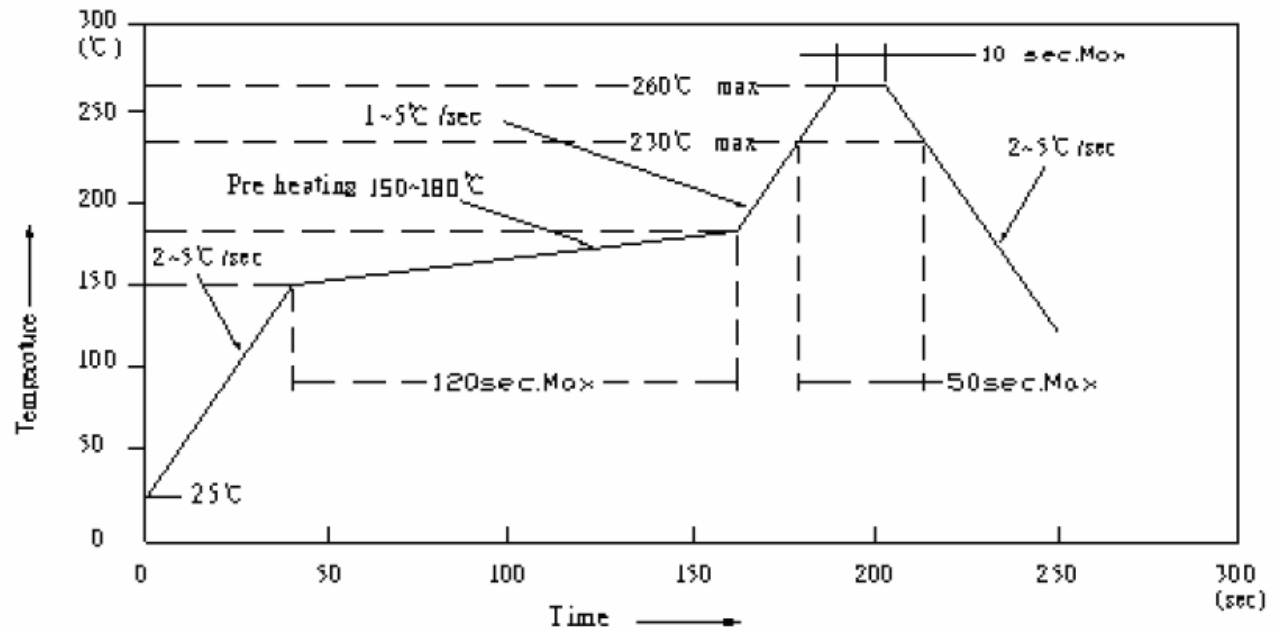


InGaN (IB/IG/IW)

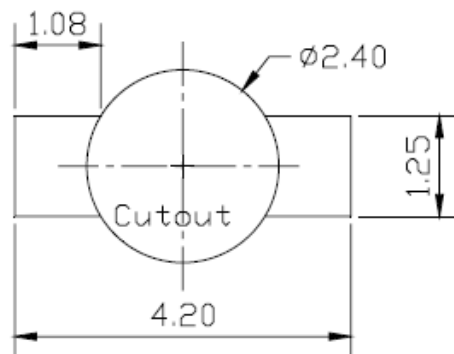


Solder Profile & Footprint:

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



RECOMMEND PAD LAYOUT

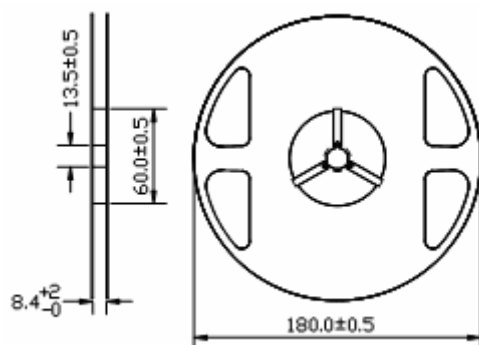


Units: mm

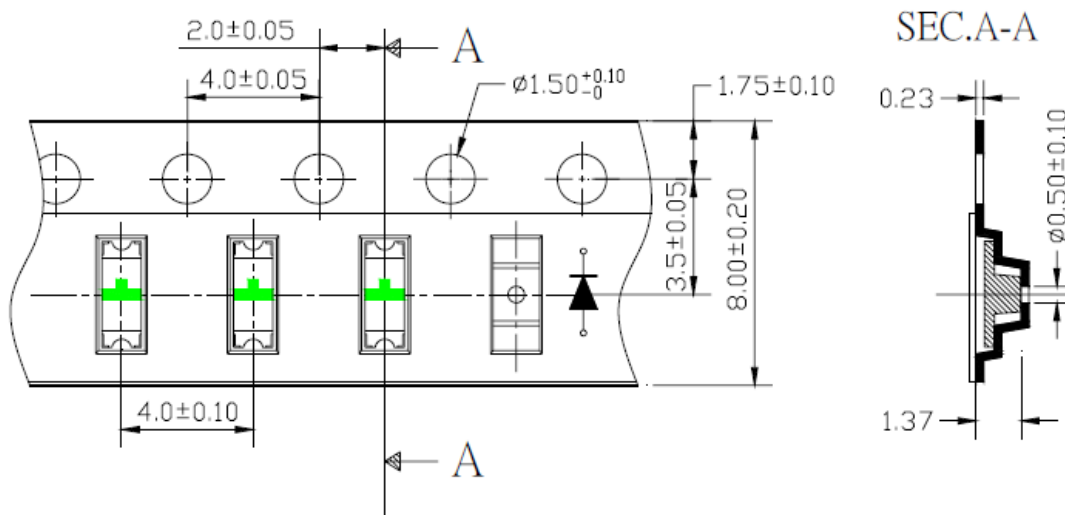
tolerance: +/- 0.1mm

Packing:

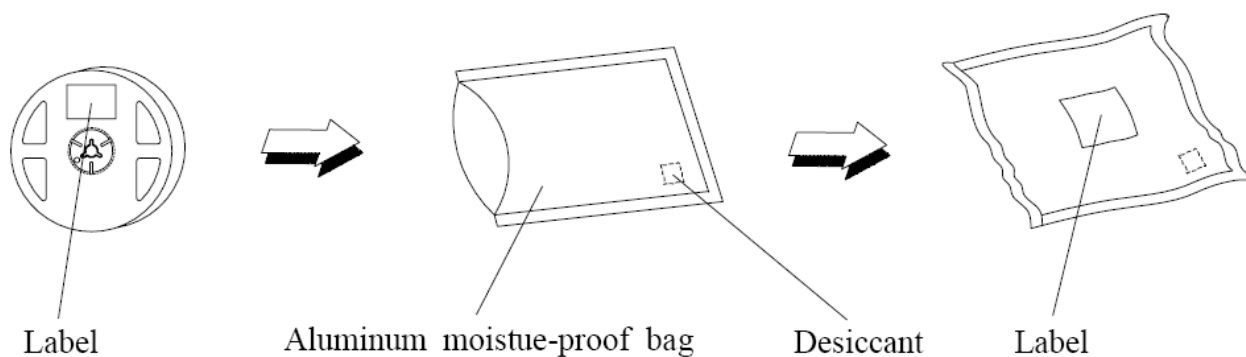
Reel Dimension:



Tape Dimension:



(Unit in mm)



Product: QBLP655R_series	Date: January 13, 2012	Page 8 of 10
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Labeling:

	QT-Brighttek	
		
Part No: _____		
Customer P/N: _____		
Item: _____		
Q'ty: _____		
Vf: _____		
Iv: _____		
WI: _____		
Date: _____		
Made in China		

Ordering Information:

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP655R-IB	QBLP655R-IB	Iv = 60 mcd Typ. / Color = 465-475nm	3,000 units
QBLP655R-IG	QBLP655R-IG	Iv = 330 mcd Typ. / Color = 515-525nm	3,000 units
QBLP655R-IW	QBLP655R-IW	Iv = 180 mcd Typ. / X=0.29, Y=0.28	3,000 units
QBLP655R-R	QBLP655R-R	Iv = 100 mcd Typ. / Color = 615-630nm	3,000 units
QBLP655R-AG	QBLP655R-AG	Iv = 25 mcd Typ. / Color = 565-576nm	3,000 units
QBLP655R-Y	QBLP655R-Y	Iv = 65 mcd Typ. / Color = 585-595nm	3,000 units
QBLP655R-O	QBLP655R-O	Iv=120 mcd Typ./ Color = 600-610nm	3,000 units

Revision History:

Description:	Revision #	Revision Date
New Release of QBLP655R_series	V1.0	01/13/2012