QT-Brightek Chip LED Series

SMD 1210 Bi-Color LED with Inner Lens

Part No.: QBLP651-R1YG

Table of Contents:

Introduction

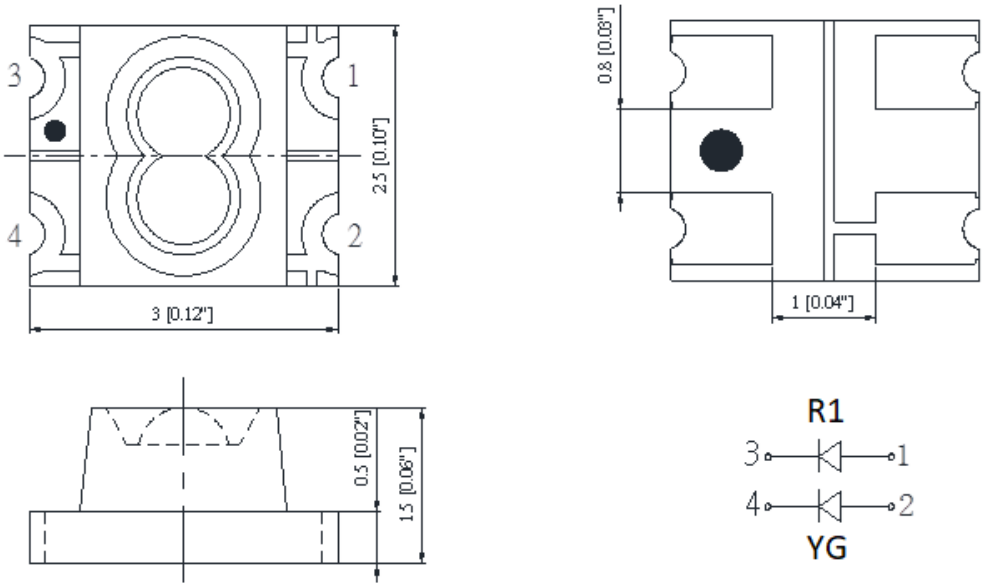
Feature:
- Water clear lens
- 1210 LED package with inner lens
- GaAsP technology for Red
- GaP technology for Yellow Green
- Viewing Angle: 40° typ.

Description:
These ultra bright 1210 LEDs have a height profile of 1.5mm. 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 = +/-0.15mm

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.
QBLP651-R1YG	Red	20	2.1	2.5	615	620	630	16	30
	Yellow Green	20	2.1	2.5	565	570	576	25	45

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)**
GaAsP	75	30	125	5	-40 ~ +80	-40 ~ +85	260
GaP	75	30	125	5	-40 ~ +80	-40 ~ +85	260

*Duty 1/8 @ 1kHz

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

Luminous Intensity I_V for Yellow Green @ I_F=20mA

Bin	Min.	Max.	Unit
D	25	32	mcd
E	32	40	
F	40	50	
G	50	63	
H	63	80	

Luminous Intensity I_V for Red @ I_F=20mA

Bin	Min.	Max.	Unit
B	16	20	mcd
C	20	25	
D	25	32	
E	32	40	
F	40	50	

Dominant Wavelength λ_D for Yellow Green @ I_F=20mA

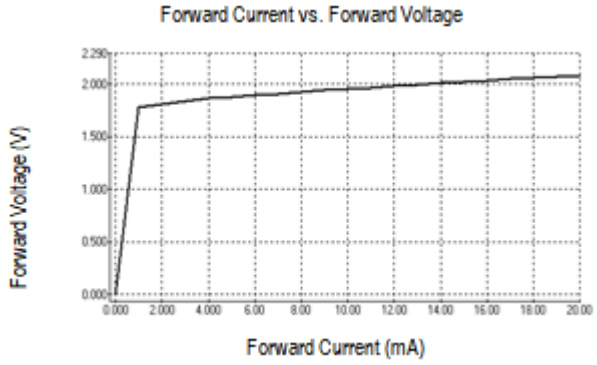
Bin	Min.	Max.	Unit
h	565	568	nm
i	568	572	
j	572	576	

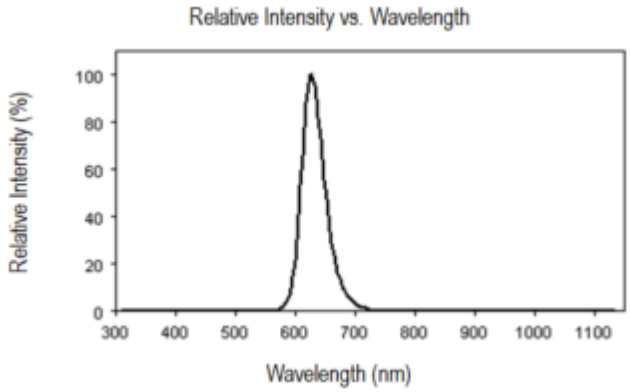
Dominant Wavelength λ_D for Red @ I_F=20mA

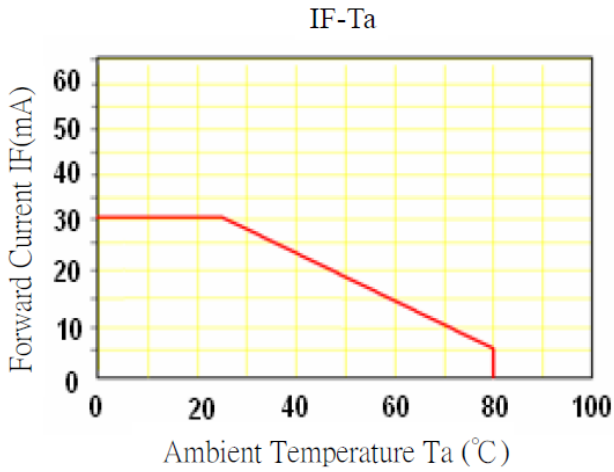
Bin	Min.	Max.	Unit
s	615	620	nm
t	620	625	
u	625	630	

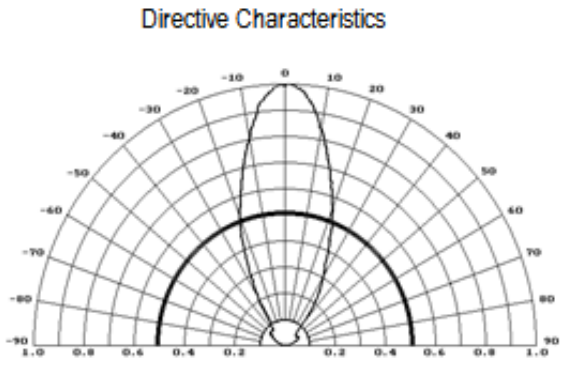
Characteristic Curves

GaAsP (Red)

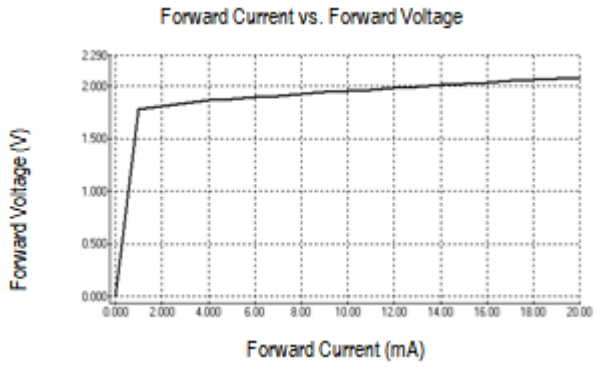


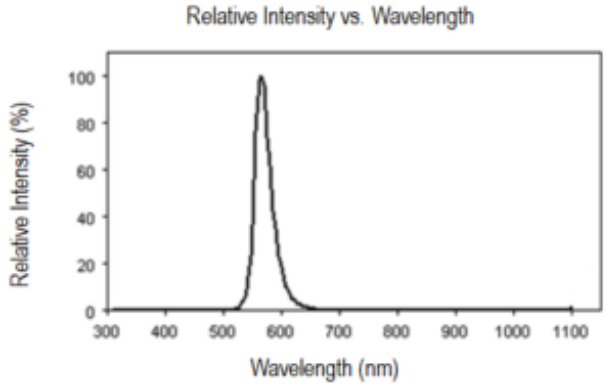


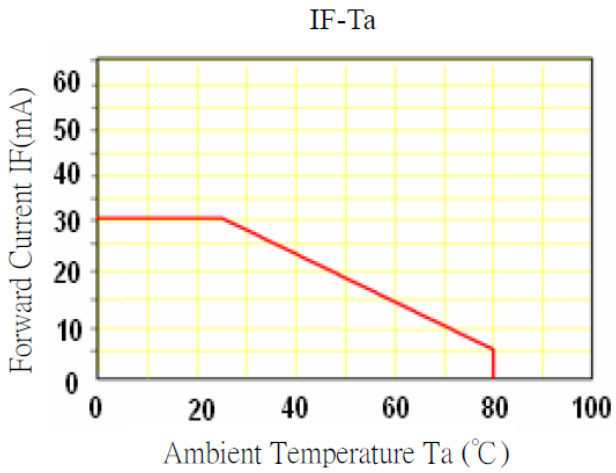


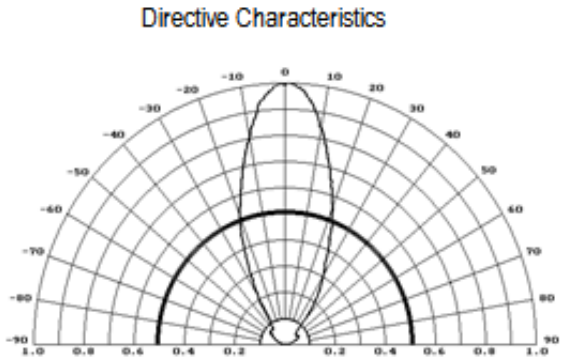


GaP (Yellow Green)

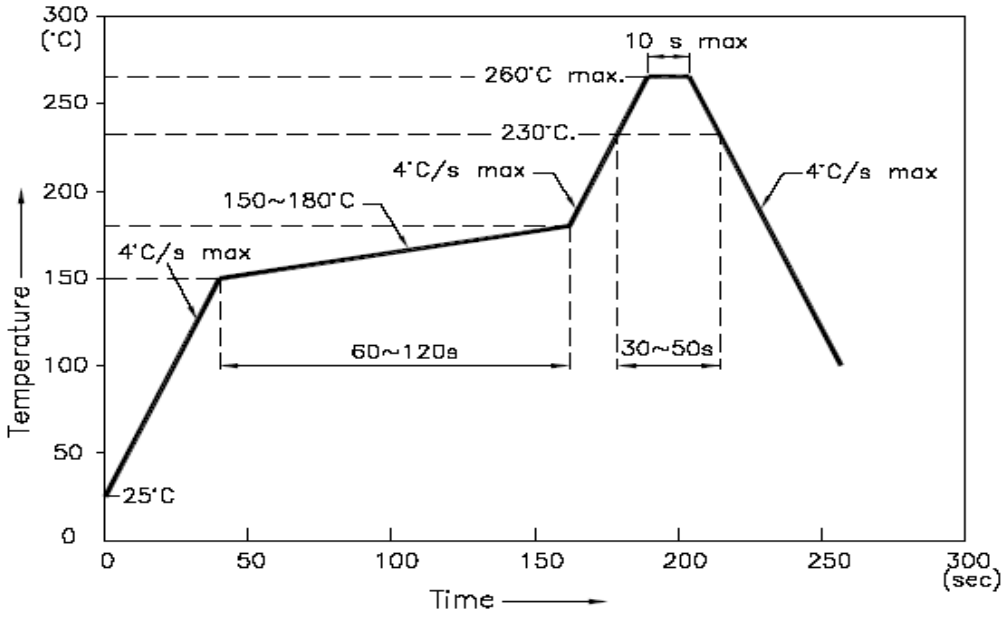




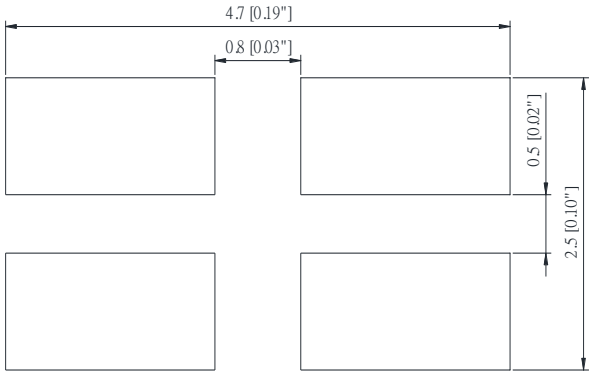




Solder Profile & Footprint:



Recommended Pad Layout



Units: mm Tolerance: ± 0.15mm

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per reel
QBLP651-R1YG	QBLP651-R1YG	Red (R1): Iv=30mcd typ. @ I_F=20mA, λ_D=615nm to 630nm	3000 Units
		Yellow Green (YG): Iv=45mcd typ. @ I_F=20mA, λ_D=565nm to 576nm	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP651-R1YG	V1.0	01/17/2021

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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.