



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!



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QT-Brightek Chip LED Series

SMD 1208 Tri-Color LED

Part No.: QBLP653-RAGUV

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Introduction

Feature:

- Water clear dome lens
- Package in tap and reel
- Bright 1208 LED package
- AllnGaP technology for R(red) / AG (yellow green)
- InGaN technology for UV
- 60° Viewing Angle

Description:

These 1208 tri-color LEDs have a height profile of 2.5mm. With narrow viewing angle, LED produces high bright light output.

Application:

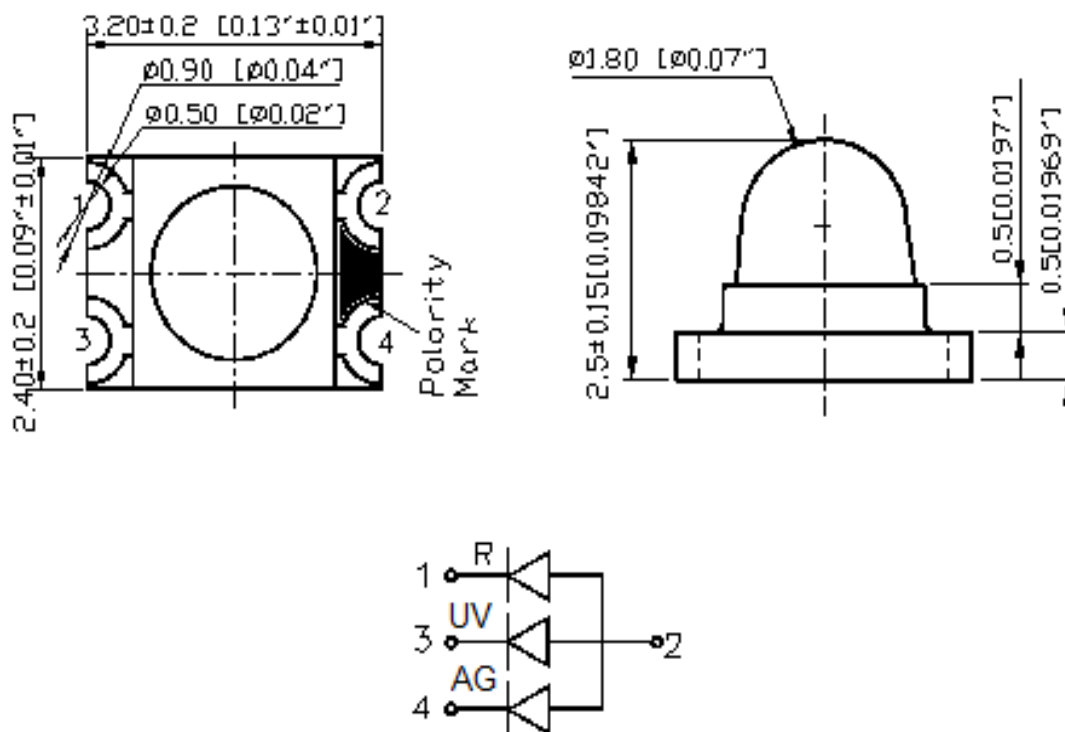
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = ± 0.1 mm

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.
QBLP653-RAGUV	Red	20	2.0	2.5	625	630	635	50	-
	Yellow Green	20	2.0	2.5	565	570	575	32	-
	UV	20	3.1	3.7	-	428	-	1.0	-
					λ _p (nm)				
405					410	415			

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 ~ +80	-40 ~ +85	260
InGaN	108	30	125	5	-40 ~ +80	-40 ~ +85	260

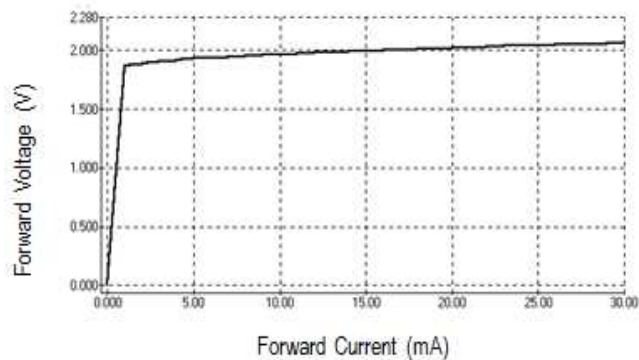
*Duty 1/8 @ 1kHz

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

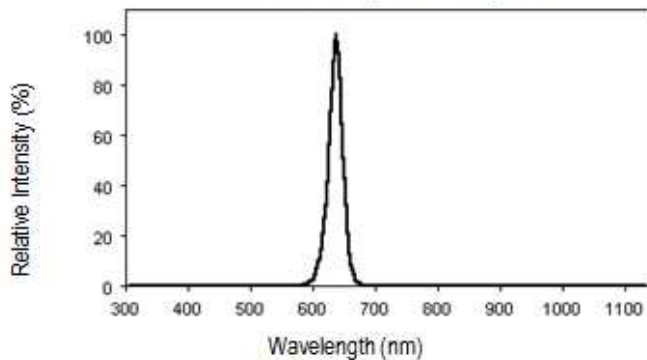
Characteristic Curves

AllnGaP

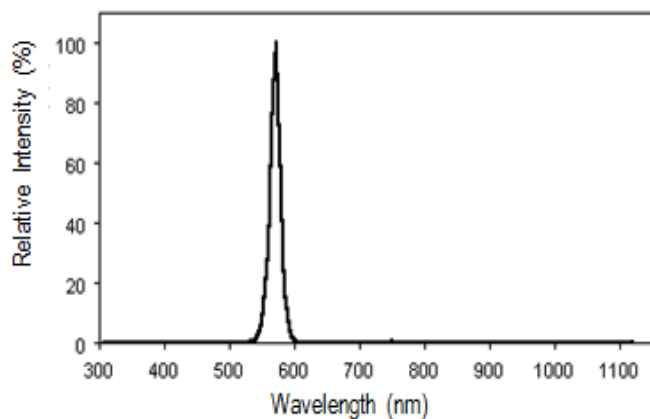
Forward Current vs. Forward Voltage



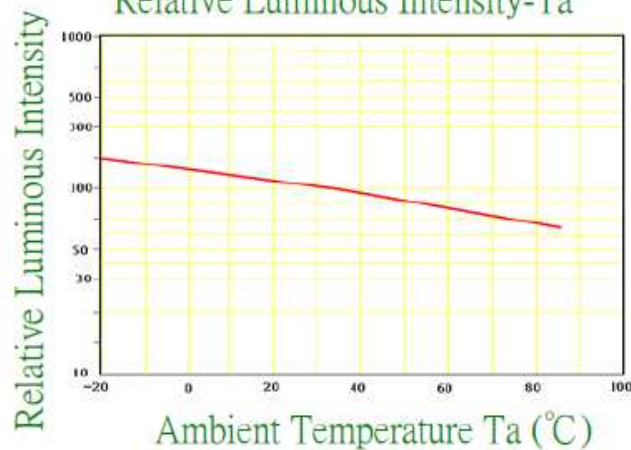
Relative Intensity vs. Wavelength (Red)



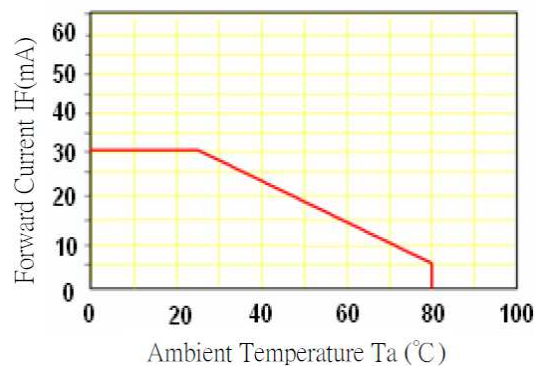
Relative Intensity vs. Wavelength (Yellow Green)



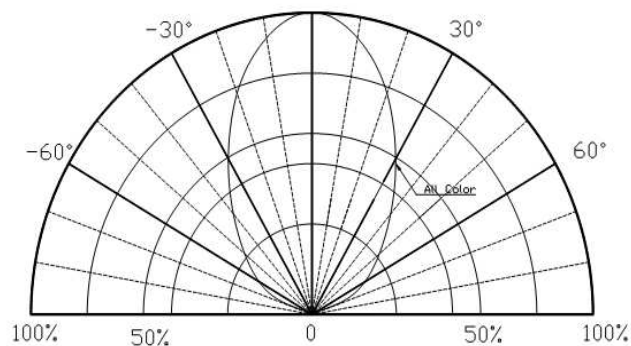
Relative Luminous Intensity-Ta



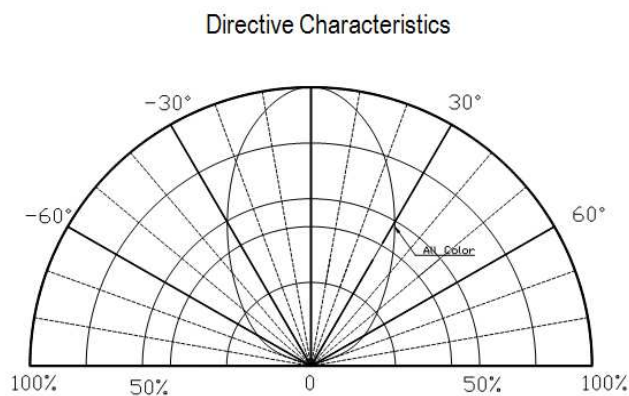
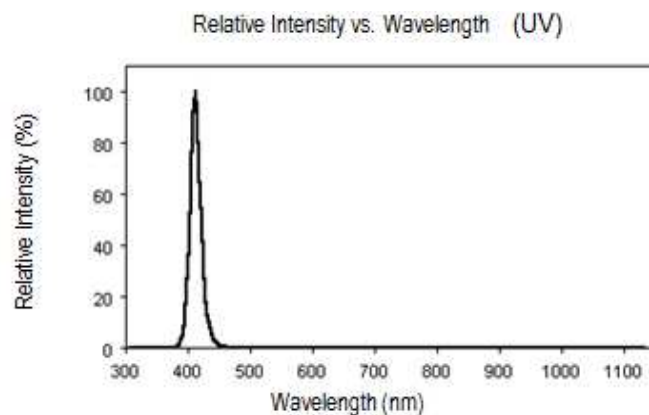
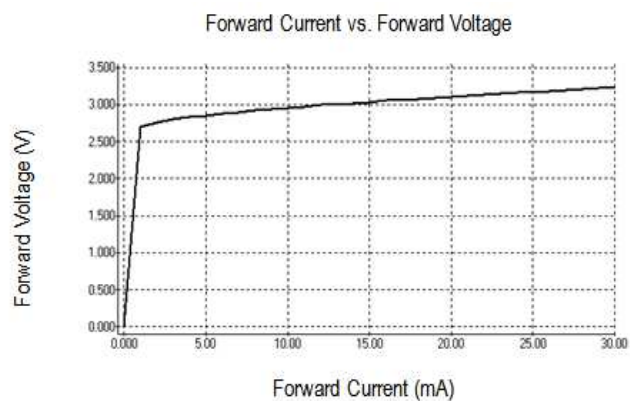
IF-Ta



Directive Characteristics

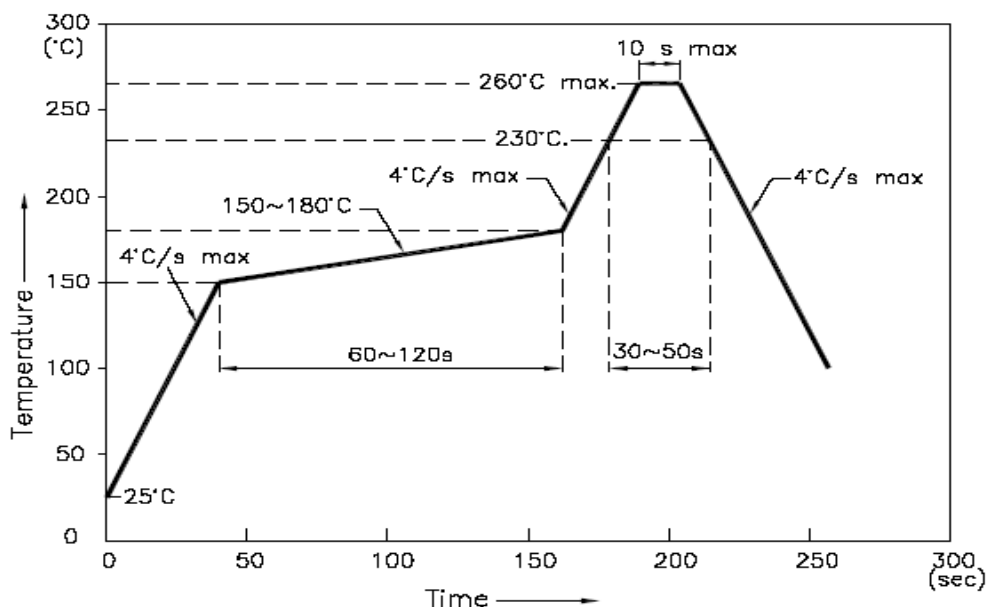


InGaN

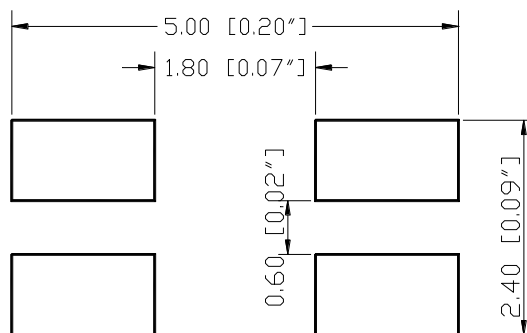


Solder Profile & Footprint

- Recommended tin solder 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):



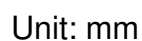
Recommend Pad Layout



Units: mm

tolerance: +/- 0.1mm

Reel Dimension:



Technical drawing of a mechanical part, showing a front view and a cross-section view (Sec. A-A).

Front View Dimensions:

- Top horizontal dimension: 2.0 ± 0.05
- Horizontal distance from left edge to center of first hole: 4.0 ± 0.10
- Horizontal distance between centers of adjacent holes: $\varnothing 1.55 \pm 0.05$
- Horizontal distance from center of last hole to right edge: 1.75 ± 0.10
- Vertical distance from top surface to center of holes: 5.25 ± 0.10
- Overall vertical height: 8.00 ± 0.30
- Horizontal distance from left edge to center of first hole (bottom): 4.0 ± 0.10

Cross-section View (Sec. A-A) Dimensions:

- Top horizontal dimension: 0.20
- Internal vertical dimension: $\varnothing 1.50$
- Internal vertical dimension: 3.40
- Bottom horizontal dimension: 2.75

Unit: mm

Reel(1,500pcs)

Molsture-proof bag

Lable

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Labeling



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
QBLP653-RAGUV	QBLP653-RAGUV	Red: Iv=50mcd min., λ_D =625nm to 635nm @ I _F =20mA	1500 units
		Yellow Green: Iv=32mcd min., λ_D =565nm to 575nm @ I _F =20mA	
		UV: Iv=1.0mcd min., λ_D =428nm typ. / λ_P =405 to 415nm @ I _F =20mA	

Revision History

Description:	Revision #	Revision Date
New Release of QBLP653-RAGUV	V1.0	01/23/2013
Update Labeling	V1.1	04/14/2016
Correct typos, add Peak wavelength for UV	V1.2	08/31/2016
Correct VF spec for UV	V1.3	10/18/2016

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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.