

QT-Brightek Chip LED Series

SMD 1205 Bi-Color LED

Part No.: QBLP655R-RAG

R: Red

AG: Yellow Green

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Introduction

Feature:

- Clear lens
- Package in tape and reel
- Ultra bright 1205 package
- AlInGaP technology for R/ AG
- Viewing angle: 140 degrees
- Reverse Mountable

Description:

These ultra-bright 655R 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:

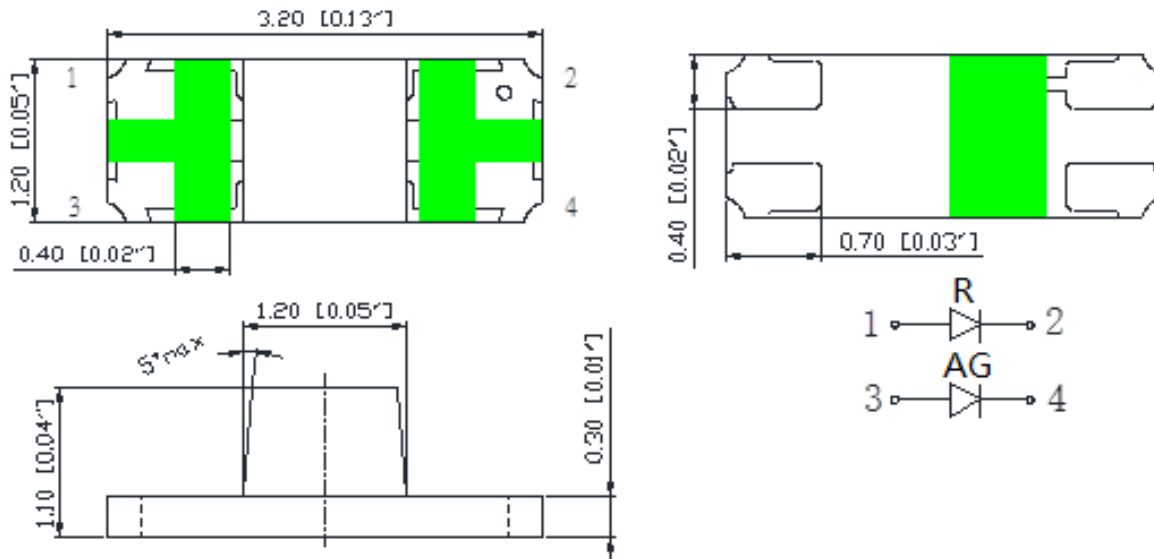
- Status indication
- Back lighting application

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

| Product | Color | I _F (mA) | V _F (V) | | λ _D (nm) | | | I _V (mcd) | |
|--------------|--------------|---------------------|--------------------|------|---------------------|------|------|----------------------|------|
| | | | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. |
| QBLP655R-RAG | Red | 20 | 2.0 | 2.5 | 615 | 623 | 630 | 50 | 90 |
| | Yellow Green | 20 | 2.0 | 2.5 | 565 | 571 | 576 | 20 | 33 |

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)** |
|-----------------------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|-------------------------|
| AllnGaP (R/AG/Y/O) | 75 | 30 | 125 | 5 | -40 ~ +85 | -40 ~ +100 | 260 |

*Duty 1/8 @ 1kHz

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

Forward Voltage V_F for AllnGaP @ I_F=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| □ | 1.7 | 2.5 | V |

Luminous Intensity I_V @ I_F=20mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| C | 20 | 25 | mcd |
| D | 25 | 32 | |
| E | 32 | 40 | |
| F | 40 | 50 | |
| G | 50 | 63 | |
| H | 63 | 80 | |
| I | 80 | 100 | |
| J | 100 | 125 | |
| K | 125 | 160 | |

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 Red @ $I_F=20\text{mA}$

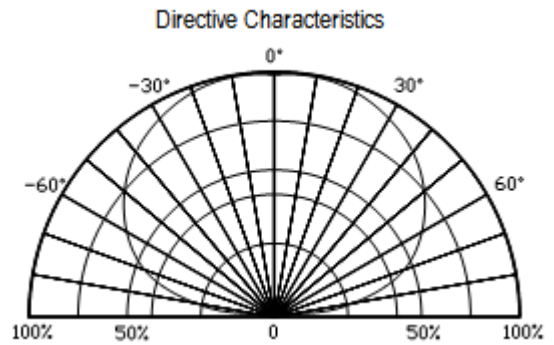
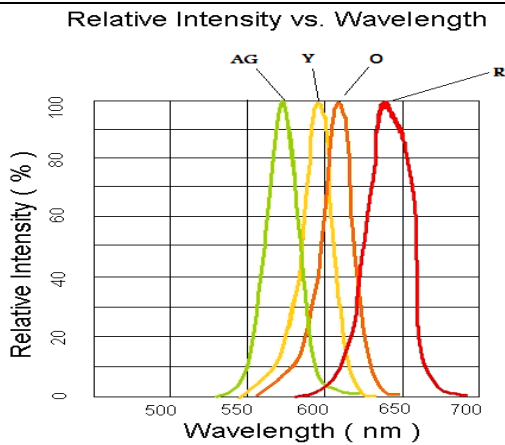
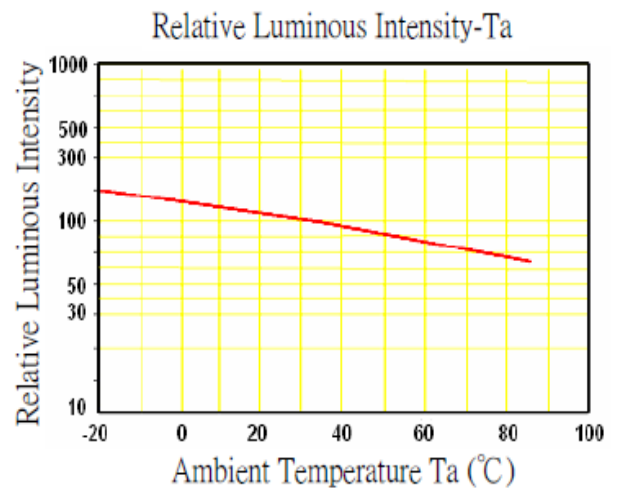
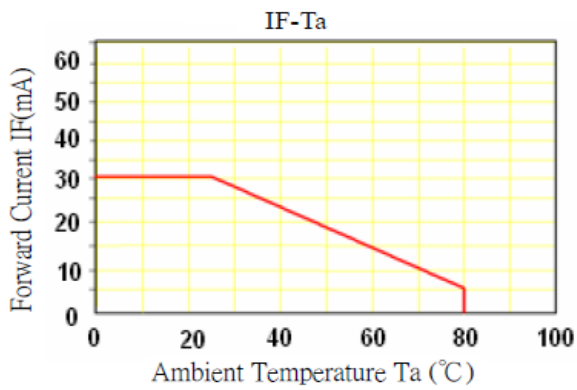
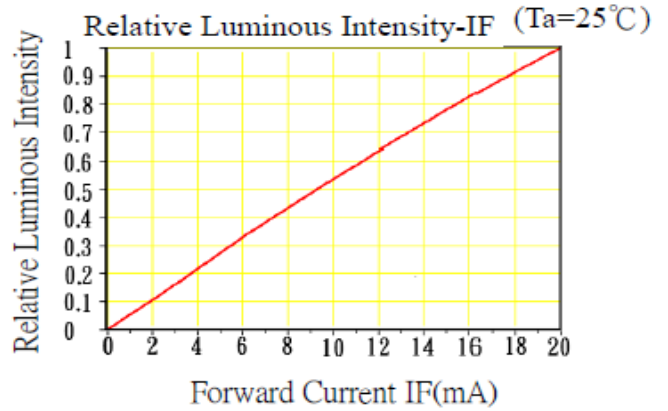
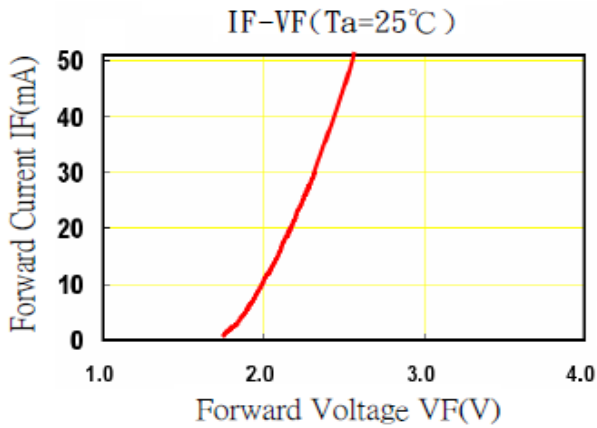
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| s | 615 | 620 | nm |
| t | 620 | 625 | |
| u | 625 | 630 | |

Note:

Tolerance of measurement of forward voltage: $\pm 0.1\text{V}$ Tolerance of measurement of luminous intensity: $\pm 15\%$ Tolerance of measurement of dominant wavelength: $\pm 2\text{nm}$

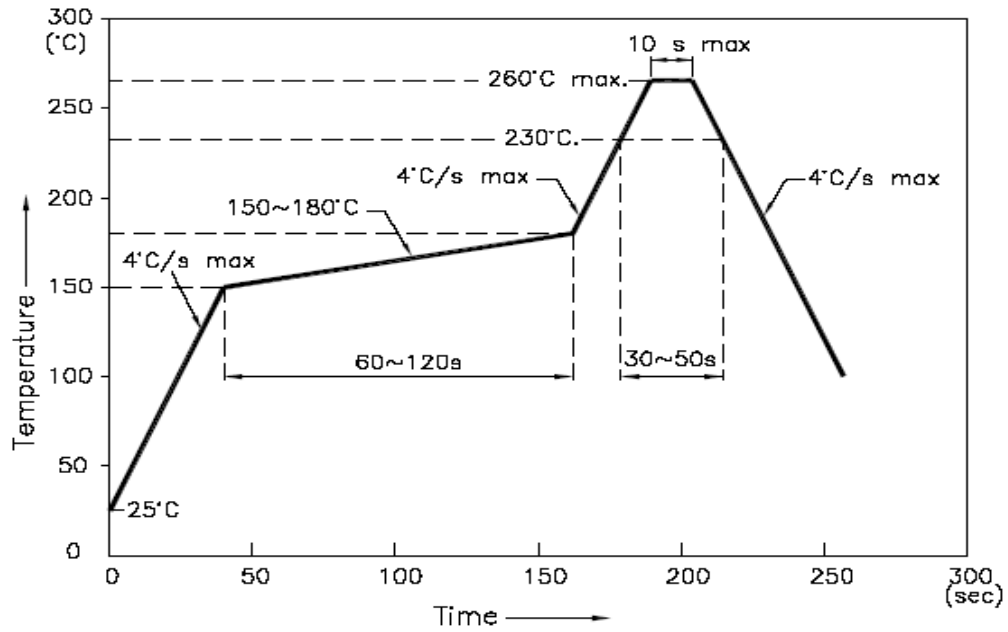
Characteristic Curves

AllnGaP (R/ AG)

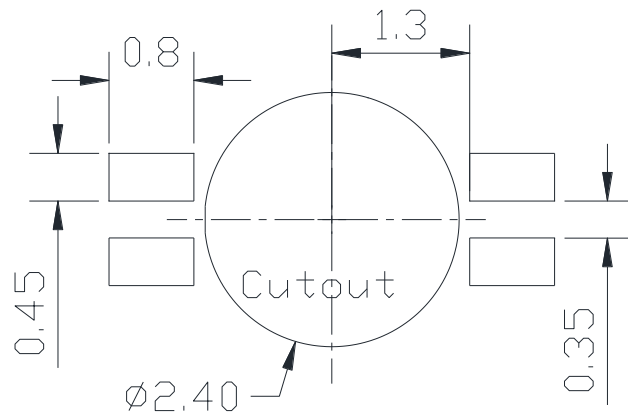


Solder Profile & Footprint

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



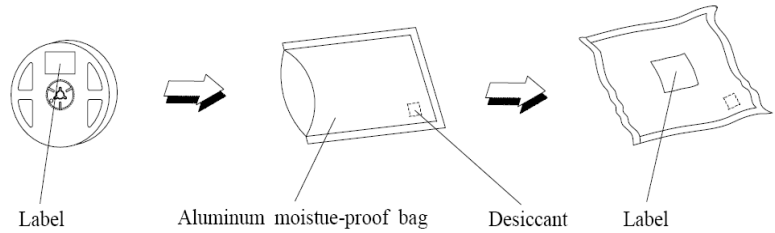
Recommended Pad Layout



Units: mm

tolerance: +/- 0.1mm

Packaging Specifications:



Labeling

 **QT-Brightek** 



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-RAG | QBLP655R-RAG | Iv=90mcd typ. @ 20mA / λ _D =615-630nm Iv=33mcd typ. @ 20mA / λ _D =565-576nm | 3,000 units |

Revision History

| Description: | Revision # | Revision Date |
|-----------------------------|------------|---------------|
| New Release of QBLP655R-RAG | V1.0 | 06/08/2017 |
| | | |
| | | |
| | | |
| | | |

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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.

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|-----------------------|---------------------|---------------|
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| | Version# 1.0 | |