

QT-Brightek Chip LED Series**SMD 1208 Yellow Green LED****Part No.: QBLP653-AG5****5: 5mA**

| | | |
|----------------------|----------------------|-------------|
| Product: QBLP653-AG5 | Date: March 07, 2023 | Page 1 of 9 |
| | Version# 1.0 | |

Table of Contents:

| | |
|--|---|
| Introduction | 3 |
| Electrical / Optical Characteristic (Ta=25 °C) | 4 |
| Absolute Maximum Rating | 4 |
| Characteristic Curves..... | 5 |
| Solder Profile & Footprint..... | 6 |
| Packing | 7 |
| Labeling | 8 |
| Ordering Information | 8 |
| Revision History | 9 |
| Disclaimer | 9 |

Introduction

Feature:

- Water clear lens
- Package in tap and reel
- Bright 1208 LED package
- AllnGaP technology
- Viewing angle: 15 deg typ.

Description:

This bright 1208 LED has a height profile of 2.5mm. With narrow viewing angle, LED produces high bright light output.

Application:

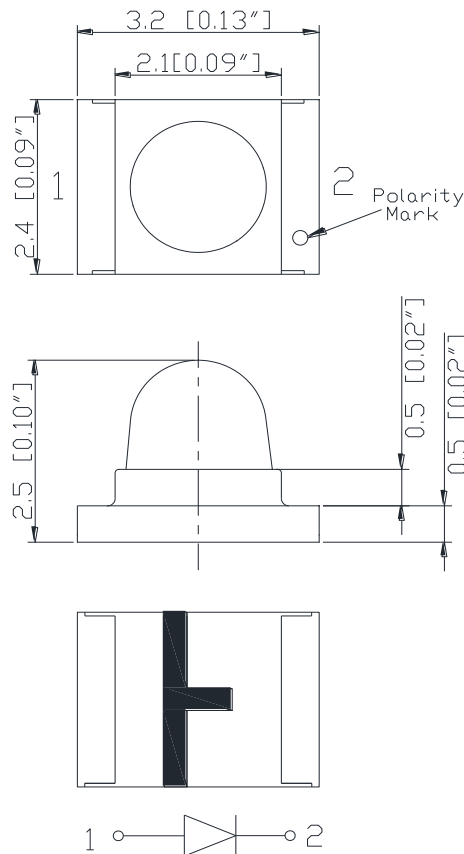
- Status indication
- Back lighting application

Certification & Compliance:

- 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. |
| QBLP653-AG5 | Yellow Green | 5 | 1.9 | 2.3 | 565 | 569 | 576 | 160 | 300 |

Absolute Maximum Rating

| Material | P _d (mW) | I _F (mA) | I _{FP} (mA)* | V _R (V) | T _{OP} (°C) | T _{ST} (°C) | T _{SO L} (°C)** |
|----------|---------------------|---------------------|-----------------------|--------------------|----------------------|----------------------|--------------------------|
| AllnGaP | 69 | 30 | 125 | 5 | -40 ~ +80 | -40 ~ +85 | 260 |

*Duty 1/8 @ 1KHz

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

Forward Voltage V_F @ I_F=5mA

| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| □ | 1.7 | 2.3 | V |

Luminous Intensity I_V @ I_F=5mA

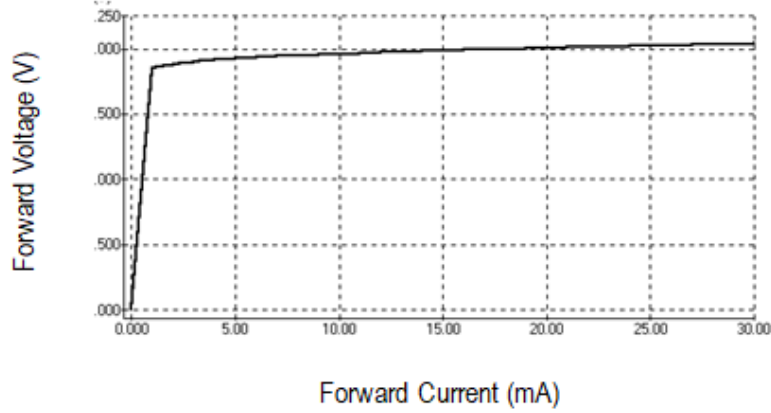
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| L | 160 | 200 | mcd |
| M | 200 | 250 | |
| N | 250 | 320 | |
| O | 320 | 400 | |
| P | 400 | 500 | |

Dominant Wavelength λ_D @ I_F=5mA

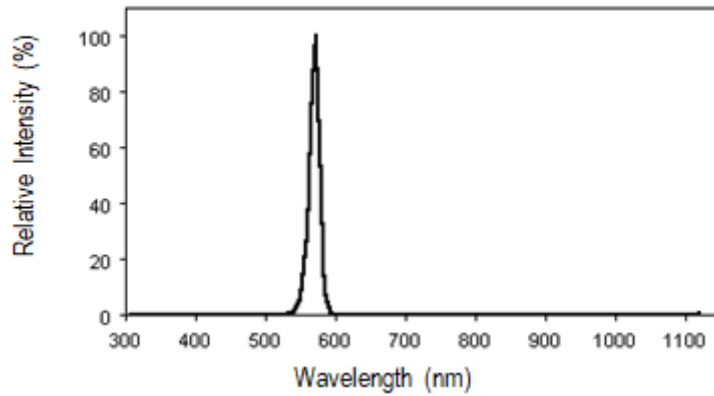
| Bin | Min. | Max. | Unit |
|-----|------|------|------|
| h | 565 | 568 | nm |
| i | 568 | 572 | |
| j | 572 | 576 | |

Characteristic Curves

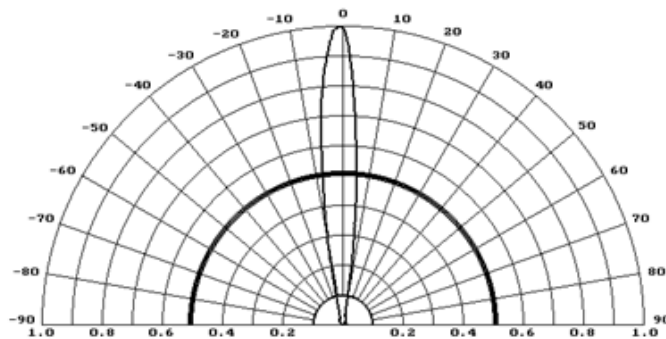
Forward Current vs. Forward Voltage



Relative Intensity vs. Wavelength

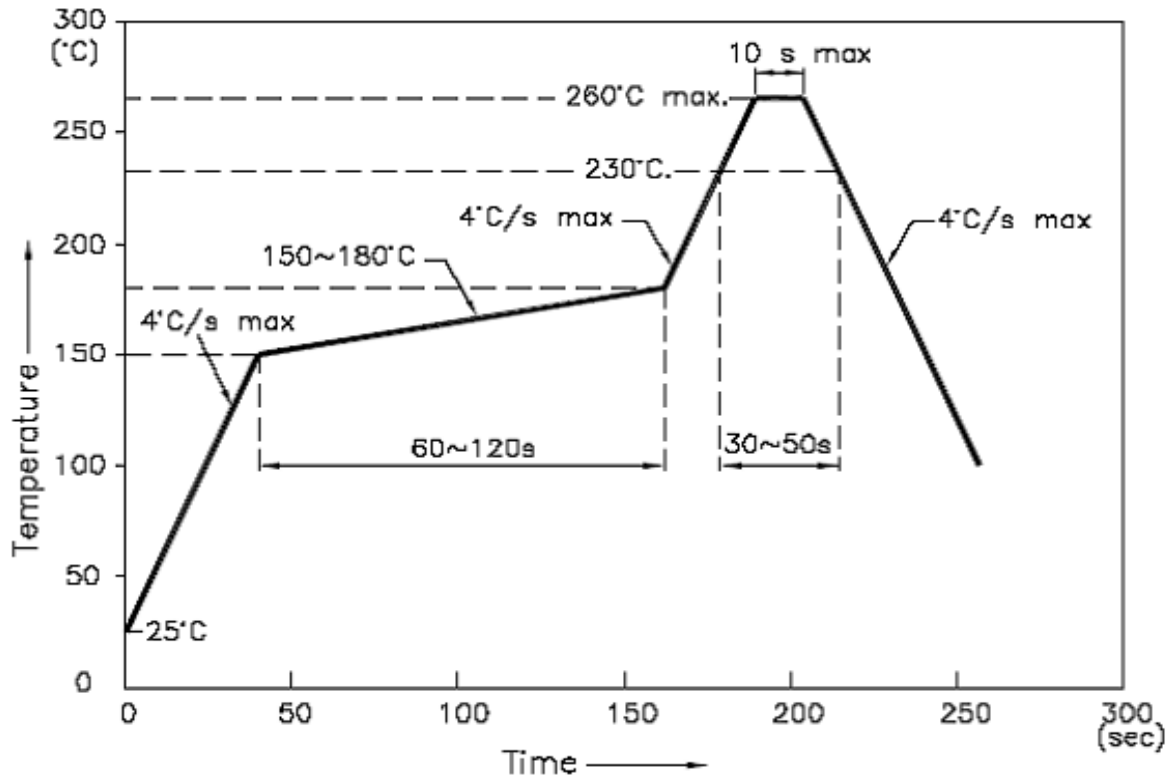


Directive Characteristics

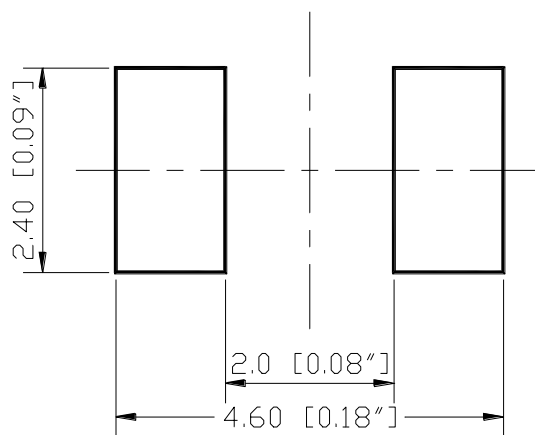


Solder Profile & Footprint

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



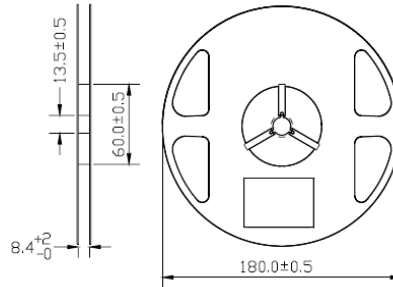
Recommended Pad Layout



Units: mm

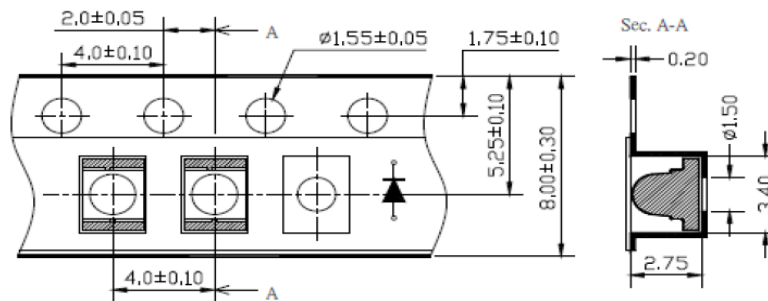
Packing

Reel Dimension:



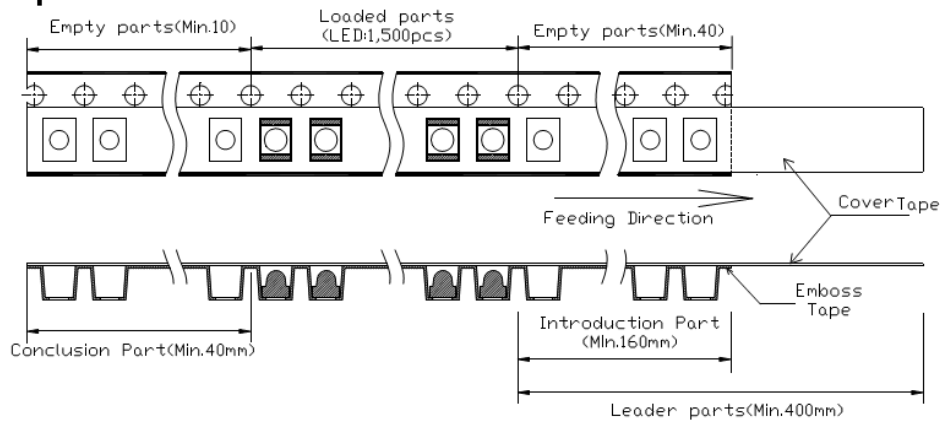
Unit: mm

Tape Dimension:

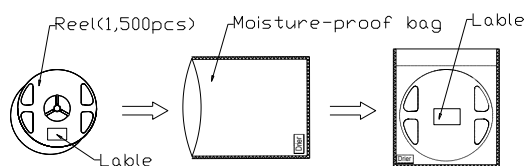


Unit: mm

Arrangement of Tape:



Packaging Specification:



| | | |
|----------------------|----------------------|-------------|
| Product: QBLP653-AG5 | Date: March 07, 2023 | Page 7 of 9 |
| | Version# 1.0 | |

Labeling



Part No: _____
Customer P/N: _____
Item: _____
Q'ty: _____
Vf: _____
Iv: _____
VI: _____
Date: _____

Made in China

Ordering Information

| Part # | Orderable Part # | Spec Range | Quantity per reel |
|-------------|------------------|---|-------------------|
| QBLP653-AG5 | QBLP653-AG5 | Iv=300mcd typ. / Color = 565nm to 576nm @ 5mA | 1,500 units |

Revision History

| Description: | Revision # | Revision Date |
|----------------------------|------------|---------------|
| New Release of QBLP653-AG5 | V1.0 | 03/07/2023 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |



Disclaimer

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

Life Support Policy

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

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.