# QT-Brightek Chip LED Series

# SMD 1208 Blue LED

## Part No.: QBLP653-IB5

**5: 5mA**

**Table of Contents:**

# Introduction

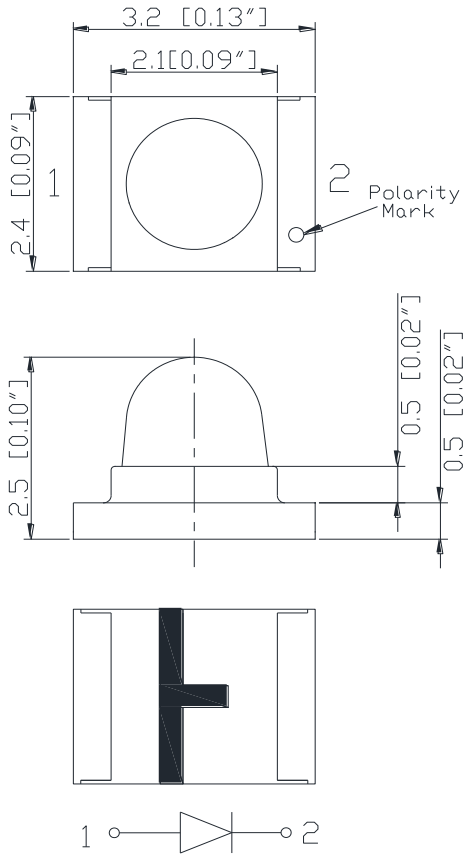
**Feature:**
- Water clear lens
- Package in tap and reel
- Bright 1208 LED package
- AllnGaP technology
- Viewing angle: 15 deg typ.

**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) | | $\lambda_D$ (nm) | | | $I_V$ (mcd) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Typ. | Max. | Min. | Typ. | Max. | Min. | Typ. |
| QBLP653-IB5 | Blue | 5 | 2.8 | 3.4 | 455 | 462 | 465 | 200 | 350 |

## 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 | 102 | 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 |
|---|---|---|---|
| e | 2.5 | 2.8 | V |
| f | 2.8 | 3.1 | |
| g | 3.1 | 3.4 | |

## Luminous Intensity $I_V$ @ $I_F$=5mA

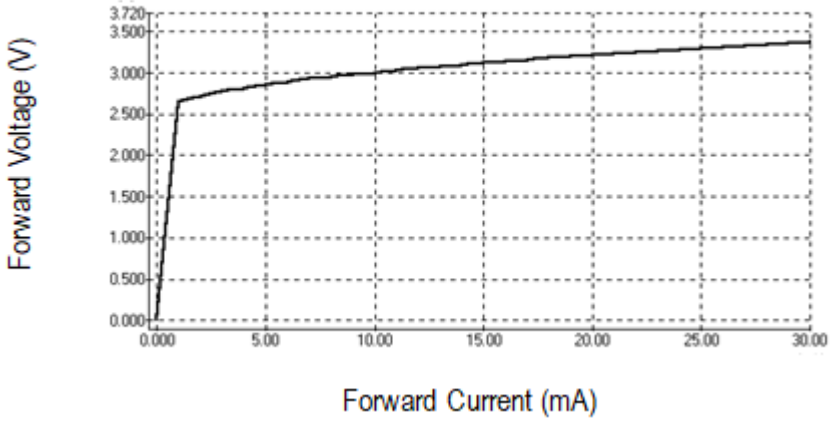
| Bin | Min. | Max. | Unit |
|---|---|---|---|
| M | 200 | 250 | mcd |
| N | 250 | 320 | |
| O | 320 | 400 | |
| P | 400 | 500 | |
| Q | 500 | 630 | |

## Dominant Wavelength $\lambda_D$ @ $I_F$=5mA

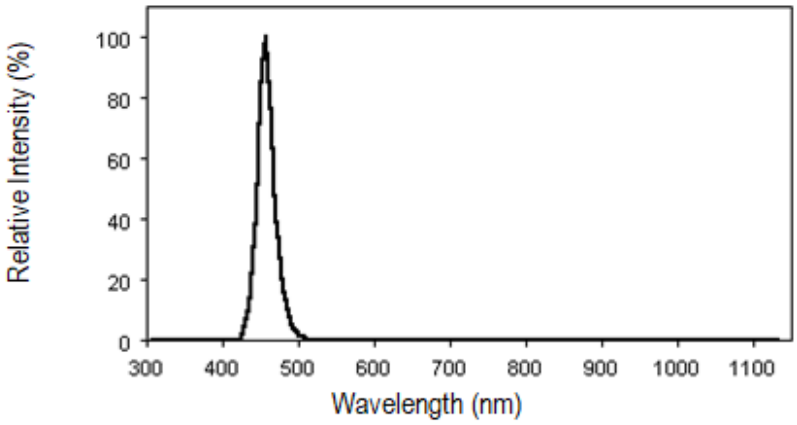
| Bin | Min. | Max. | Unit |
|---|---|---|---|
| C | 455 | 457.5 | nm |
| D | 457.5 | 460 | |
| E | 460 | 462.5 | |
| F | 462.5 | 465 | |

## Characteristic Curves

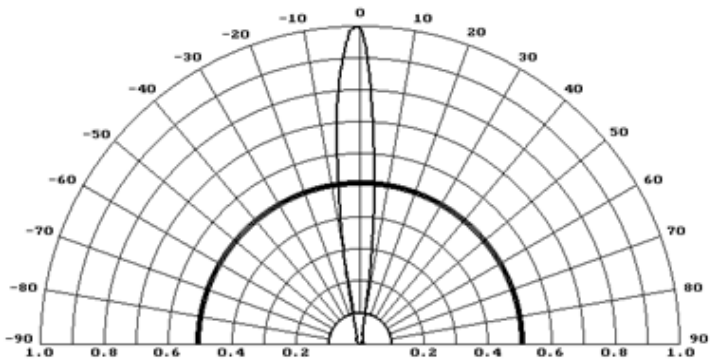
Forward Current vs. Forward Voltage




Relative Intensity vs. Wavelength

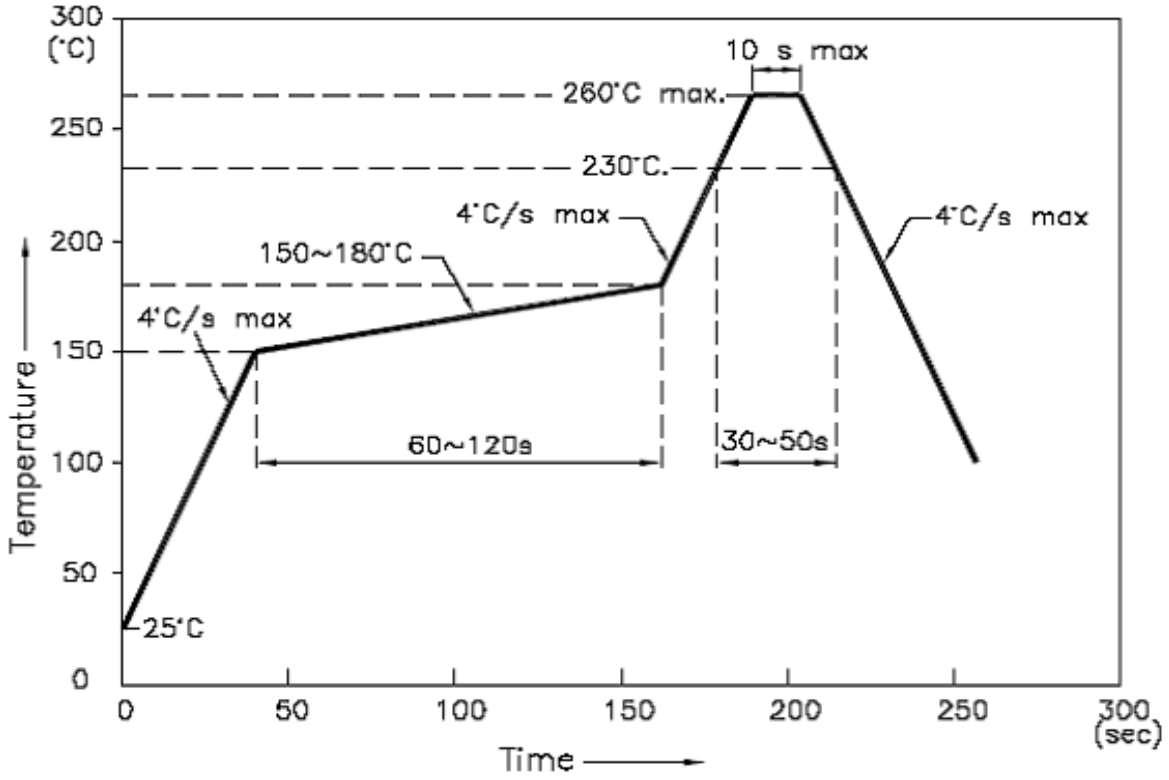



Directive Characteristics

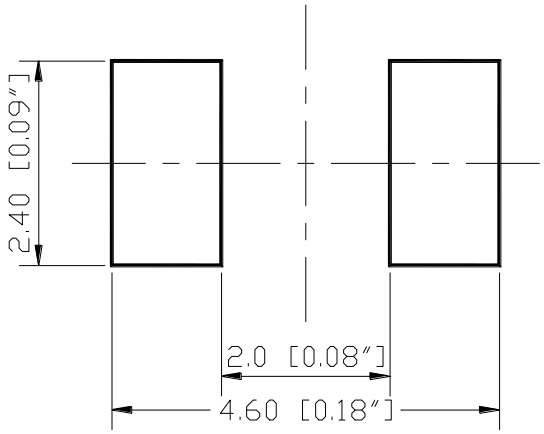


## Solder Profile & Footprint

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



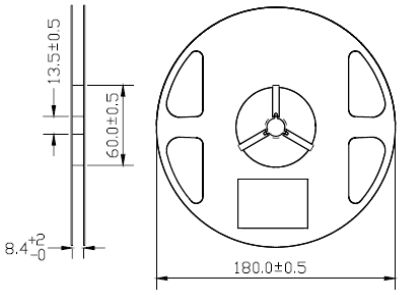

**Recommended Pad Layout**




Units: mm

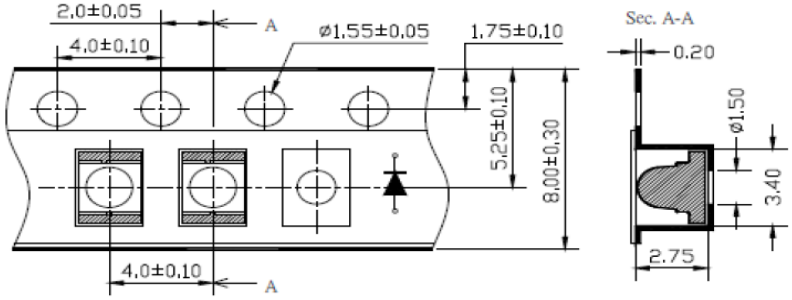
# Packing

## Reel Dimension:



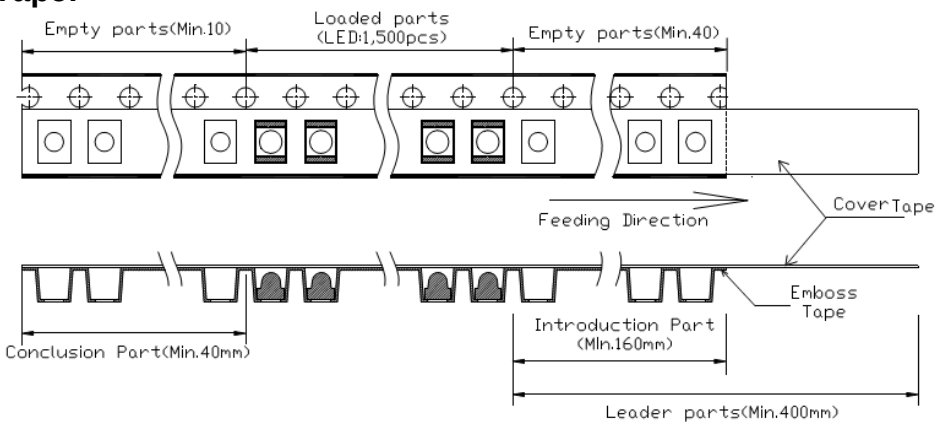

Unit: mm

## Tape Dimension:

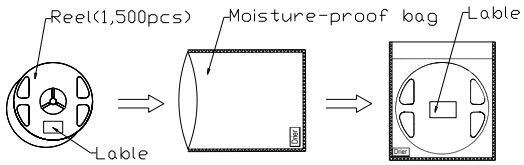



Unit: mm

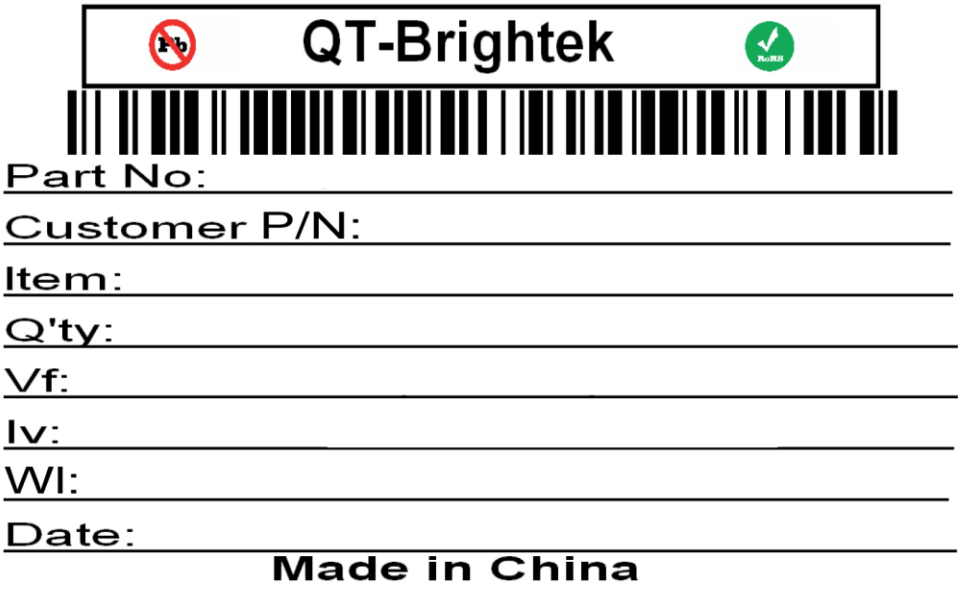
## Arrangement of Tape:




## Packaging Specification:



## Labeling




## Ordering Information

| Part # | Orderable Part # | Spec Range | Quantity per reel |
|---|---|---|---|
| QBLP653-IB5 | QBLP653-IB5 | Iv=350mcd typ. / Color = 455nm to 465nm @ 5mA | 1,500 units |

## Revision History

| Description: | Revision # | Revision Date |
|---|---|---|
| New Release of QBLP653-IB5 | V1.0 | 03/07/2023 |
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