

0603 Package 0.8mm Height Super Blue LED

Features

- Package in 8mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with infrared and vapor phase reflow solder process
- Mono-color type
- RoHS



QSLP1BF1



Descriptions

- The SMD series enable smaller board size, higher packing density, reduced storage space, and small equipment.
- Besides, light weight makes them ideal for miniature applications

Applications

- Automotive: Backlighting in dashboards and switch
- Telecommunication: indicator and backlighting in telephone and fax
- Flat backlight for LCD, switches and symbols
- General use
- Indoor signboard use.

Device Selection Guide

| Part No. | Chip | | Lens Color |
|--------------------|----------|---------------|-------------|
| | Material | Emitted Color | |
| TSP1-BF1608H8-2528 | InGaN | Super Blue | Water Clear |

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Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Value | Unit |
|---|------------------------|---------------------|------|
| Reverse Voltage | V_R | 5 | V |
| Forward Current | I_F | 25 | mA |
| Peak Forward Current (Duty 1/10 @1KHz) | I_{FP} | 100 | mA |
| Power Dissipation | P_d | 110 | mW |
| Electrostatic Discharge (HBM) | ESD | 150 | V |
| Soldering Temperature | T_{sol} | 260 (for 5 seconds) | °C |
| Operating Temperature | T_{opr} | -40 ~ +85 | °C |
| Storage Temperature | T_{stg} | -40 ~ +90 | °C |

Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|------------------------------|-------------------------|-------|-------|-------|------|----------------------|
| Luminous Intensity | I_v | 30.5 | ----- | 53.5 | mcd | I _F =20mA |
| Viewing Angle | 2θ_{1/2} | ----- | 100 | ----- | deg | |
| Peak Wavelength | λ_p | ----- | 468 | ----- | nm | |
| Dominant wavelength | λ_d | 464 | ----- | 472 | nm | |
| Spectrum Radiation Bandwidth | Δλ | ----- | 35 | ----- | nm | |
| Forward Voltage | V_F | 2.75 | ----- | 3.65 | V | V _R =5V |
| Reverse Current | I_R | ----- | ----- | 10 | μA | |

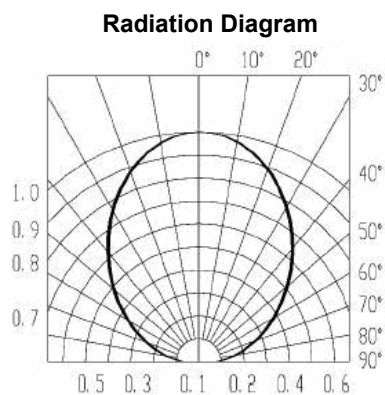
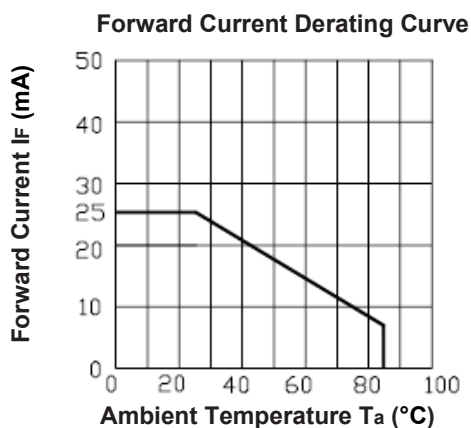
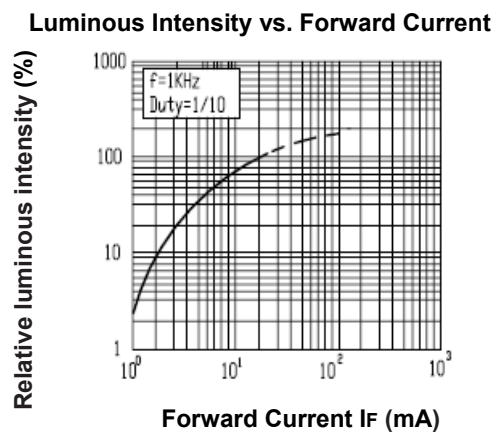
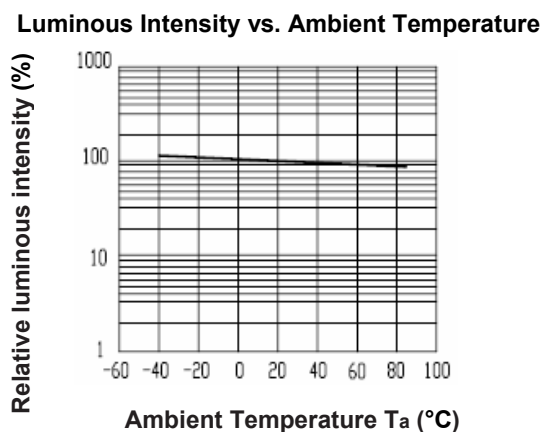
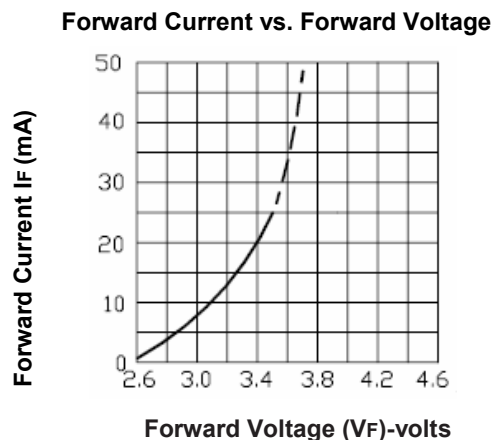
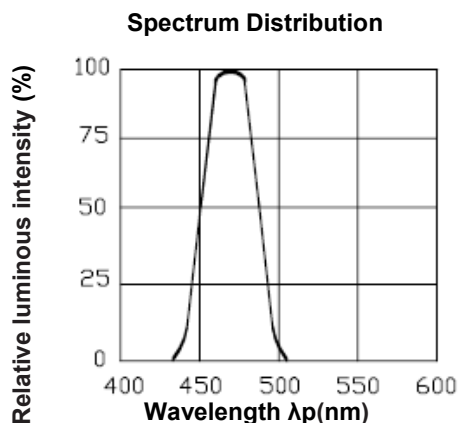
Notes:

1. Tolerance of Luminous Intensity ±10%
2. Tolerance of Dominant Wavelength ±1nm
3. Tolerance of Forward Voltage ±0.1V

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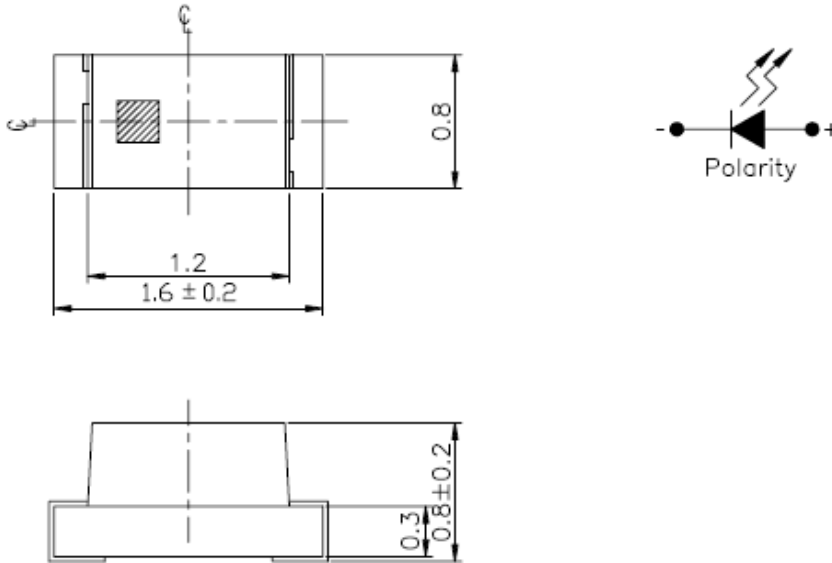
Typical Electro-Optical Characteristics Curves (Ta =25°C)



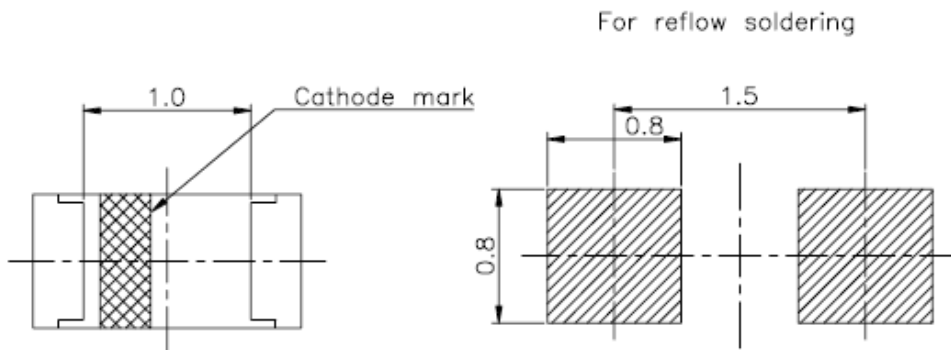
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Package Outline Dimensions (Unit=mm)



Note: The tolerances unless mentioned is ± 0.1 mm, Unit = mm

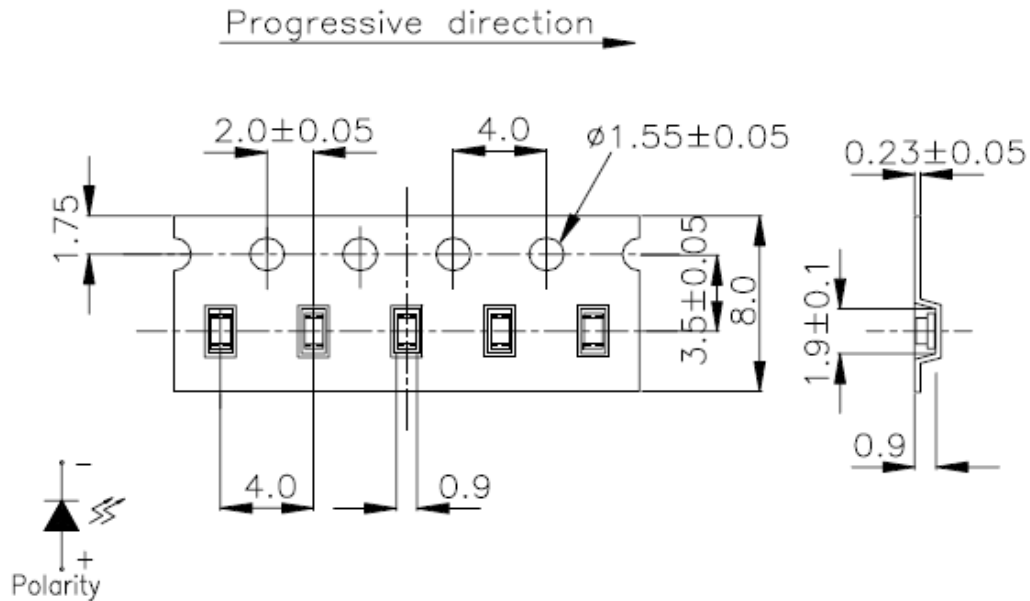


Note: The tolerances unless mentioned is ± 0.1 mm, Unit = mm

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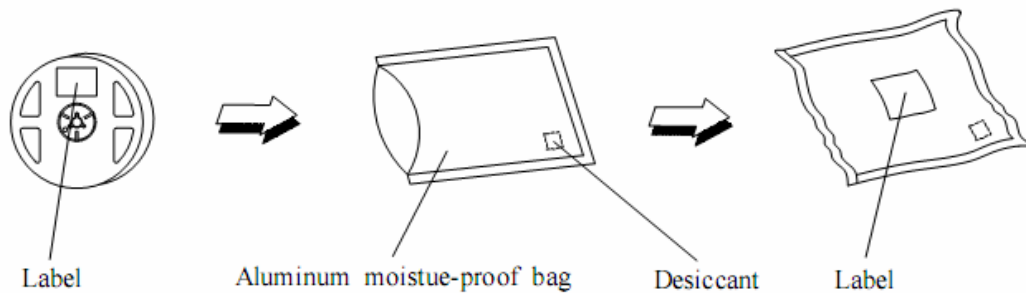
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Carrier Tape Dimensions (Unit=mm): Loaded quantity 2000pcs per reel



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$.

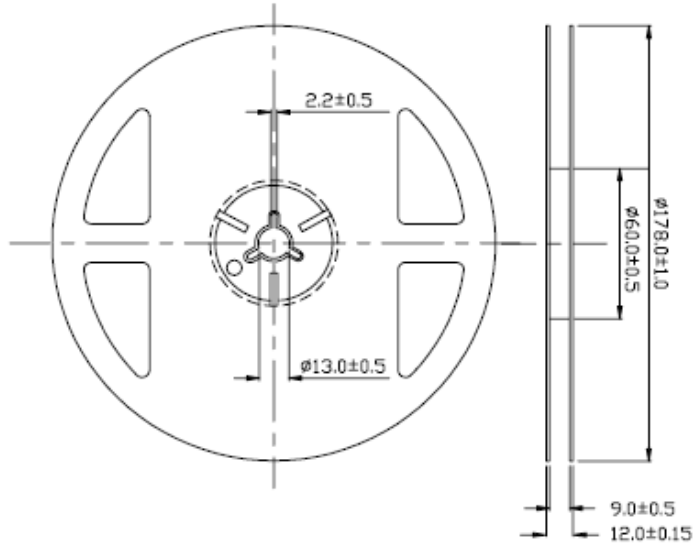
Moisture Resistant Packaging



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Reel Dimensions (Unit= mm):



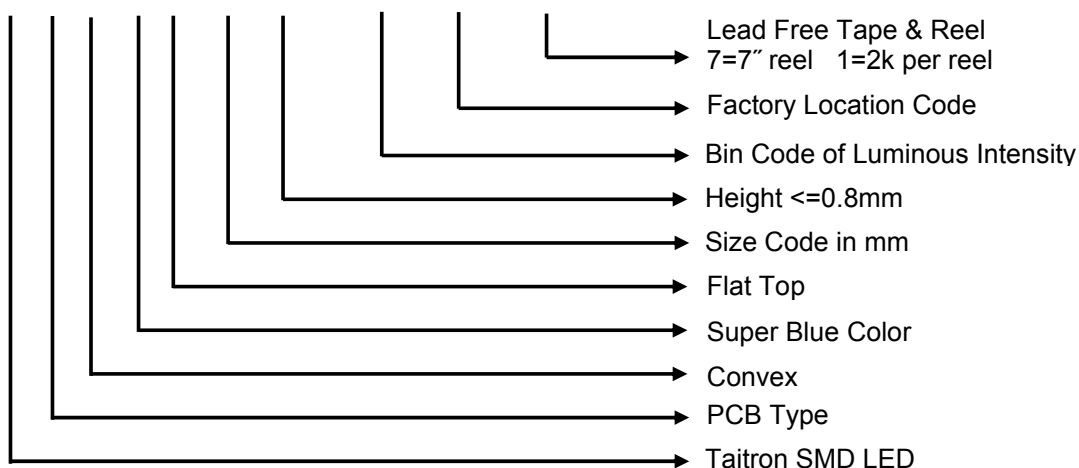
Note: The tolerances unless mentioned is ± 0.1 mm.

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Ordering Information

TS P 1- B F 1608 H8 - 2528- 92-TR71

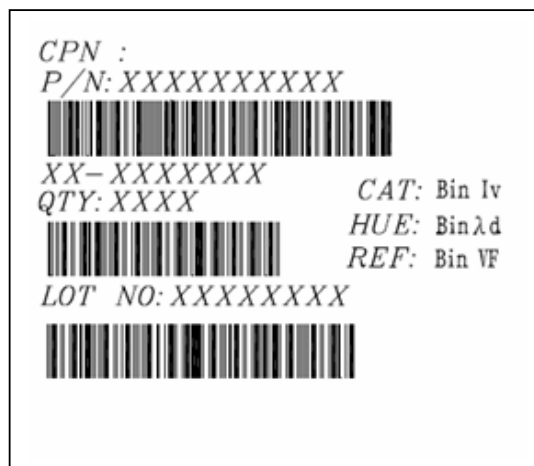


Label Explanation

CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank



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Bin Range of HUE

| Groups | Bin Code | Min | Max | Unit | Condition |
|--------|----------|-----|-----|------|-----------|
| F | AA1 | 464 | 466 | nm | IF=20mA |
| | AA2 | 466 | 468 | | |
| | AA3 | 468 | 470 | | |
| | AA4 | 470 | 472 | | |

Bin Range of Luminous Intensity

| Bin Code | Min | Max | Unit | Condition |
|----------|------|------|------|-----------|
| 25 | 30.5 | 35.0 | mcd | IF=20mA |
| 26 | 35.0 | 40.5 | | |
| 27 | 40.5 | 46.5 | | |
| 28 | 46.5 | 53.5 | | |

Bin Range of Forward Voltage

| Groups | Bin Code | Min | Max | Unit | Condition |
|--------|----------|------|------|------|-----------|
| E | 5 | 2.75 | 3.05 | V | IF=20mA |
| | 6 | 3.05 | 3.35 | | |
| | 7 | 3.35 | 3.65 | | |

Notes: Tolerance of Luminous Intensity $\pm 10\%$

Tolerance of Dominant wavelength $\pm 1\text{nm}$

Tolerance of Forward Voltage $\pm 0.1\text{V}$

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