

Specification of Ceramic 3535 UVC LED Series

Part number: AB-3535UC-C



Features:

- * Top view UVC LED
- * Gold-plated Package Design
- * Low Thermal Resistance
- * RoHS and REACH compliant

Applications:

- * Disinfection
- * Sterilization

Absolute Maximum Ratings at T_j=25°C

| Item | Symbol | Absolute Maximum Rating | Unit |
|-----------------------|--------------------|---|------|
| Forward current | I _F | 120 | mA |
| Pulse Forward current | I _{FP} | 150 | mA |
| Power Dissipation | P _D | 0.9 | W |
| Operating Temperature | T _{s.opr} | -20~+60 | °C |
| Storage Temperature | T _{stg} | -35~+85 | °C |
| Junction Temperature | T _j | 65 | °C |
| Soldering Temperature | T _{sol} | Reflow Soldering: 230°C or 245°C for 5sec | |

*I_{FP} condition with Pulse: Width≤100μs, Duty cycles≤1/10

*LED's properties might be different from suggested values like above and below tables if operation condition will be exceeded our parameter range. Care is to be taken that power dissipation does not exceed the absolute maximum rating of the product

*All measurements were made under the standardized environment of American Bright LED

Electrical/Optical Characteristics at T_j=25°C

| Item | Symbol | Unit | Value | | | Condition |
|--------------------|-------------------------|------|-------|------|-----|-----------------------|
| | | | Min | Type | Max | |
| Forward Voltage | V _F | V | 5.5 | -- | 6.5 | I _F =100mA |
| Reverse Current | I _R | μA | -- | -- | 10 | V _R =5V |
| Radiant flux | Φ _e | mW | 10 | -- | -- | I _F =100mA |
| Peak Wavelength | λ _p | nm | 270 | -- | 280 | I _F =100mA |
| Thermal resistance | R _{th} j-sp | °C/W | -- | 15 | -- | I _F =100mA |

* Tolerance of measurements of the Forward Voltage is ±0.2V

* Tolerance of measurements of the Radiant Flux is ±10%

* Tolerance of measurements of Peak Wavelength is ±2.0nm

* 2θ_{1/2} is the off-axis where the luminous intensity is 1/2 of the peak intensity

Typical Characteristics Curves

Fig 1. Spectrum Power Distribution, $T_j = 25^\circ\text{C}$

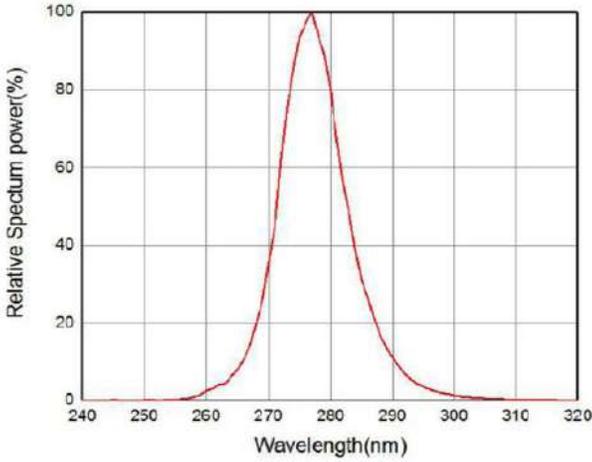


Fig 2. Relative luminous Intensity vs Forward Current (mA)

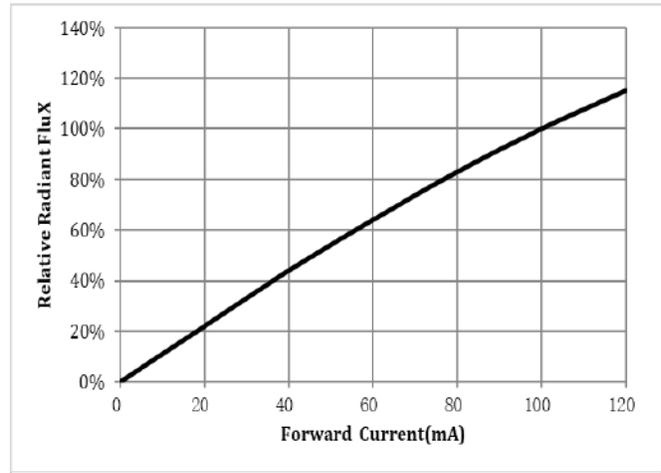


Fig 3. Forward Current vs. Forward Voltage

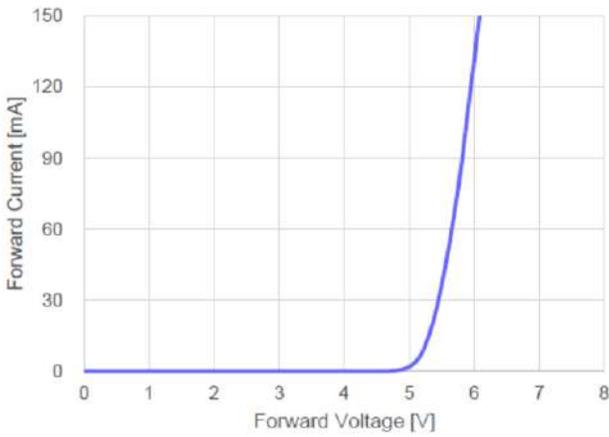


Fig 4. Viewing Angle Distribution, $T_j = 25^\circ\text{C}$

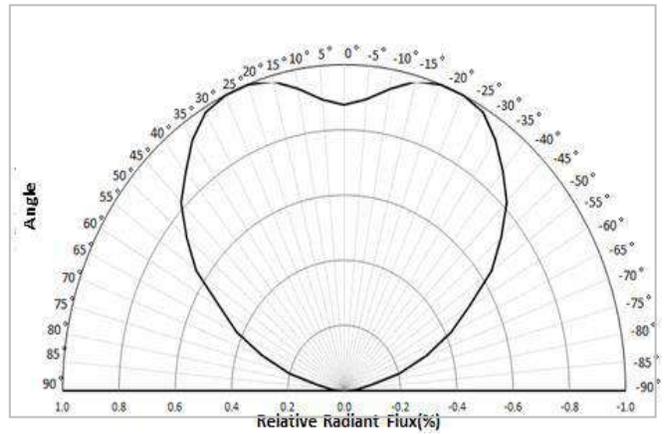


Fig 5. Current Derating Curve vs Ambient temperature

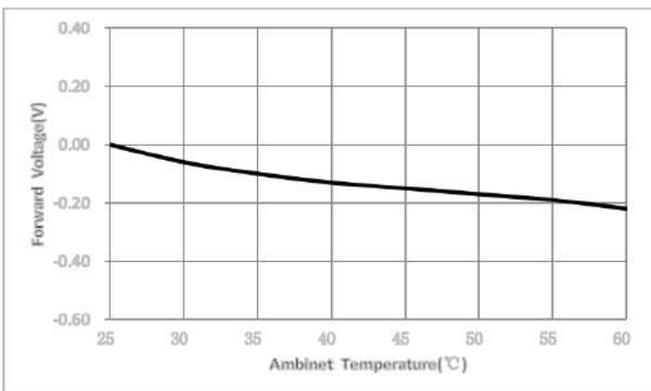
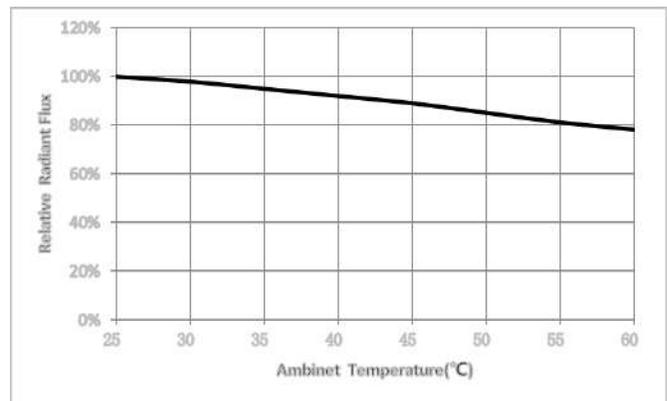
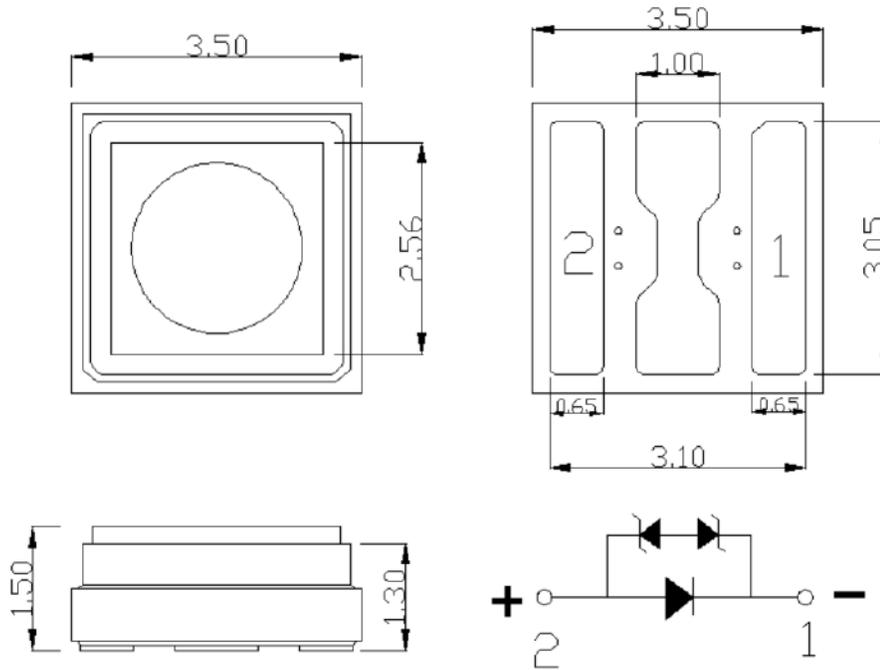


Fig 6. Relative Radiant Flux vs Ambient temperature

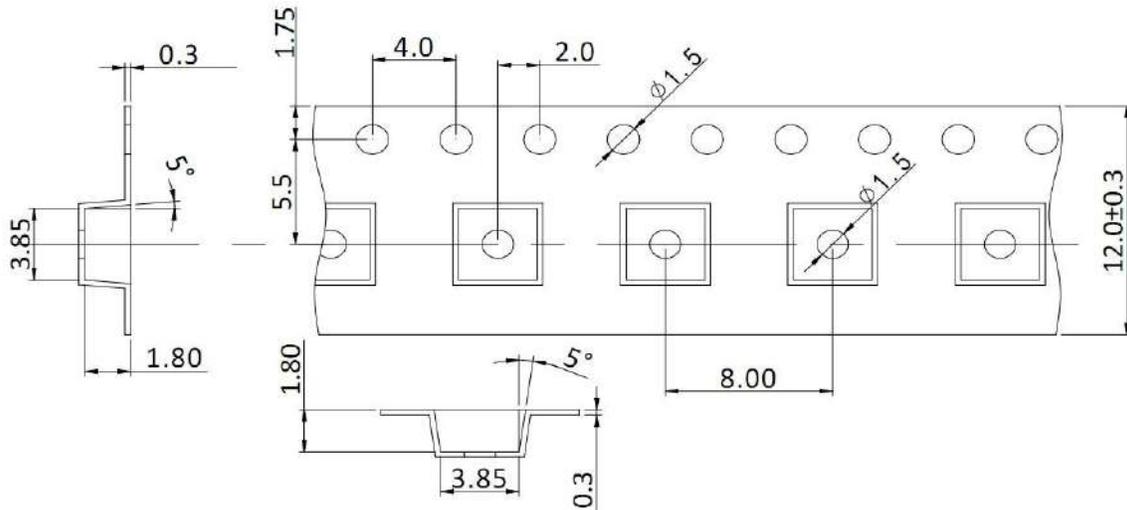


Package Dimensions



* The tolerance unless mentioned is $\pm 0.2\text{mm}$, unit = mm

Package Dimensions of Tape



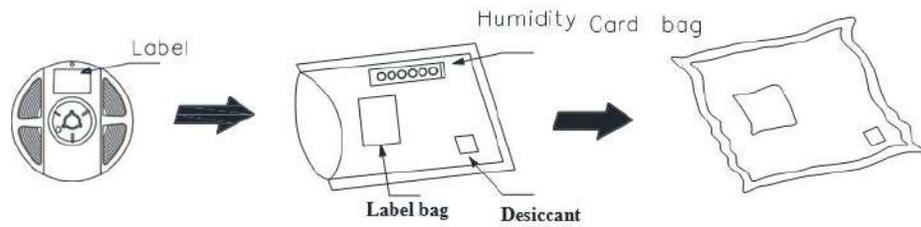
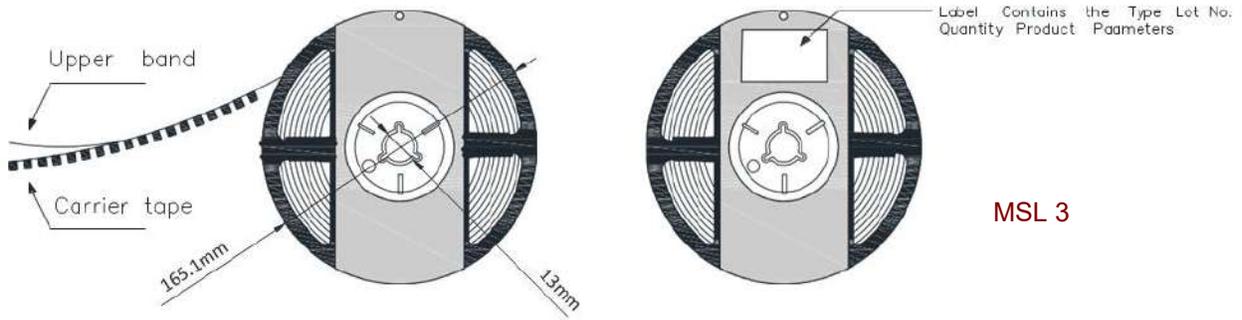
* Quantity : Max 1000pcs/Reel

* Cumulative Tolerance : Cumulative Tolerance/10 pitches to be $\pm 0.25\text{mm}$

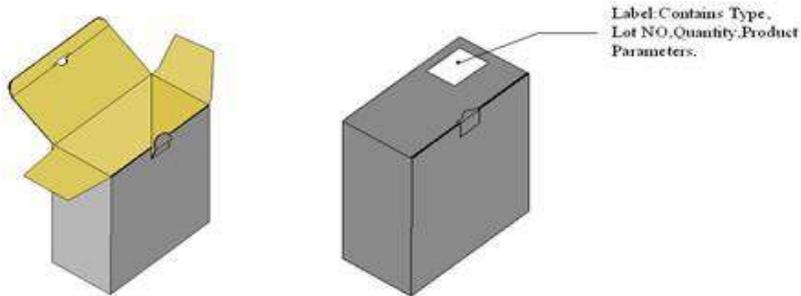
* Package : P/N, Manufacturing data Code No. and Quantity to be indicated on a damp proof Package.

* unit = mm

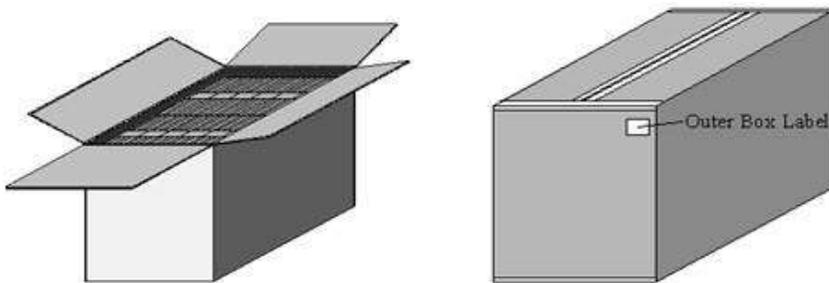
Package Dimensions of Reel



Packaging:



* Capacity 4 or 8 reels per box.



* Capacity 48 or 64 reels per box.

Caution

1. Reflow soldering is recommended not to be done more than two times. In the case of more than 24 hours passed soldering after first, LEDs will be damaged.
2. Repairs should not be done after the LEDs have been soldered. When repair is unavoidable, suitable tools must be used.
3. Die slug is to be soldered.
4. When soldering, do not put stress on the LEDs during heating.
5. After soldering, do not warp the circuit board.

Notes on Lighting Ceramic Series soldering:

1. Recommend to use reflow machine.
2. Recommend to use heating plate soldering.
3. Manual soldering is not recommended.

Notes on reflow process:

1. To confirm whether the actual temperature curve in the reflow soldering conditions comply with recommended conditions. LEDs are guaranteed for one time reflow.
2. During reflow process donot apply force on LED active area.
3. After reflow process, PCB board should be cooled down before packing or storage.

Precaution for use**Storage**

1. Before opening the package: The LED should be kept at 5°C ~30°C and 60%RH or less.
2. After opening the package: The LED's floor life is 168Hrs under 30°C or less and 60%RH or less. If unused LED remain , it should be stored in moisture proof packages JEDEC (MSL 3).
3. If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions: Baking treatment:60±5°C for 24 hours.