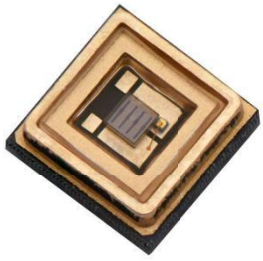
# Draft Specification For UV-C Series

## XY-3535UVCAU1WX1FL-QU

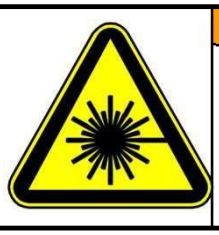


### Features

- Deep Ultraviolet LED
- Dimension : 3.6mm×3.6mm x1.62mm
- All Metal Design Cu Substrate/ Al reflector
- View Angle :Flat
- Low thermal resistance

### Applications

- Disinfection
- Chemical and Biological analysis

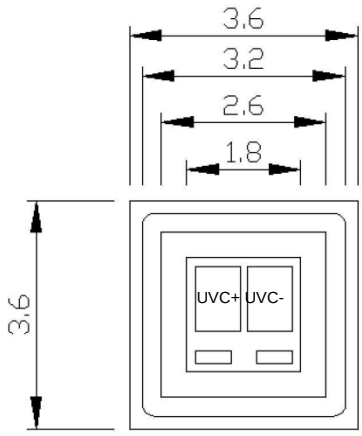


**CAUTION**

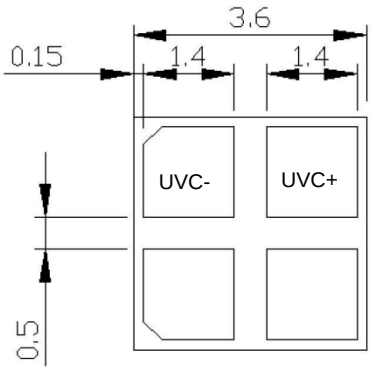
- LEDs emit very strong UV radiation.
- Don't look directly into the LED light.
  UV radiation can harm your eyes.
- To prevent even inadequate exposure, wear protective eyewear.
- If LEDs are embedded in devices, please indicate warning labels against the UV light LED used.
- Keep out of reach of children.
- Specification and dimension are subject to change for improvement without notice.

# Outline Dimension

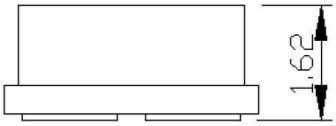
Unit : mm



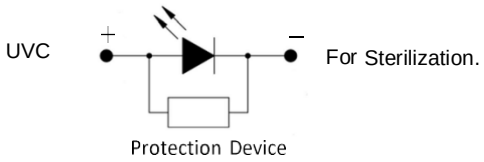

top view




Bottom view




side view




**Notes:**

1. All dimension units are millimeters.
2. All dimension tolerance is ±0.2mm unless otherwise noted.

## Absolute Maximum Ratings

(Ta=25℃)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Power Dissipation | P | 0.7 | W |
| Forward Current | $I_F$ | 100 | mA |
| Maximum Current | $I_F$ | 150 | mA |
| Thermal Resistance, Junction-Case | $R_{th}$, J-C1 | 15 | °C/W |
| Operating Temperature Range | $T_{opr}$ | - 40°C to + 60°C | |
| Storage Temperature Range | $T_{stg}$ | - 40°C to + 100°C | |
| Soldering Condition | $T_{sol}$ | 230°C For 5 Seconds | |

Note: 1. The thermal resistance value is measured with MCPCB (Star).

## Initial Electrical/Optical Characteristics

(Ta=25℃ IF=100mA)

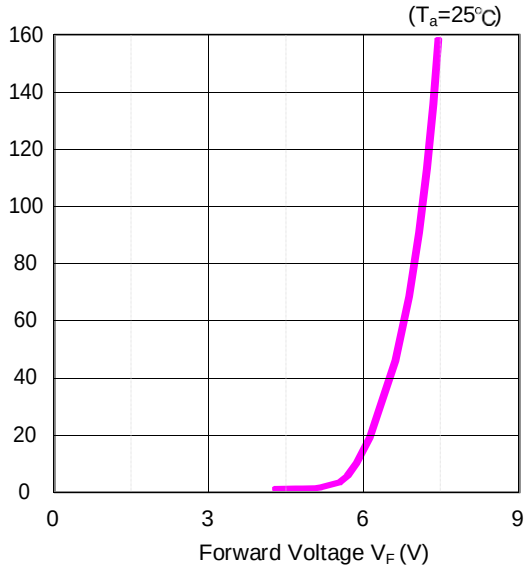
| Parameter | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Peak wavelength | $\lambda_p$ | 265 | 275 | 285 | nm |
| Radiant Flux | $\Phi_e$ | 6 | 12 | — | mW |
| Forward Voltage | $V_F$ | — | 6 | 8 | V |
| Spectra half-width | $\Delta\lambda$ | — | 15 | — | nm |
| LED Junction Temperature | TJ | — | 60 | 80 | °C |

Note

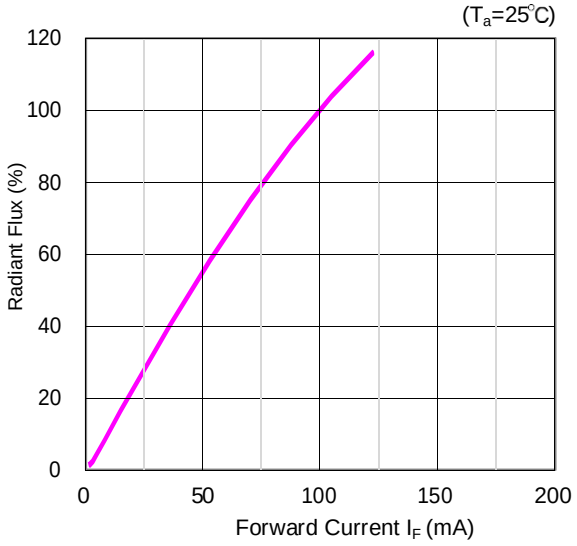
1. Forward voltage measurement allowance is ± 0.2V.
2. Radiant flux measurement allowance is ± 10%.
3. Irradiance tested at a distance 10mm from Al reflector.
4. Wavelength measurement allowance is ± 3nm.

## Characteristic Diagram

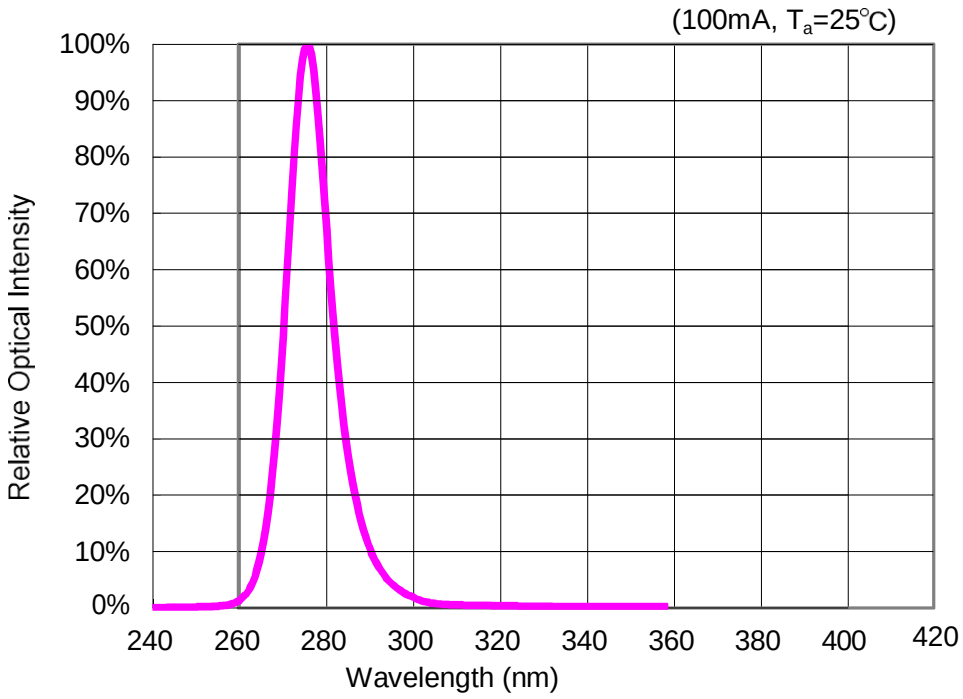
- **Forward Current vs. Forward Voltage**



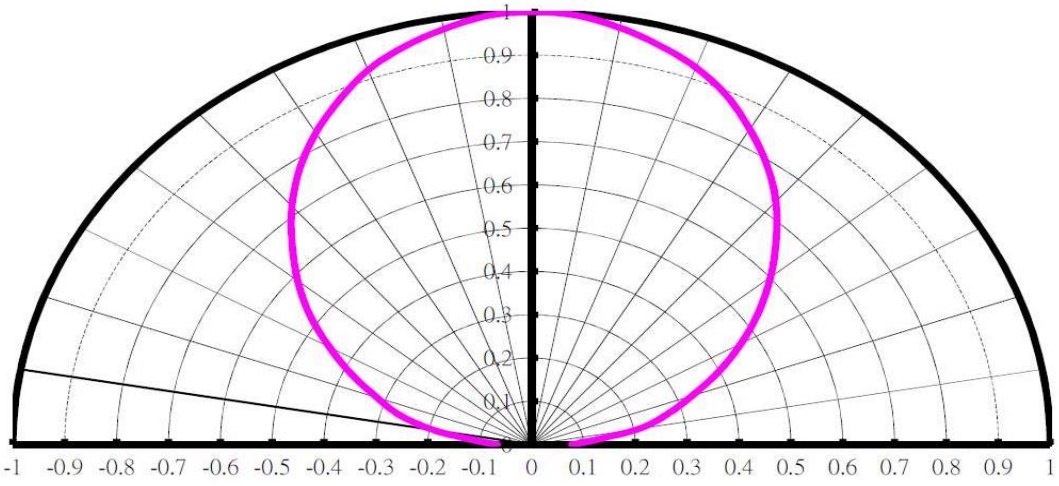

- **Relative Intensity vs. Forward Current**



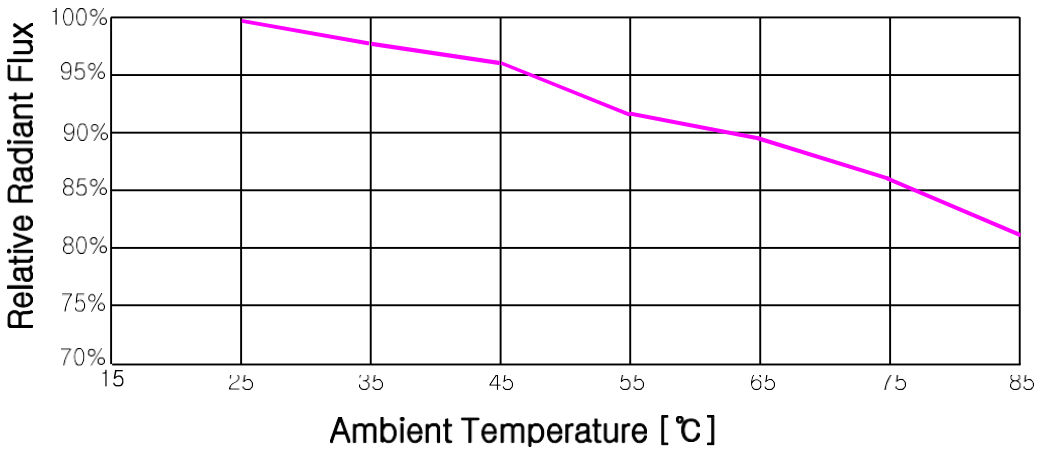
## Spectral Power Distribution



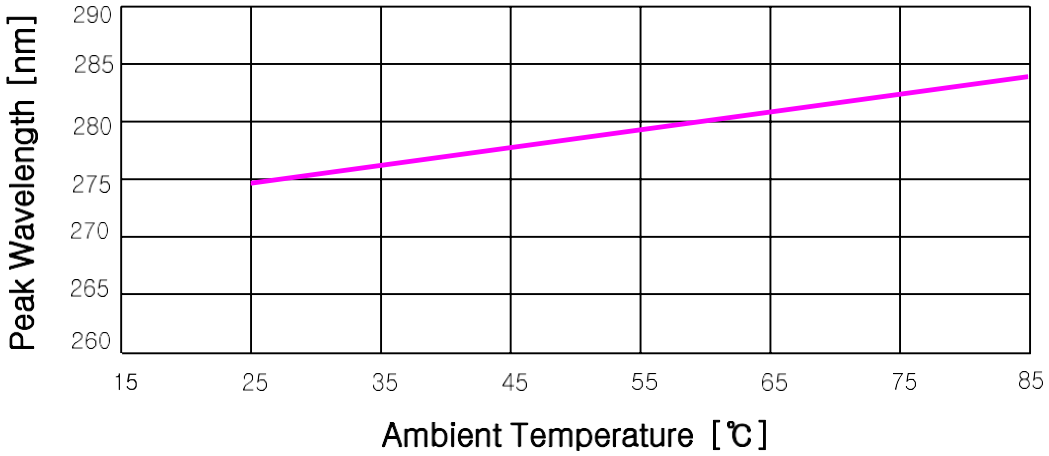

## Typical Radiation Pattern



- **Ambient Temperature vs. Relative Radiant Flux, $I_F$=100mA**




- **Ambient Temperature vs. Peak Wavelength ,$I_F$=100mA**



# Label

**Part NO： Product model**

**LOT NO：Instruction number**

**Spec NO： product**

**Date： Date**

**Bin No.：Class-Bin No.-Wavelength code**

**Q’ty： Quantity**

**VF（V）：Forward voltage**

**Φ（mW）： Radiant flux**

**λp(nm)： Peak Wavelength**

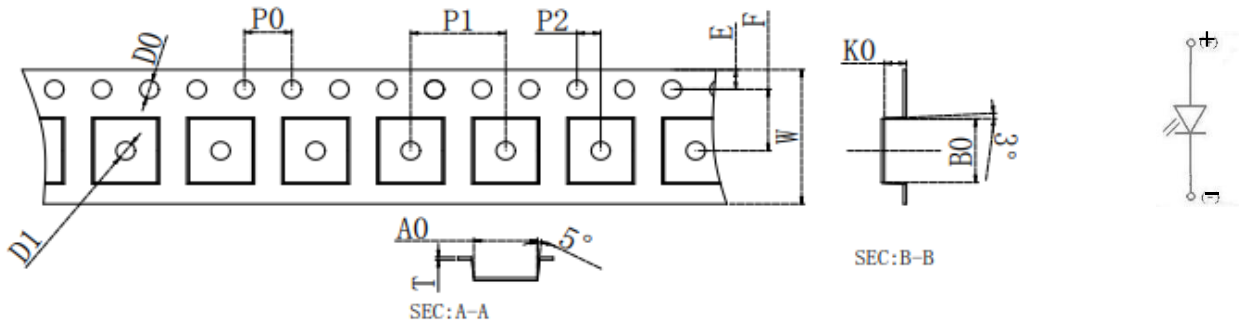
# Shipping Package Style

## Lens Type

### Tapping Dimension Packaging Specification

### FLAT Lens Type :

- Moisture proof bag.
- 1 Reel/bag.
- Q'ty: 4000 (MAX)/Reel.



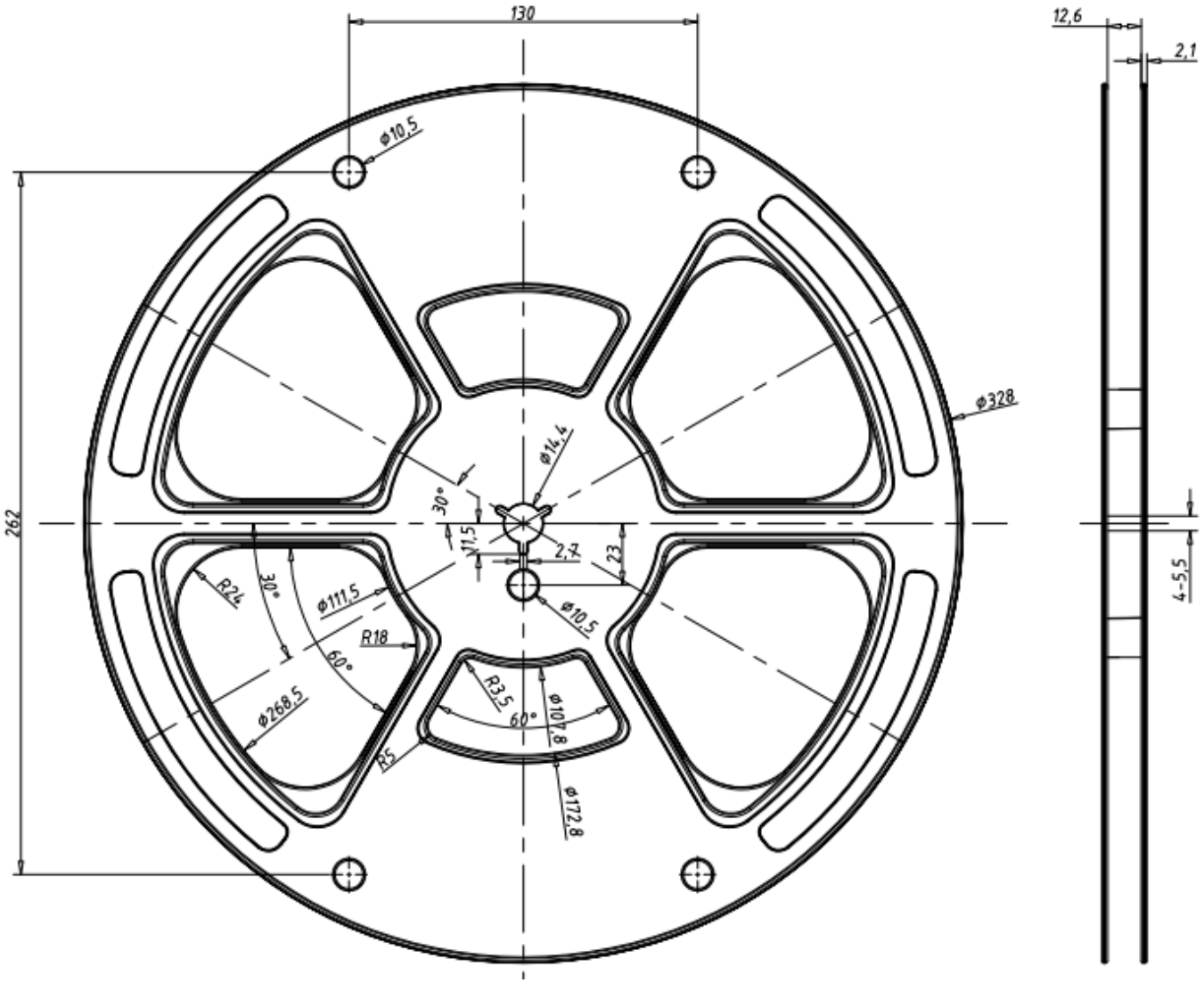

UNIT:MM

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| W | 12.00±0.10 | T | 0.20±0.02 | D1 | 1.60±0.10 | 单位 | MM |
| E | 1.75±0.10 | F | 5.50±0.10 | D0 | 1.60±0.10 | 材质 | PC |
| P0 | 4.00±0.10 | P1 | 8.00±0.10 | P2 | 2.00±0.10 | 品名 | 3535-2.2 |
| A0 | 3.75±0.10 | B0 | 3.70±0.10 | K0 | 2.20±0.10 | 制造商 | 新创源 |

# Reel Packaging :

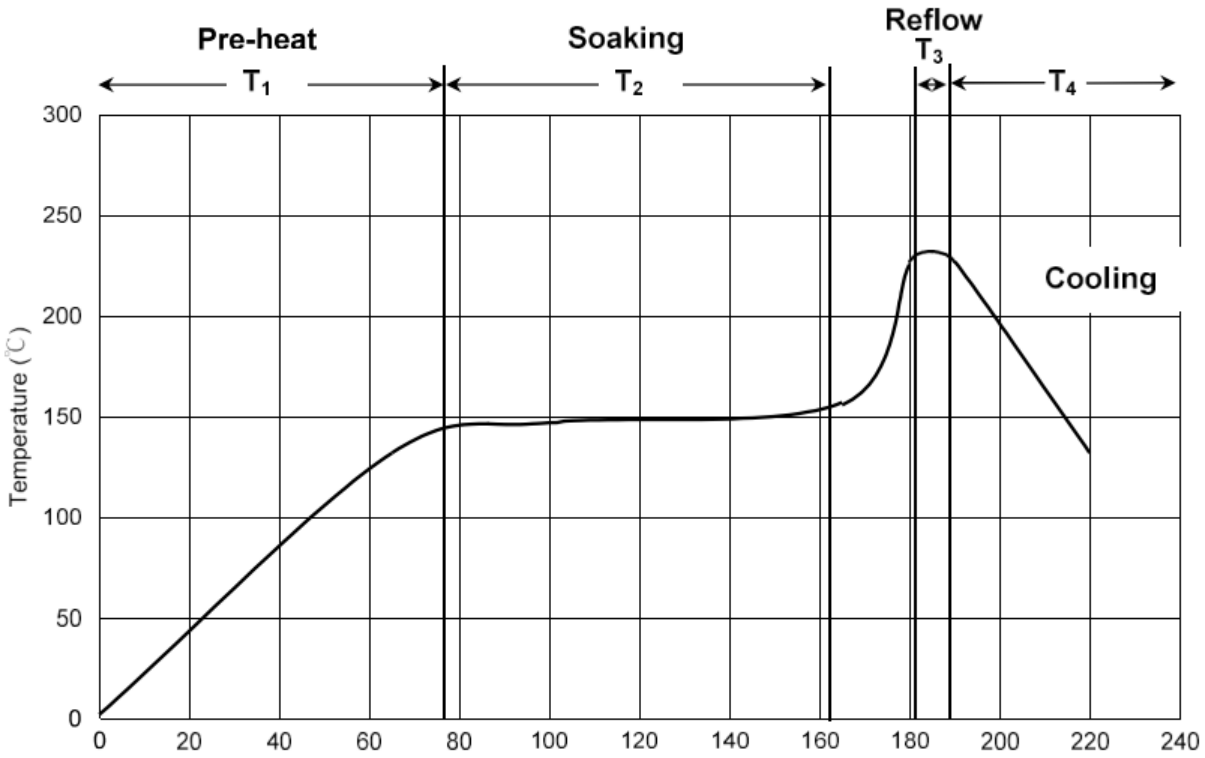
**Reel Part :**

Unit : mm



## Recommended Solder Profile

**Soldering** Recommended soldering conditions:




| | | |
|---|---|---|
| $T_1$ | Ramp up rate | 1.0 ~ 3.0 ℃/sec |
| | Pre-heat time | 50 ~80 sec |
| $T_2$ | Soaking temperature | 155 ~ 185 ℃ |
| | Dwell time during soaking | 60 ~ 120 sec |
| $T_3$ | Reflow temperature | 220 ~ 230 ℃ |
| | Reflow time | Max 10 sec |
| | Ramp up rate during reflow | 1.2 ~ 2.3 ℃/sec |
| $T_4$ | Cooling | 1.0 ~ 6.0 ℃/sec |

Note: Suggest using Sn96Ag3Cu0.5 lead free solder.

### Cleaning

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED if necessary.