

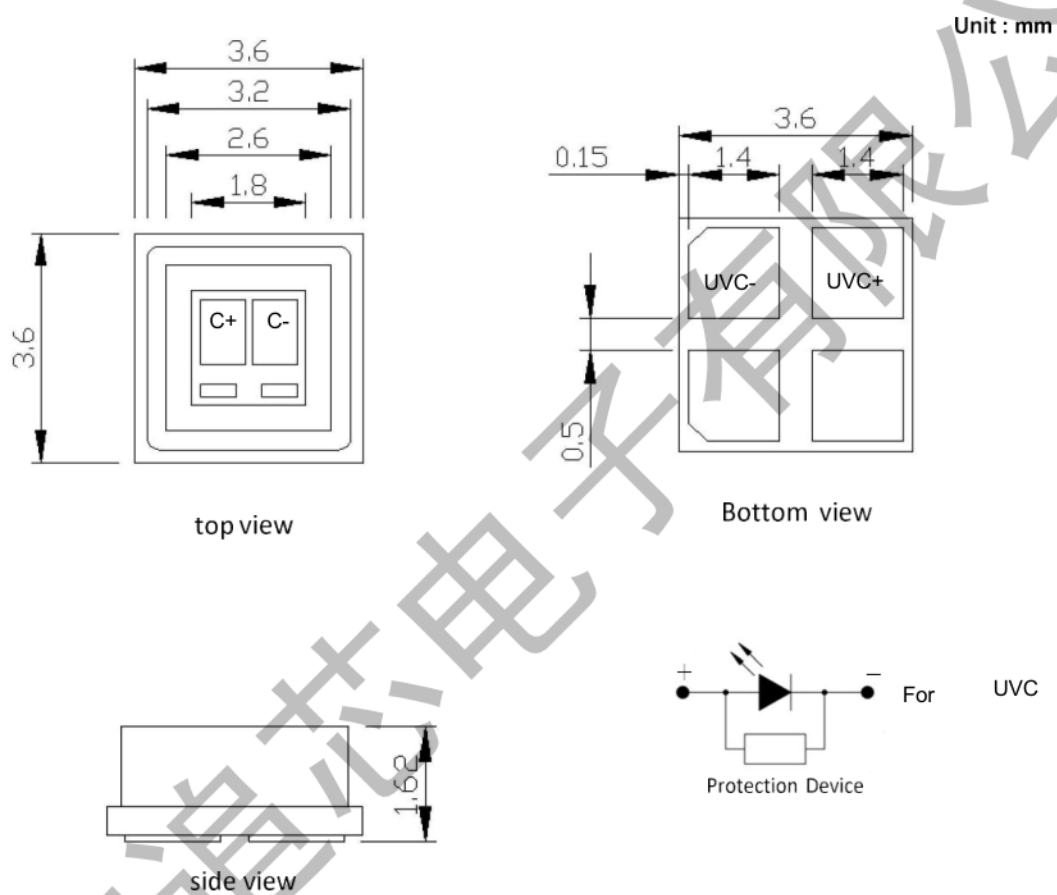
# Draft Specification For UV-C Series

3535UVC0.5W

<p><b>Features</b></p> <ul style="list-style-type: none"> <li>■ Deep Ultraviolet LED</li> <li>■ Dimension : 3.6mm×3.6mm x1.62mm</li> <li>■ All Metal Design Cu Substrate/ Al reflector</li> <li>■ View Angle :Flat</li> <li>■ Low thermal resistance</li> </ul>	<p><b>Applications</b></p> <ul style="list-style-type: none"> <li>■ Disinfection</li> <li>■ Chemical and Biological analysis</li> </ul>
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	<p><b>CAUTION</b></p>
	<ul style="list-style-type: none"> <li>• LEDs emit very strong UV radiation.</li> <li>• Don't look directly into the LED light.</li> <li>• UV radiation can harm your eyes.</li> <li>• To prevent even inadequate exposure, wear protective eyewear.</li> <li>• If LEDs are embedded in devices, please indicate warning labels against the UV light LED used.</li> <li>• Keep out of reach of children.</li> <li>• Specification and dimension are subject to change for improvement without notice.</li> </ul>

## Outline Dimension



### Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.

# UVC For Sterilization

## Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Value	Unit
Power Dissipation	P	0.5	W
Forward Current	I <sub>F</sub>	20	mA
Maximum Current	I <sub>F</sub>	60	mA
Thermal Resistance, Junction-Case	R <sub>th,J-C1</sub>	15	°C/W
Operating Temperature Range	T <sub>opr</sub>	- 40°C to + 60°C	
Storage Temperature Range	T <sub>stg</sub>	- 40°C to + 100°C	
Soldering Condition	T <sub>sol</sub>	230°C For 5 Seconds	

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

## Initial Electrical/Optical Characteristics

(Ta=25°C IF=60mA)

Parameter	Symbol	Min	Typ	Max	Unit
Peak wavelength	$\lambda_p$	265	275	285	nm
Radiant Flux	$\Phi_e$	6	10	—	mW
Radiant Irradiance	E <sub>e</sub>	—	2.5	—	mW/cm <sup>2</sup>
Forward Voltage	V <sub>F</sub>	—	6	10	V
Spectra half-width	$\Delta\lambda$	—	15	—	nm
LED Junction Temperature	T <sub>J</sub>	—	60	80	°C

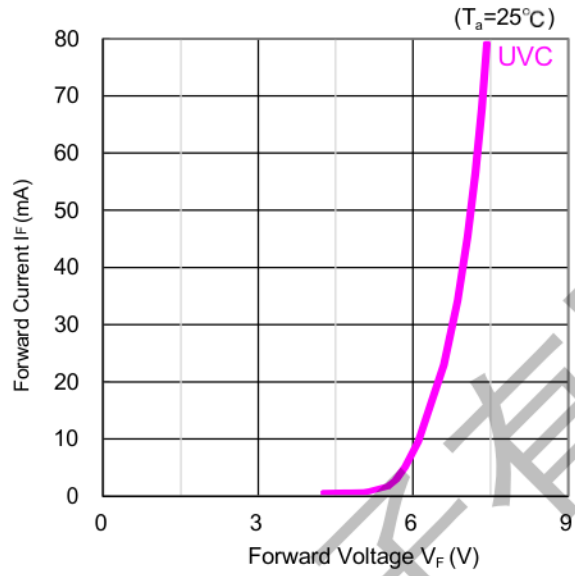
### Note

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

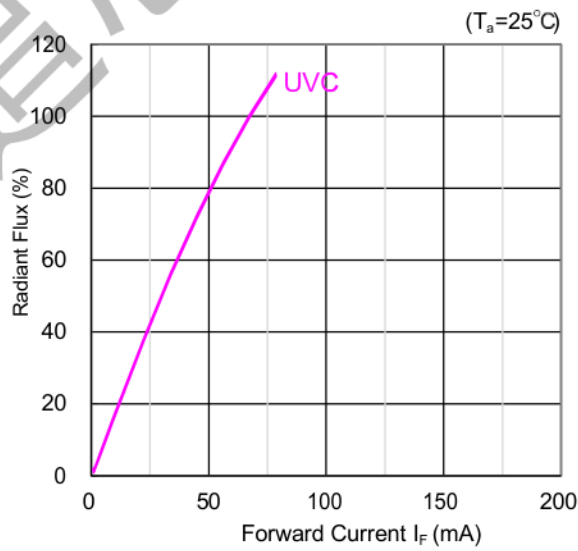
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## Characteristic Diagram

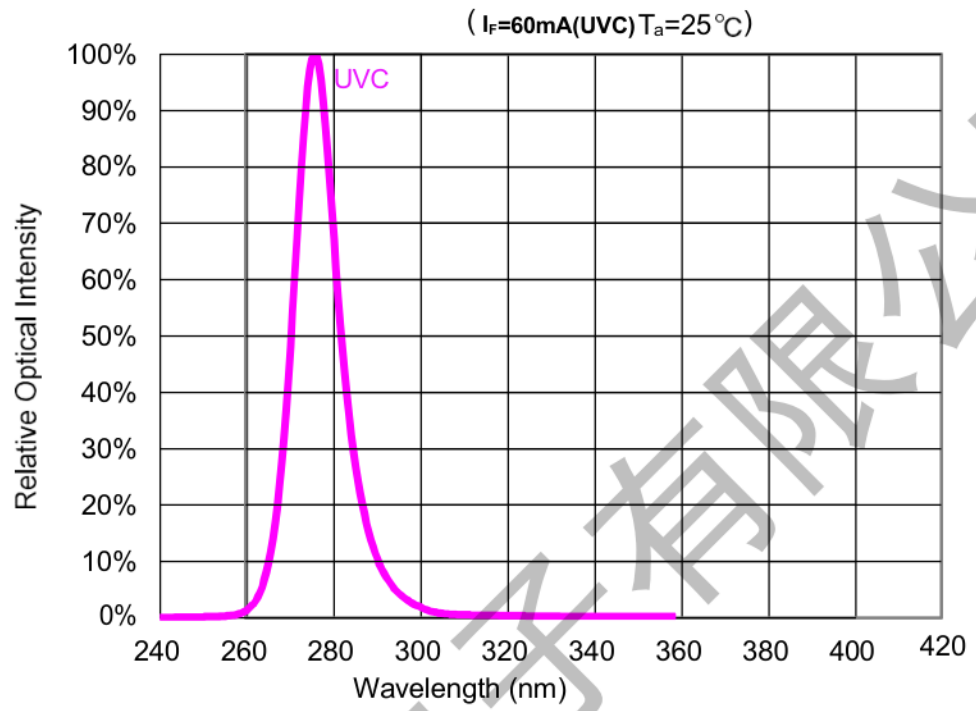
- Forward Current vs. Forward Voltage



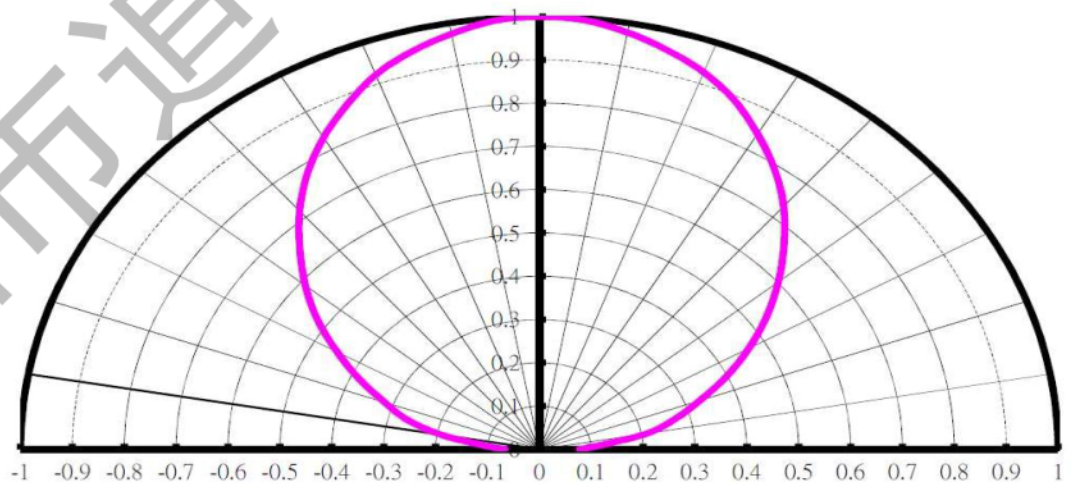
- Relative Intensity vs. Forward Current



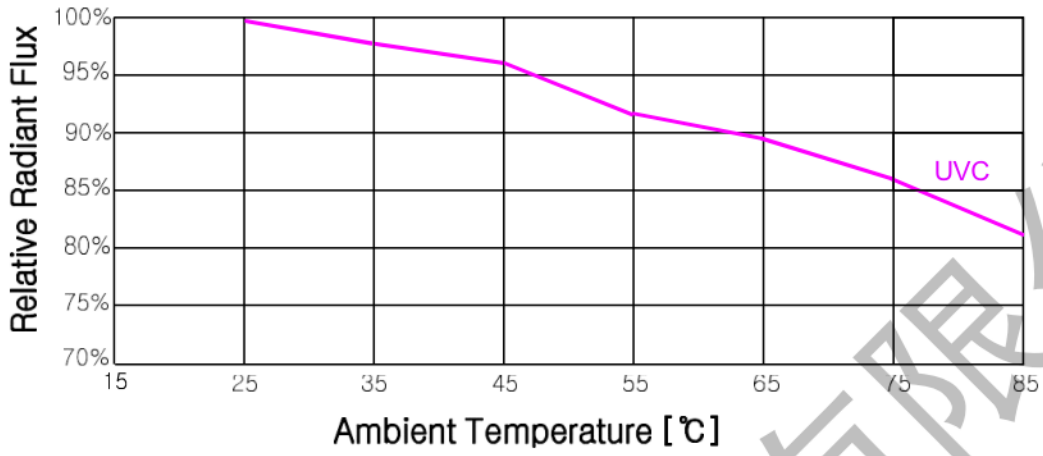
- Spectral Power Distribution



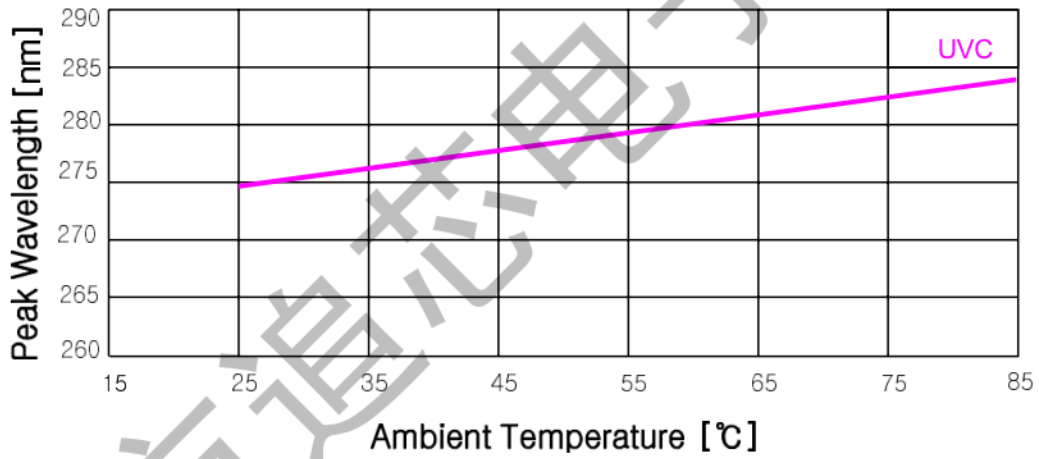
- Typical Radiation Pattern



● Ambient Temperature vs. Relative Radiant Flux,  $I_F=60\text{mA(UVC)}$



● Ambient Temperature vs. Peak Wavelength,  $I_F=60\text{mA(UVC)}$



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## 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**

**$\Phi$  (mW) : Radiant flux**

**$\lambda_p$ (nm): Peak Wavelength**

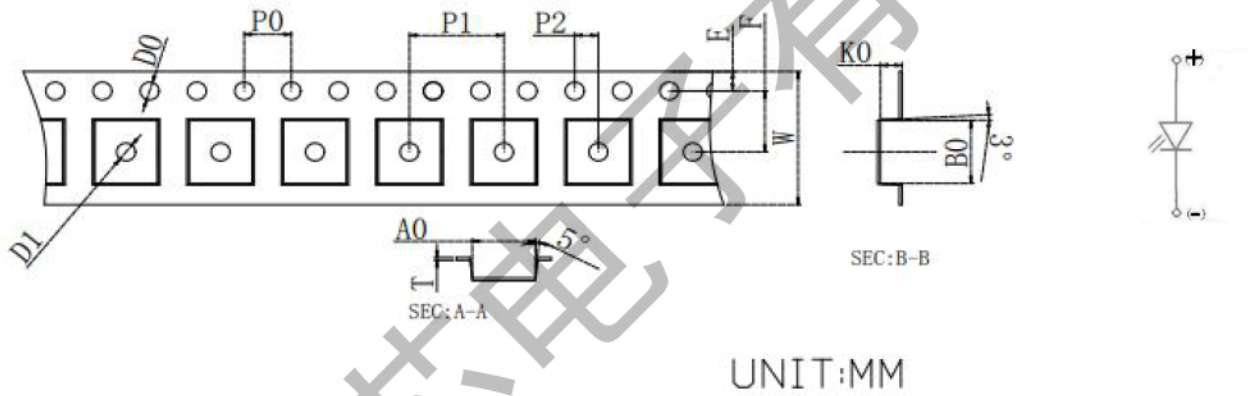
## Shipping Package Style

### Lens Type

#### Tapping Dimension Packaging Specification

##### FLAT Degree Lens Type :

- Moisture proof bag.
- 1 Reel/bag.
- Q'ty: 2500(MAX)/Reel.



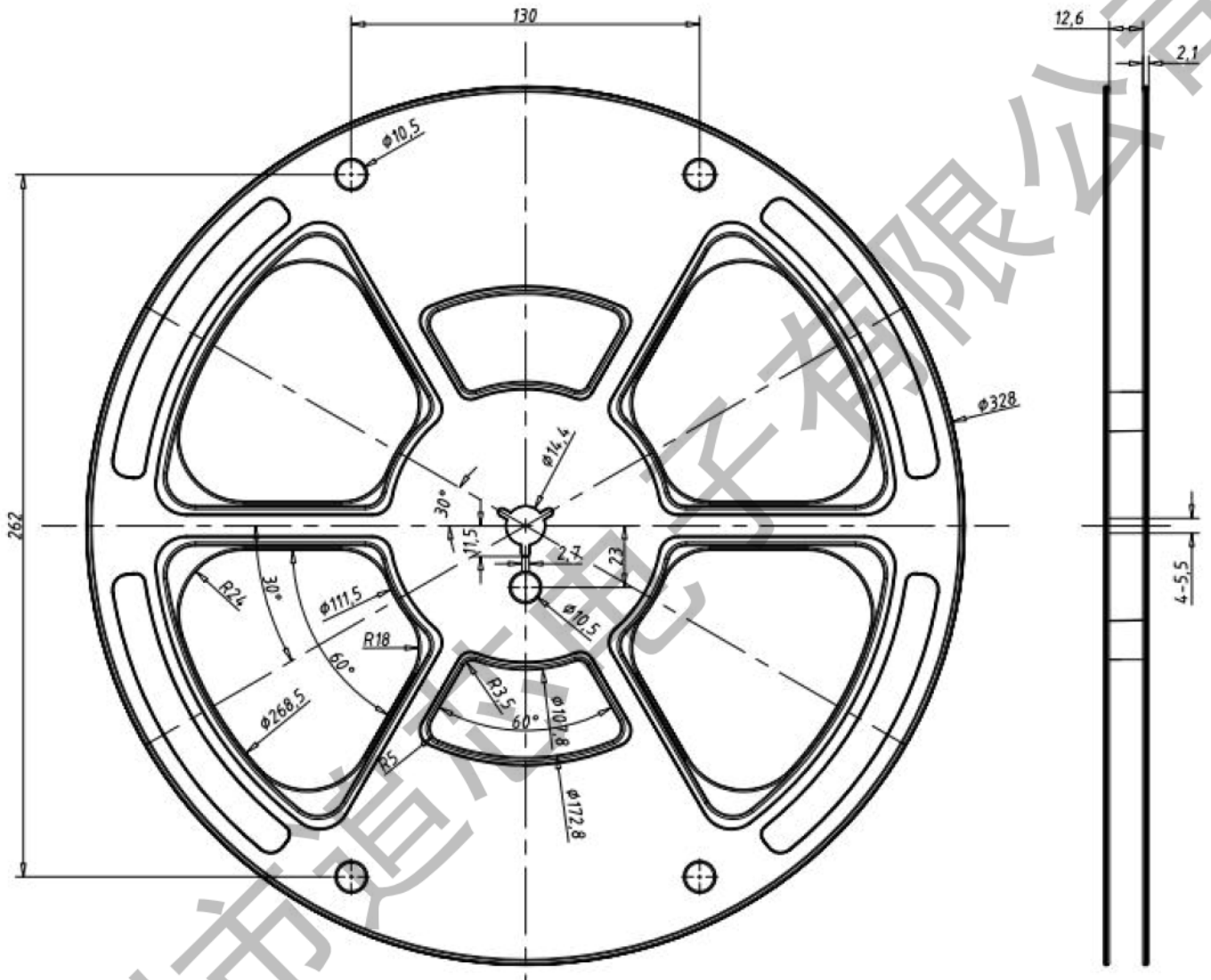
W	12.00±0.10	T	0.20±0.02	D1	1.60±0.10	单位	MM
E	1.75±0.10	F	5.50±0.10	D0	1.60±0.10	材质	PC
P0	4.00±0.10	P1	8.00±0.10	P2	2.00±0.10	品名	3535-2.2
A0	3.75±0.10	B0	3.70±0.10	KO	2.20±0.10		



# Reel Packaging :

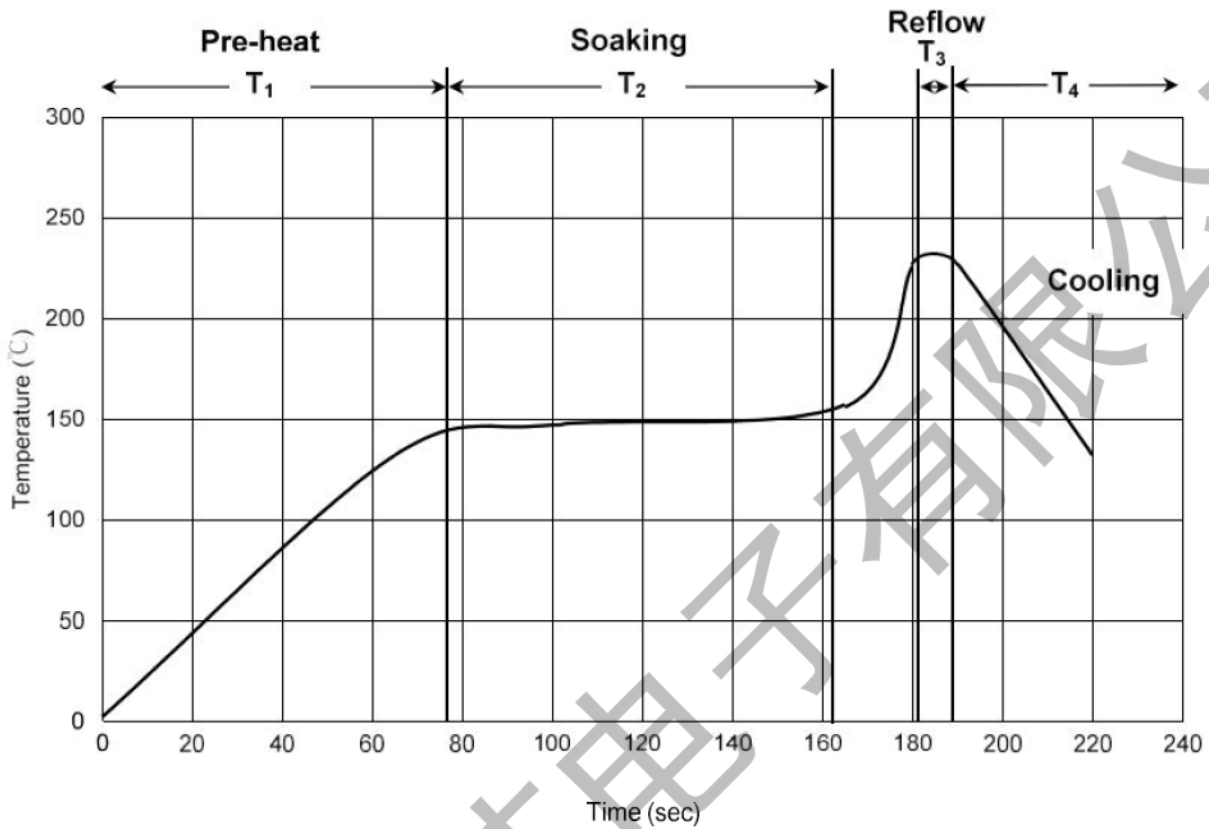
Reel Part :

Unit : mm



## Recommended Solder Profile

Soldering Recommended soldering conditions:



T <sub>1</sub>	Ramp up rate	1.0 ~ 3.0 °C/sec
	Pre-heat time	50 ~ 80 sec
T <sub>2</sub>	Soaking temperature	155 ~ 185 °C
	Dwell time during soaking	60 ~ 120 sec
T <sub>3</sub>	Reflow temperature	220 ~ 230 °C
	Reflow time	Max 10 sec
	Ramp up rate during reflow	1.2 ~ 2.3 °C/sec
T <sub>4</sub>	Cooling	1.0 ~ 6.0 °C/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.