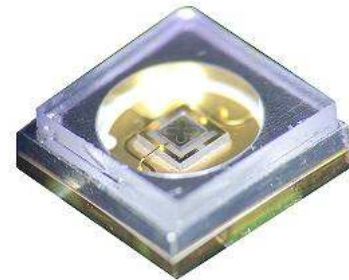


Specification For UV-C Series

YL-4444F-280nM(A)



Features	Applications
<ul style="list-style-type: none">■ Deep Ultraviolet LED■ Dimension : 4.4mm(L)×4.4mm(W)■ All Metal Design Cu Substrate/Al reflector■ View Angle 120°■ Low thermal resistance	<ul style="list-style-type: none">■ Disinfection■ Chemical and Biological analysis

General Information

Lens

120° Beam Angle

Wavelength-

Deep UV
275~285nm

Current-

20mA

Absolute Maximum Ratings

(T_j=25°C)

Parameter	Symbol	Value	Unit
Power Dissipation	P	0.2	W
Forward Current	I _F	20	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}	260°C For 5 Seconds	

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

Initial Electrical/Optical Characteristics

(T_j=25°C)

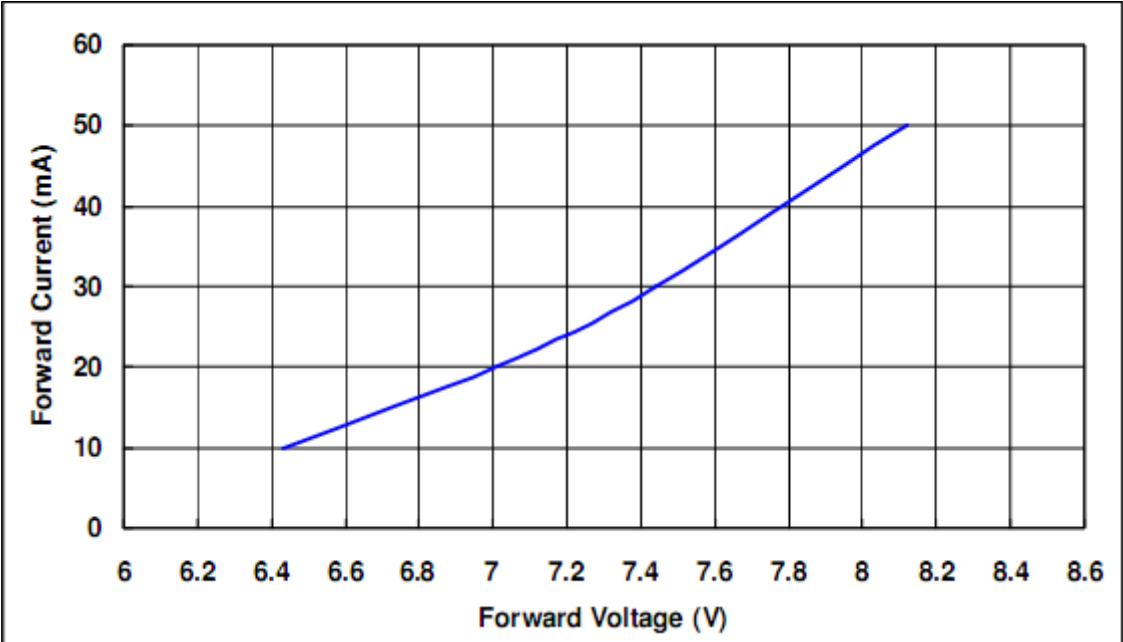
Parameter	Symbol	Min	Typ	Max	Unit
Peak wavelength	λ _p	275	—	285	nm
Radiant Flux	Φ _e	1	1.5	—	mW
Radiant Irradiance	E _e	—	3.5	—	mW/cm ²
Forward Voltage	V _F	—	7	10	V
Spectra half-width	Δλ	—	15	—	nm

Note

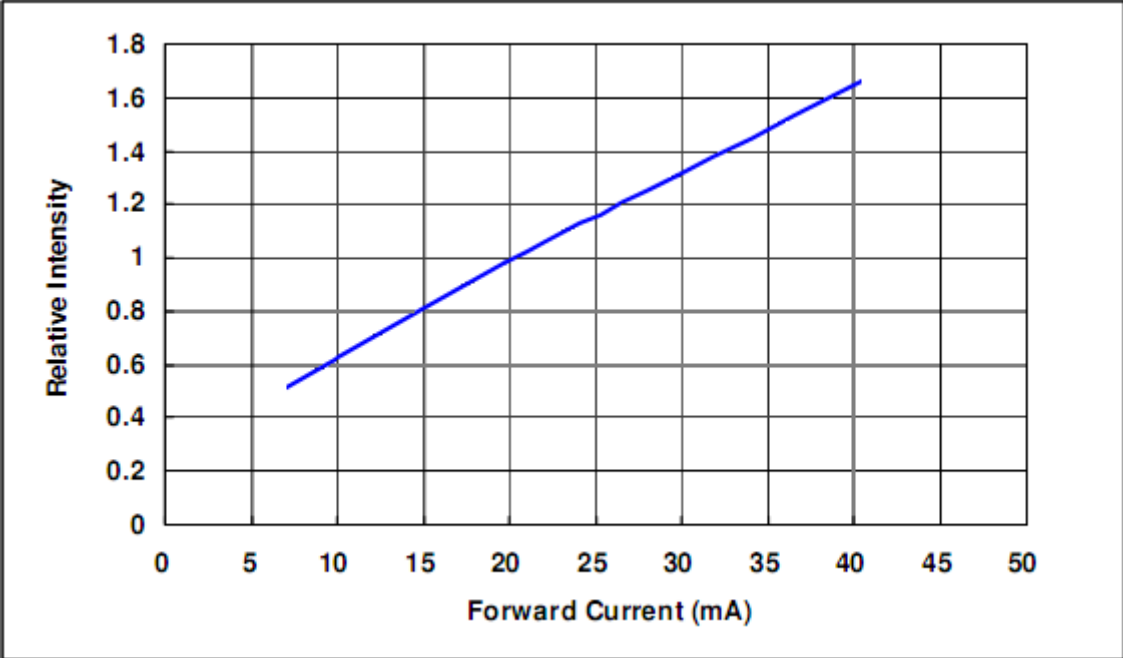
1. Forward voltage measurement allowance is ± 0.2V.
2. Radiant flux measurement allowance is ± 10%.
3. Irradiance tested at a distance 10mm from Al reflector.
4. Wavelength measurement allowance is ± 3nm.

Characteristic Diagram

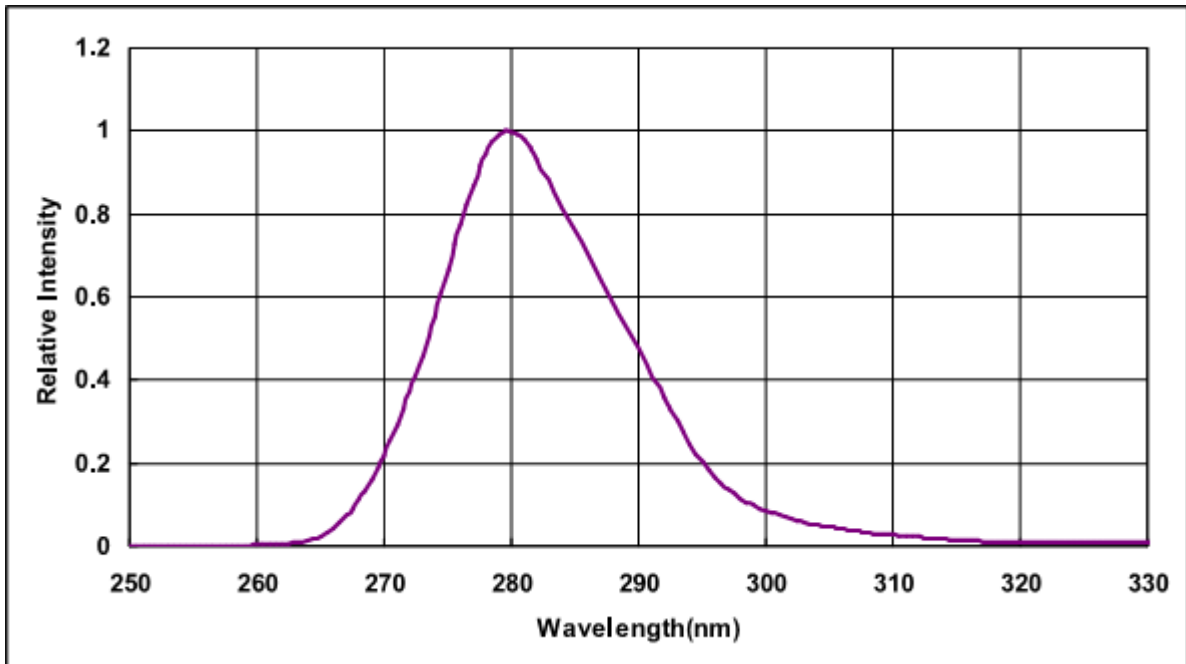
- Forward Current vs. Forward Voltage



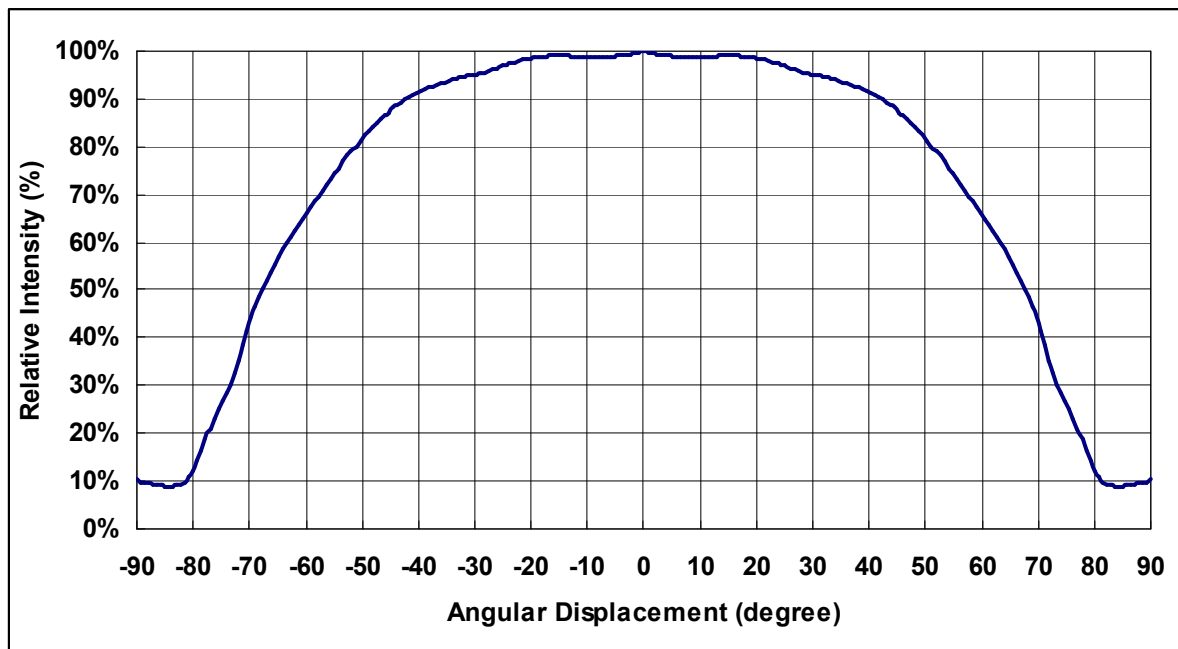
- Relative Intensity vs. Forward Current



- Spectral Power Distribution



- Typical Radiation Pattern



Outline Dimension

Unit : mm

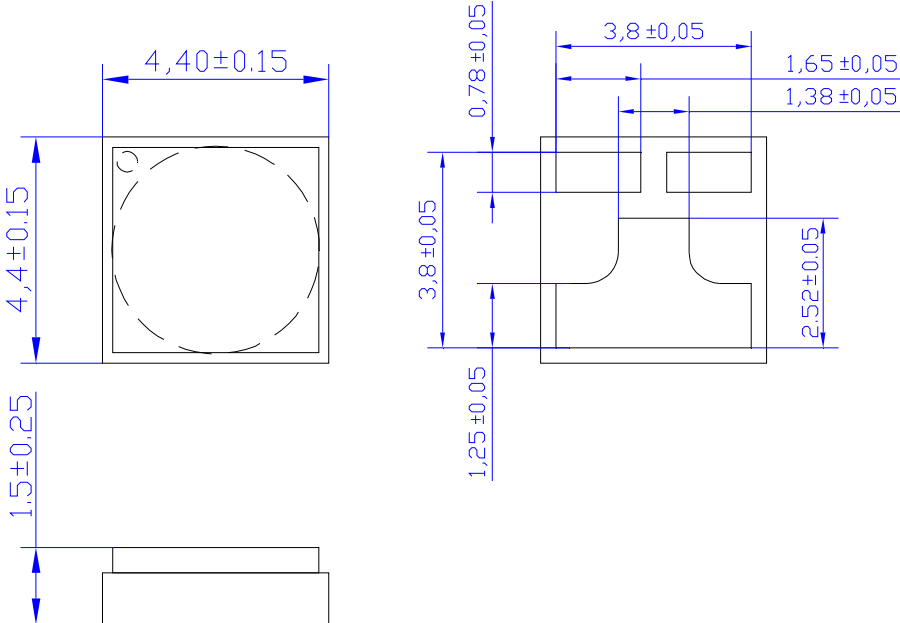
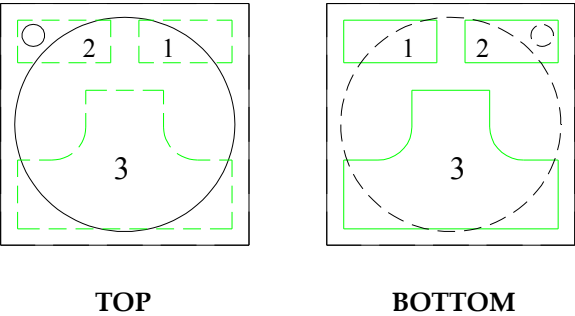


Fig. Package Outline Drawing.

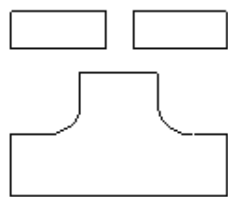
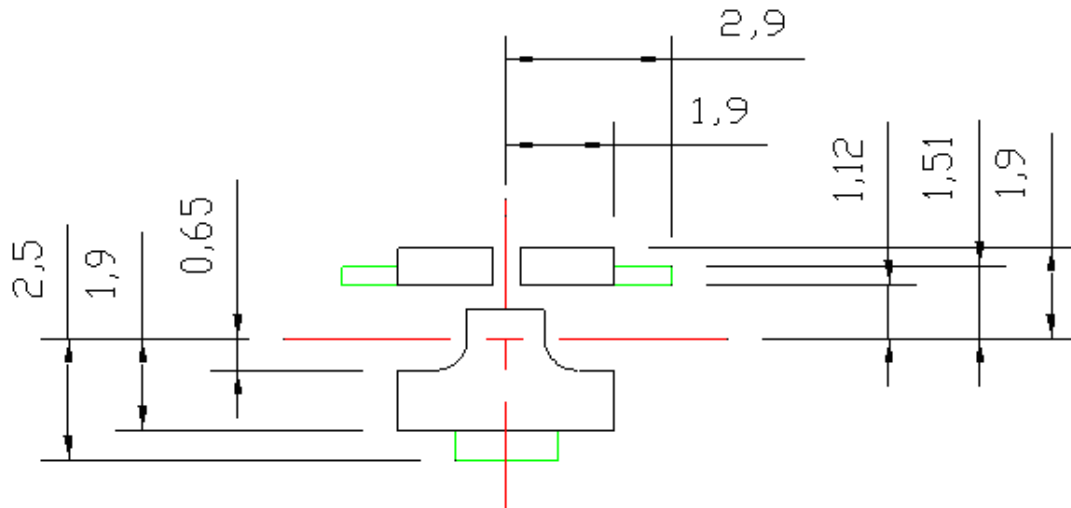
Pad Configuration



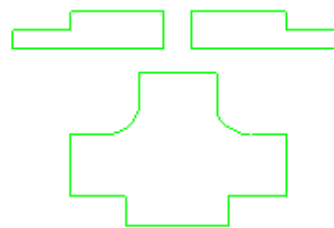
PAD	Function
1	Cathode
2	Anode
3	Thermal

Fig. Pad configuration.

Recommended Solder Pattern



**SOLDER
MASK**



**COPPER
LAYER**

Fig. Solder Pad Layout.

Shipping Package Style

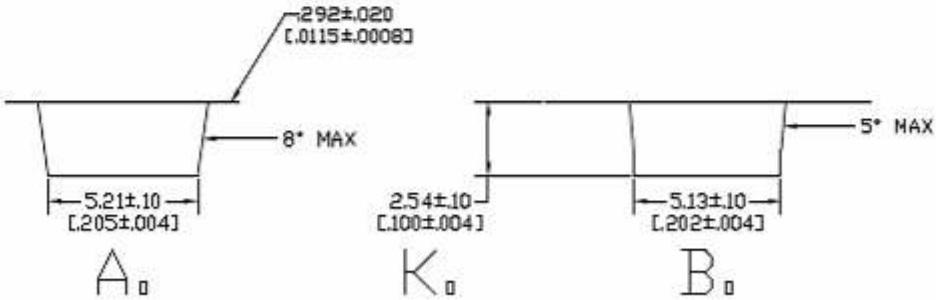
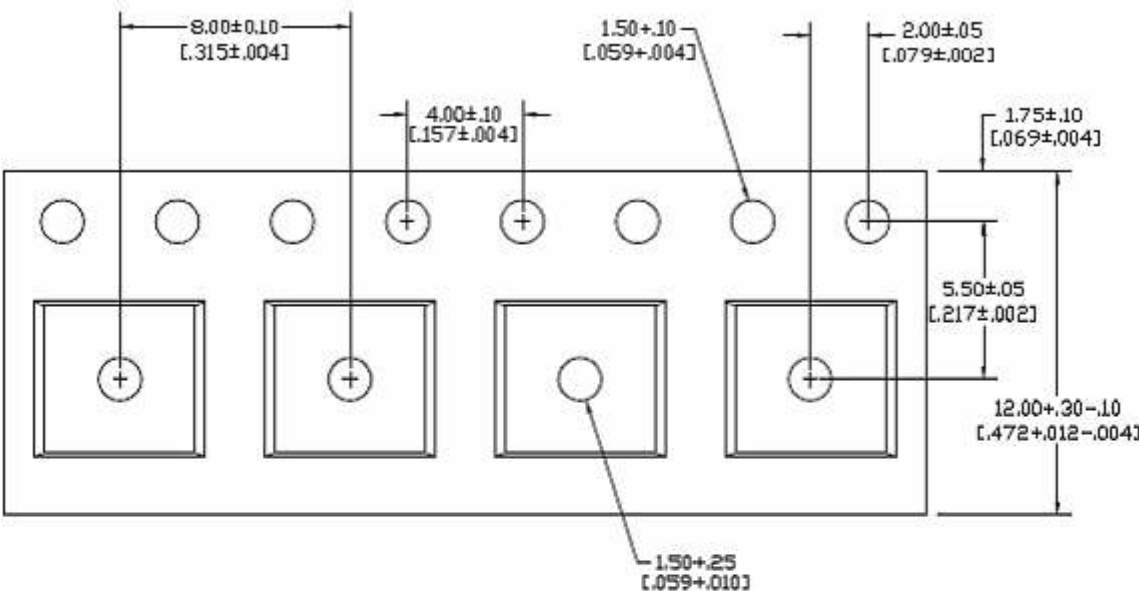
Lens Type

Tapping Dimension Packaging Specification

120 Degree Lens Type :

- Moisture proof bag.
- 1 Reel/bag.
- Q'ty: 800(MAX)/Reel.

Unit : mm



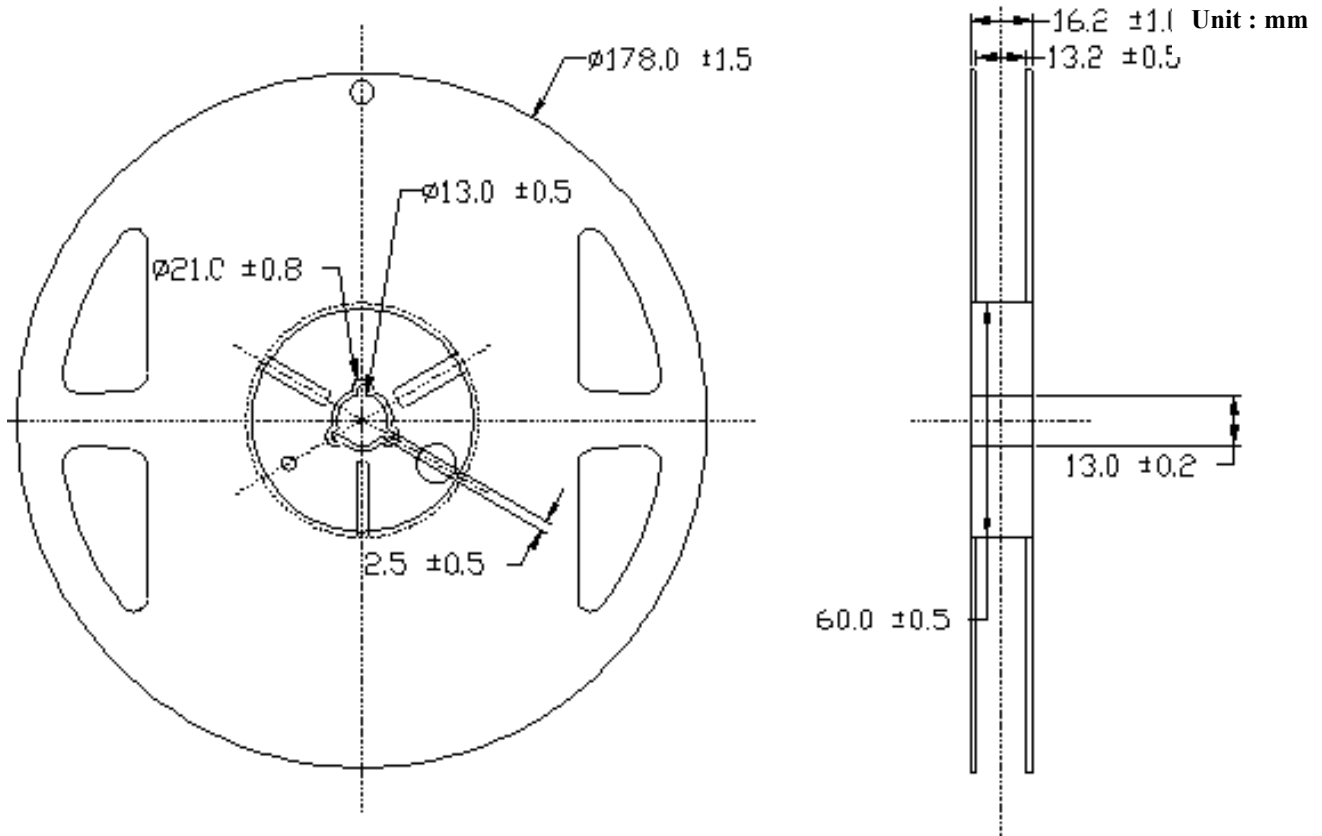
MM
[INCH]

Package

Box Type	Dimension (mm)	Reel/Box	120°Lens Type(Pcs)
Small Box(S)	230x85x265	5 Reel/Box	4000
Middle Box(M)	470x265x270	30 Reel/Box	24000
Large Box(L)	470x435x270	50 Reel/Box	40000

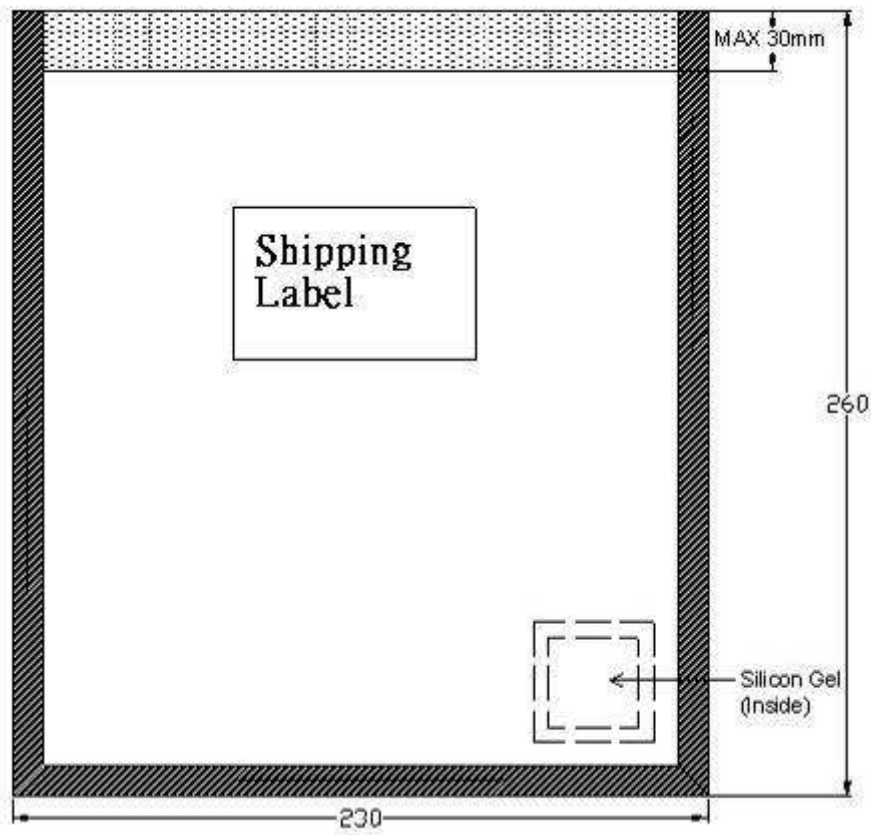
Reel Packaging :

Reel Part :



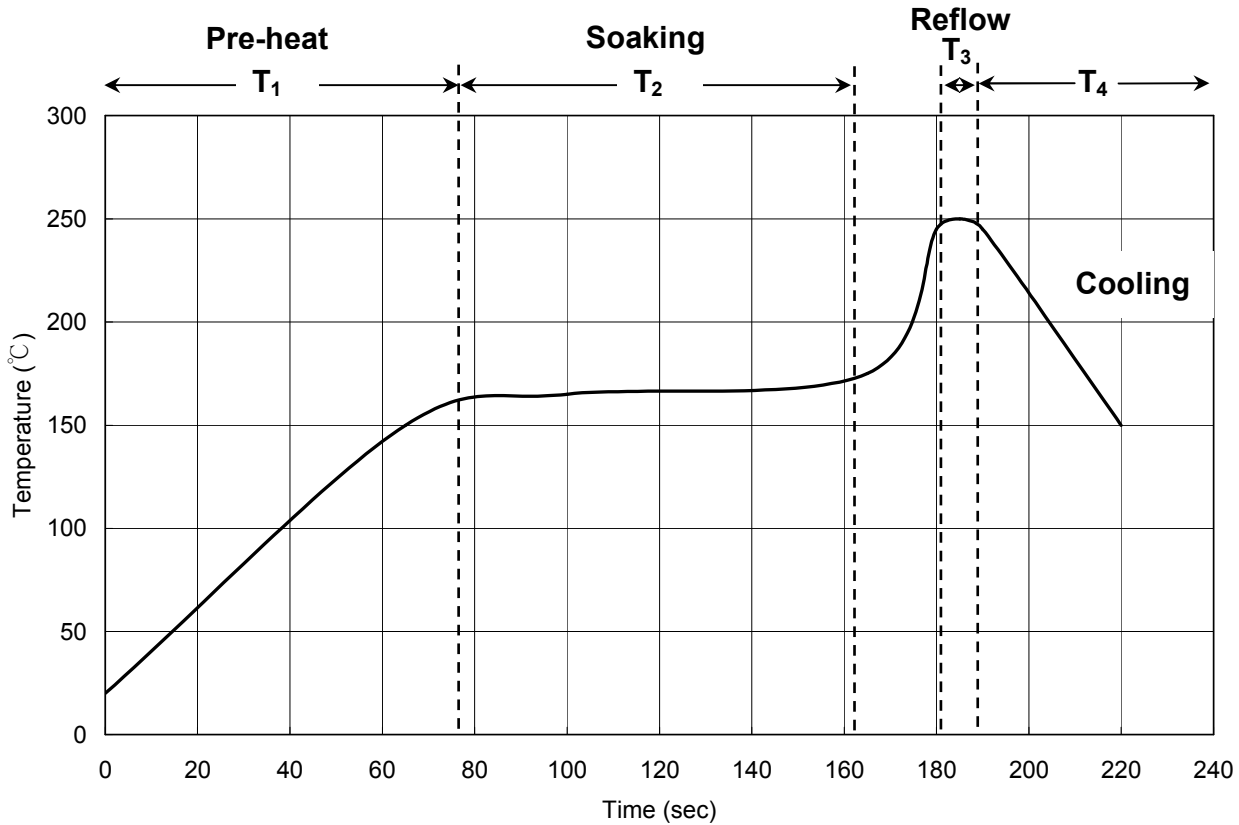
Anti Static Bag :

Unit : mm



Recommended Solder Profile

Soldering Recommended soldering conditions:



T ₁	Ramp up rate	1.0 ~ 3.0 °C/sec
	Pre-heat time	50 ~ 80 sec
T ₂	Soaking temperature	155 ~ 185 °C
	Dwell time during soaking	60 ~ 120 sec
T ₃	Reflow temperature	240 ~ 250 °C
	Reflow time	Max 10 sec
	Ramp up rate during reflow	1.2 ~ 2.3 °C/sec
T ₄	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.