

# Draft Specification For UV-C Series

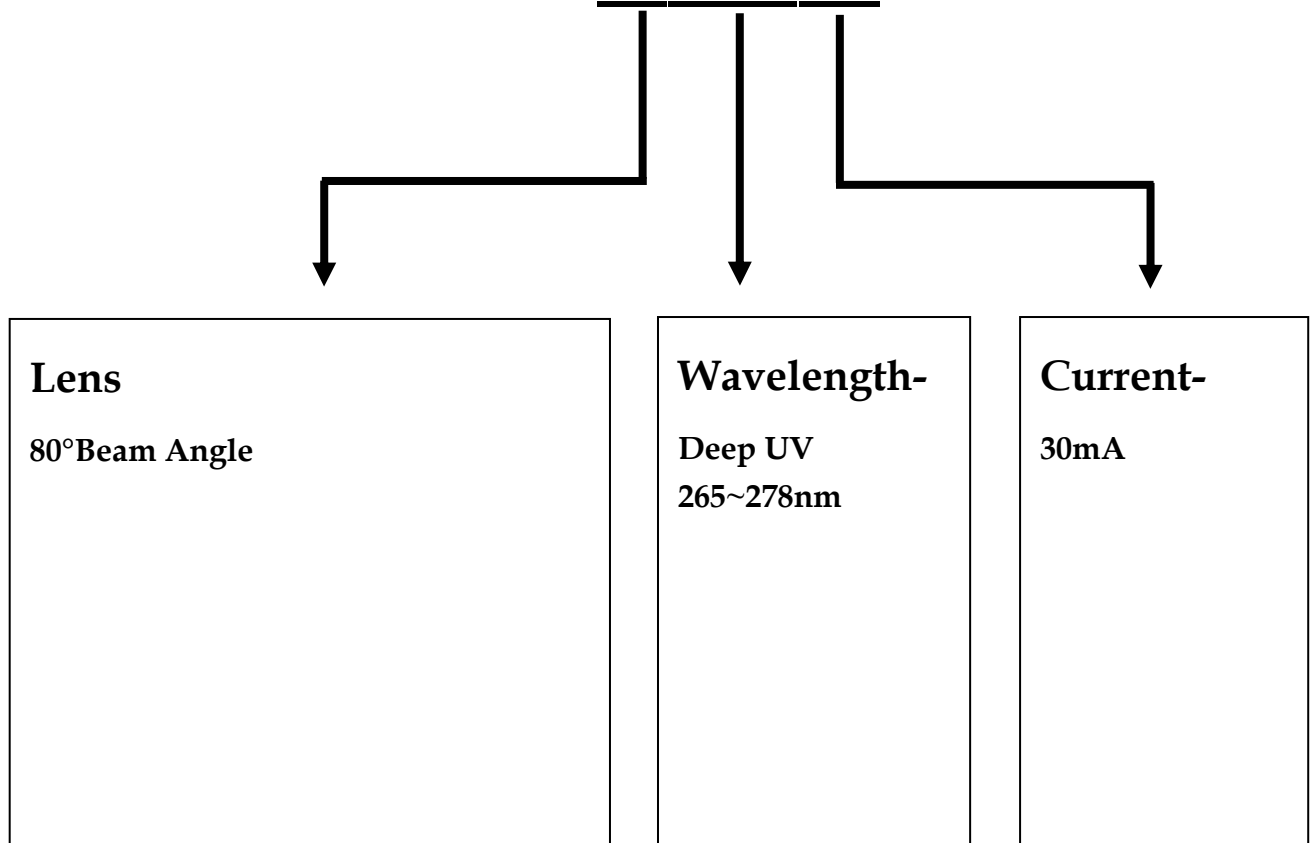
## BRT-B35CD7D1CSC

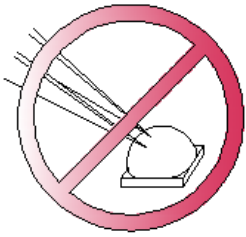
<p><b>Features</b></p> <ul style="list-style-type: none"> <li>■ Deep Ultraviolet LED</li> <li>■ Dimension : 3.45mm(L)×3.45mm(W)</li> <li>■ All Metal Design Cu Substrate</li> <li>■ View Angle 80°</li> <li>■ Low thermal resistance</li> </ul>	<p><b>Applications</b></p> <ul style="list-style-type: none"> <li>■ Disinfection</li> <li>■ Chemical and Biological analysis</li> </ul>
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General Information

# BRT - B35CD7D1CSC





Do not poke the Led Lens  
with sharp object



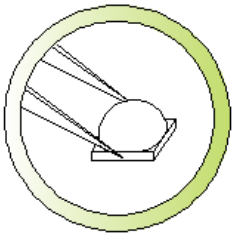
Do not stack  
assembled PCB



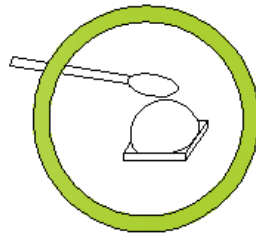
Do not hold the Led  
with hand



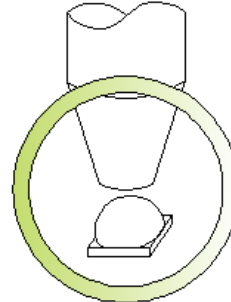
Do not press or push  
the Led Lens



Hold the Led only by  
the substrate



Clean the LED surface  
with cotton bud



Use pick and place nozzle per  
recommendation in data sheet

## Part Number Matrix

Type Wavelength	80°Lens	80°Lens & Star
DUV 265~278nm	BRT-B35CD7D1CSC	BRT-B35UD7D1CSC

## Absolute Maximum Ratings

(T<sub>j</sub>=25°C)

Parameter	Symbol	Value	Unit
Power Dissipation	P	0.27	W
Forward Current	I <sub>F</sub>	30	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>	260°C For 5 Seconds	

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

## Initial Electrical/Optical Characteristics

(T<sub>j</sub>=25°C)

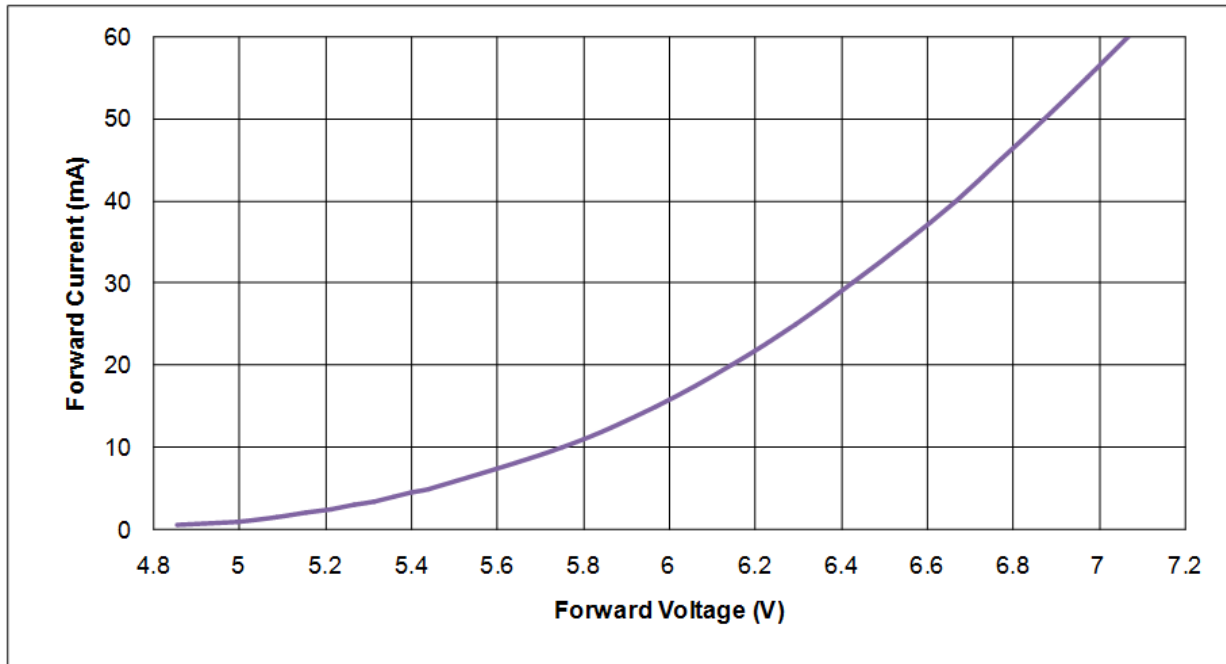
Parameter	Symbol	Min	Typ	Max	Test Condition	Unit
Peak wavelength	λ <sub>p</sub>	265	-	278	I <sub>F</sub> = 30mA	nm
Radiant Flux	Φ <sub>e</sub>	2.5	4.5	-		mW
Radiant Irradiance	E <sub>e</sub>	-	2.3	-		mW/cm <sup>2</sup>
Forward Voltage	V <sub>F</sub>	-	6.5	9		V
Spectra half-width	Δλ	-	15	-		nm

Note

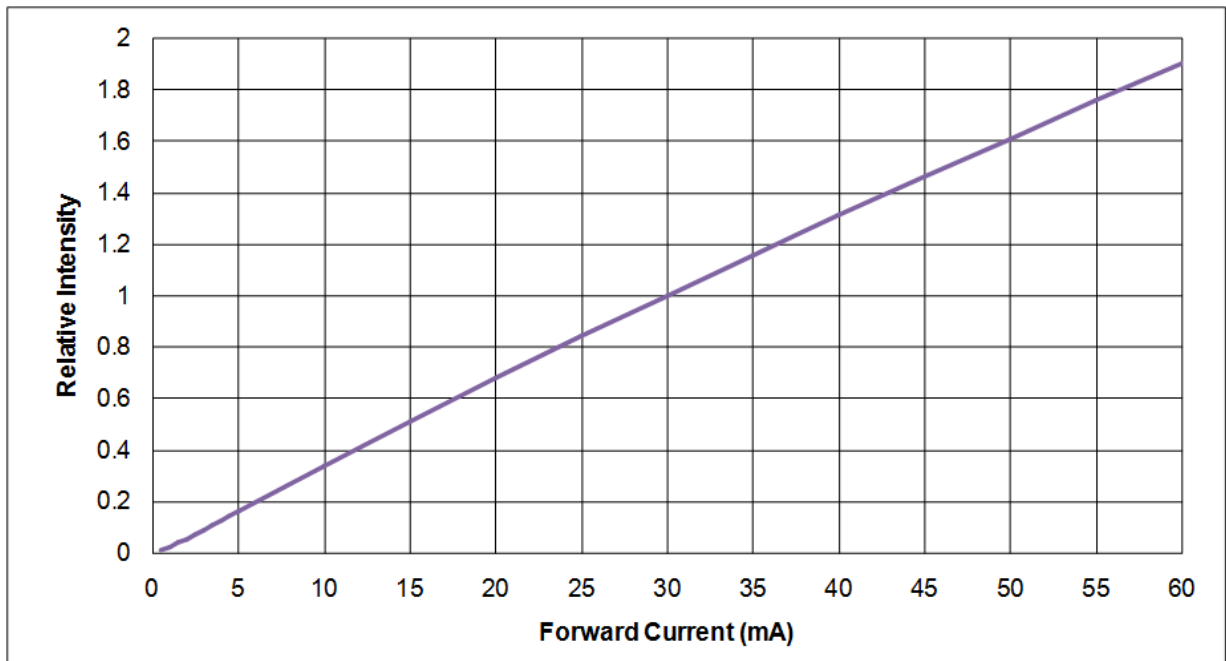
1. Forward voltage measurement allowance is ± 0.2V.
2. Radiant flux measurement allowance is ± 10%.
3. Irradiance tested at a distance 10mm from lens top.
4. Wavelength measurement allowance is ± 3nm.

## Characteristic Diagram

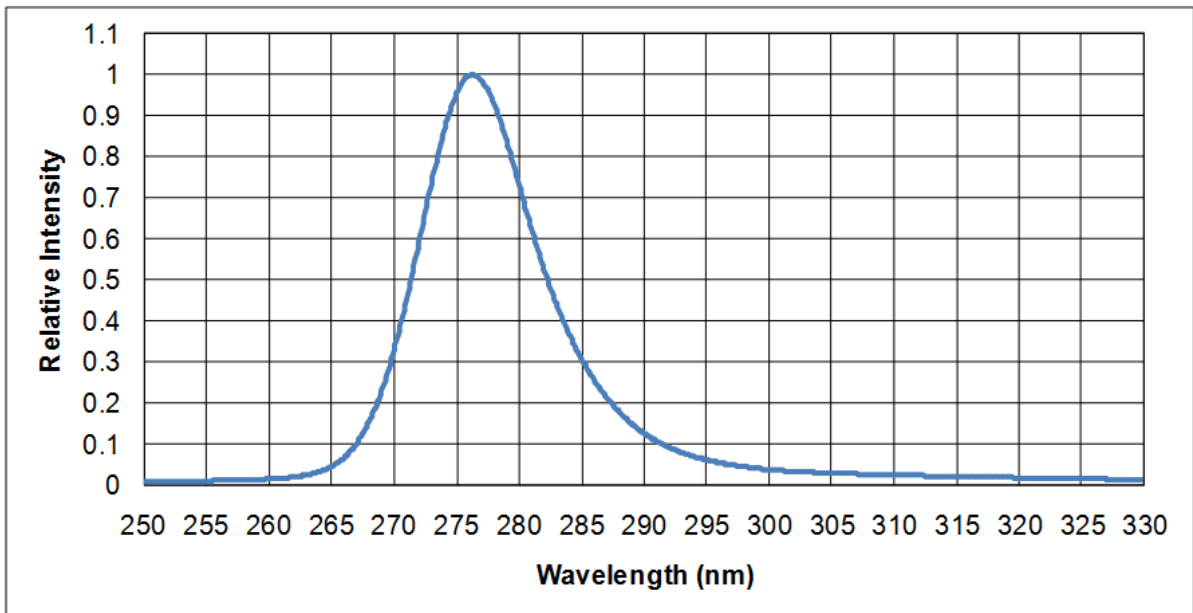
- **Forward Current vs. Forward Voltage**



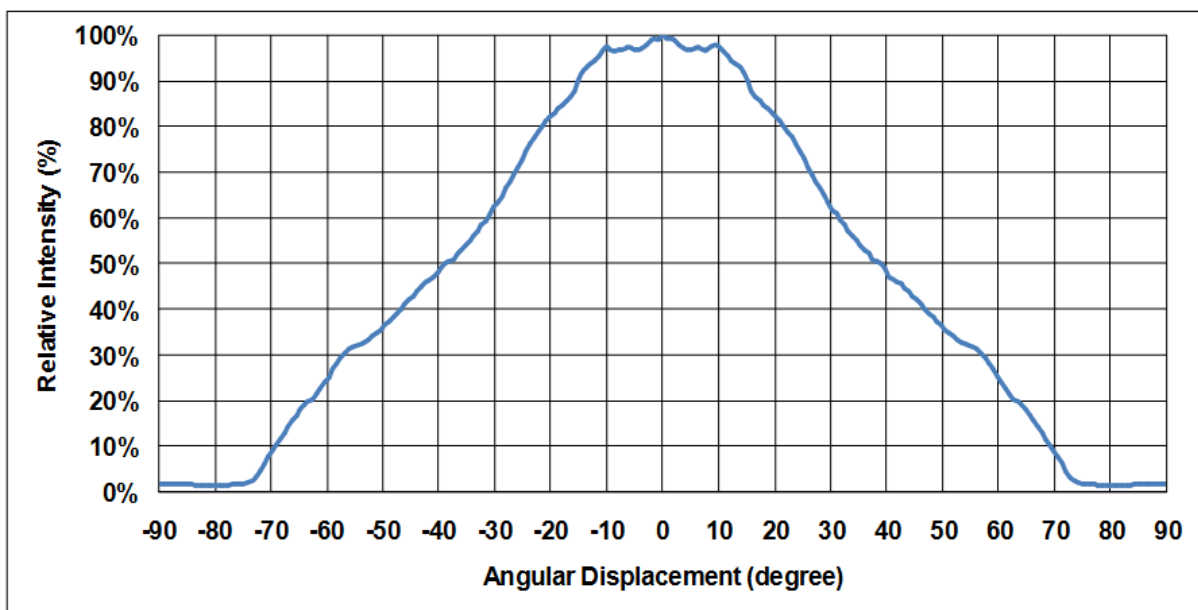
- **Relative Intensity vs. Forward Current**



- **Spectral Power Distribution**



- **Typical Radiation Pattern**



## • Bin Code List for Reference

(T<sub>j</sub>=25°C)

Item	Bin code	Symbol	Condition	Min.	Max.	Unit
<b>Forward Voltage<sup>1</sup></b>	E0	$V_F$	$I_F = 30 \text{ [mA]}$	<b>5</b>	<b>5.5</b>	<b>V</b>
	E5			<b>5.5</b>	<b>6</b>	
	F0			<b>6</b>	<b>6.5</b>	
	F5			<b>6.5</b>	<b>7</b>	
	G0			<b>7</b>	<b>7.5</b>	
	G5			<b>7.5</b>	<b>8</b>	
	H0			<b>8</b>	<b>8.5</b>	
	H5			<b>8.5</b>	<b>9</b>	
<b>Radiant Flux<sup>2</sup></b>	A25	$\Phi_e$	$I_F = 30 \text{ [mA]}$	<b>2.5</b>	<b>3.5</b>	<b>mW</b>
	A35			<b>3.5</b>	<b>6</b>	

Bin Rank :  $V_F$ - $\Phi_e$

Note

1. Forward voltage measurement allowance is  $\pm 0.2V$ .
2. Radiant flux measurement allowance is  $\pm 10\%$ .

## ● Outline Dimension

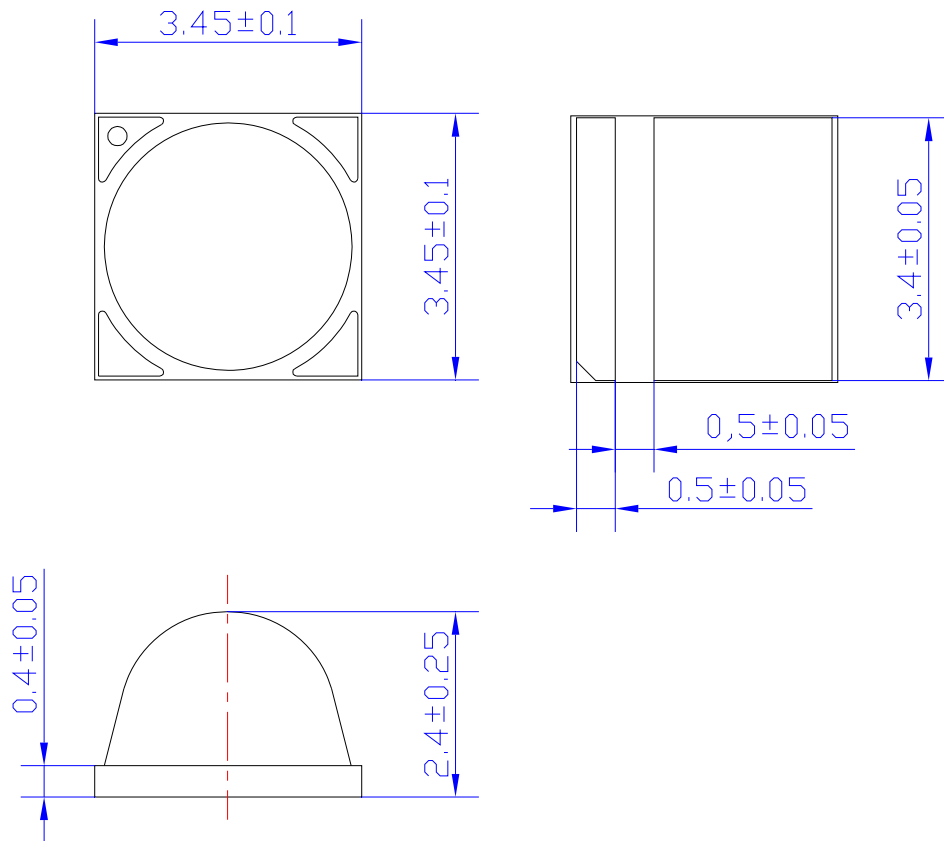
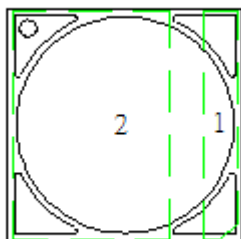
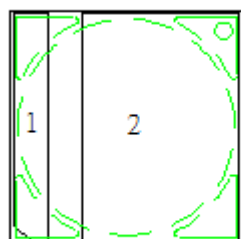


Fig. Package Outline Drawing.

## ● Pad Configuration



TOP



BOTTOM

PAD	Function
1	Cathode
2	Anode 、 Thermal

Fig. Pad configuration.

**Note:** Please don't put conductive material on the top surface of LEDs.



## Recommended Solder Pattern

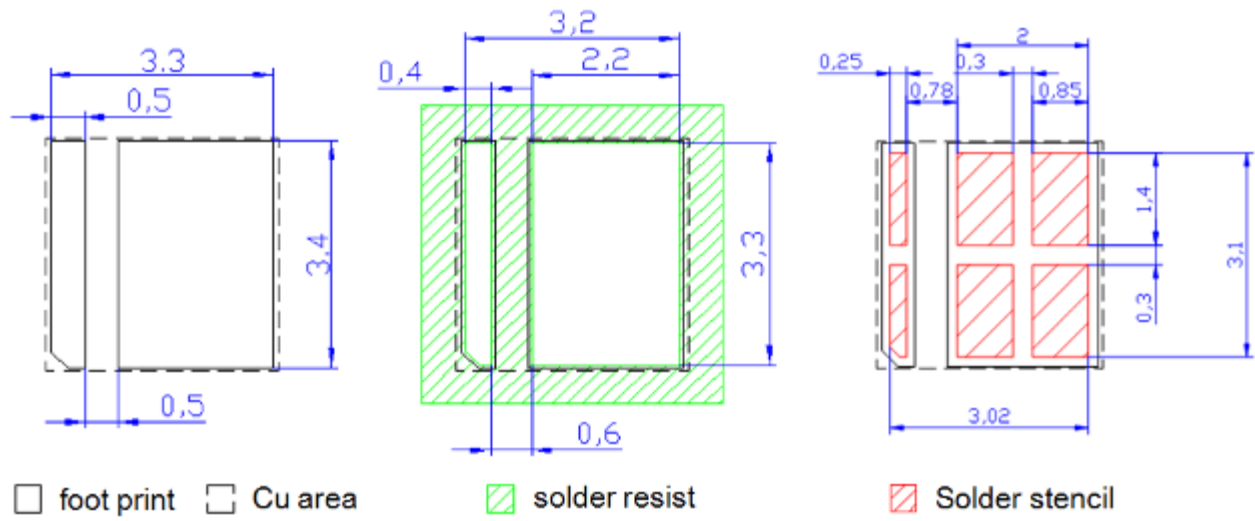


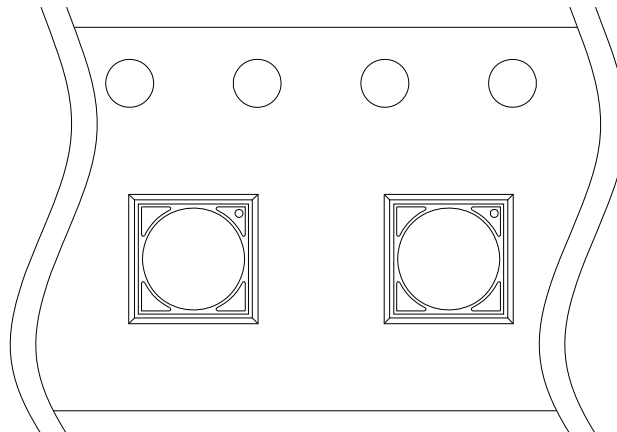
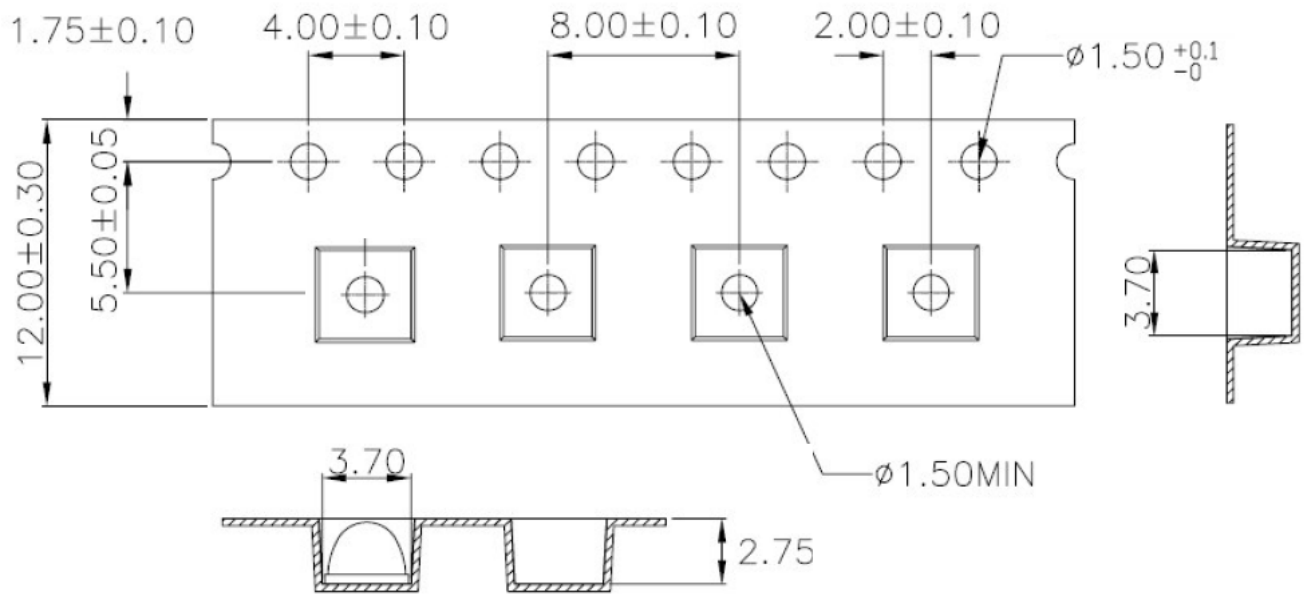
Fig. Solder Pad Layout.

## Shipping Package Style

### Tapping Dimension Packaging Specification

- Moisture proof bag.
- 1 Reel/bag.
- Q'ty: 700(MAX)/Reel

Unit : mm



## Label Formation

P/N: XXXXXXXXXXXXX	BIN Rank : XXXXXXXXX
LOT: XXXXXXXXXXXXX	Q'ty : XXXX PCS XXX

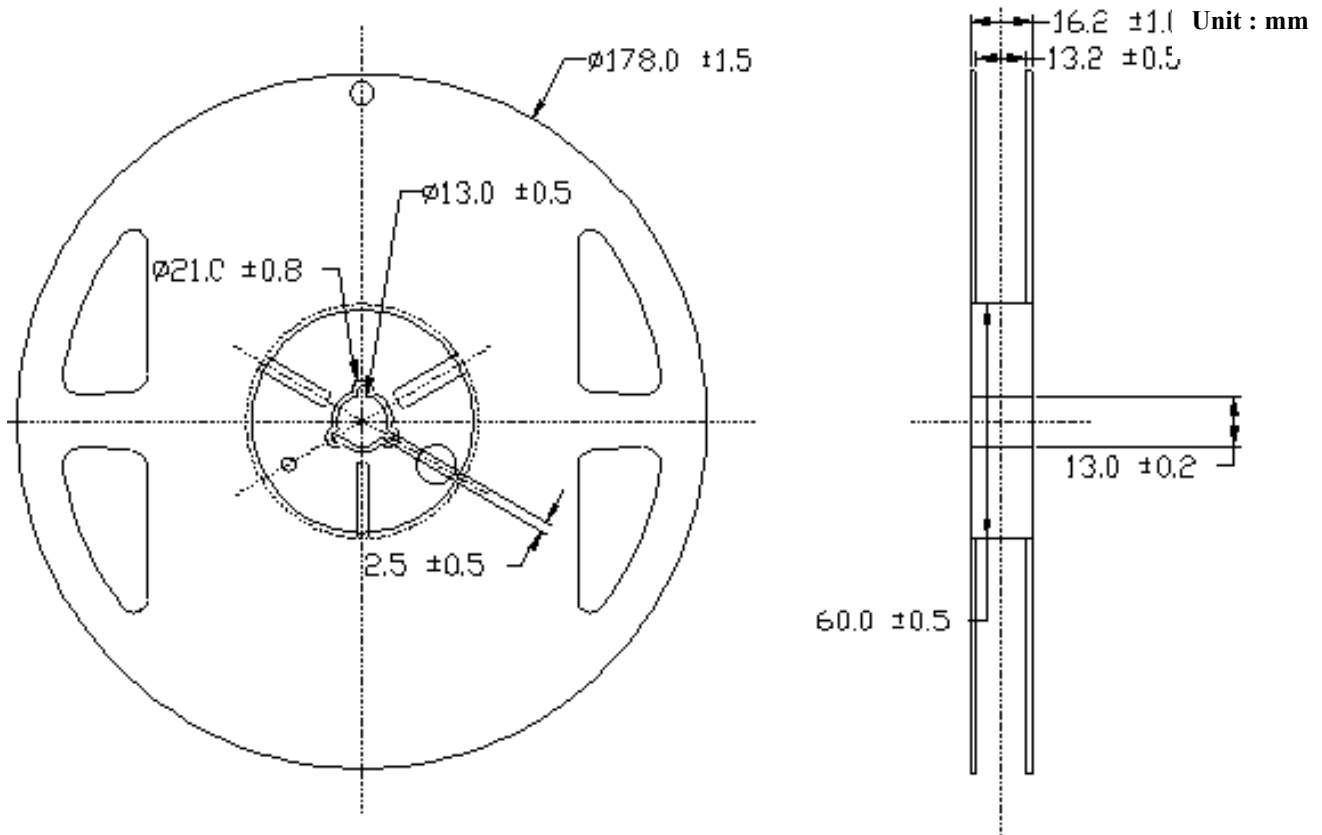
75mm\*8mm

## Package

Box Type	Dimension (mm)	Reel/Box	80°Lens Type(Pcs)
Small Box(S)	230x85x265	5 Reel/Box	3500
Middle Box(M)	470x265x270	30 Reel/Box	21000
Large Box(L)	470x435x270	50 Reel/Box	35000

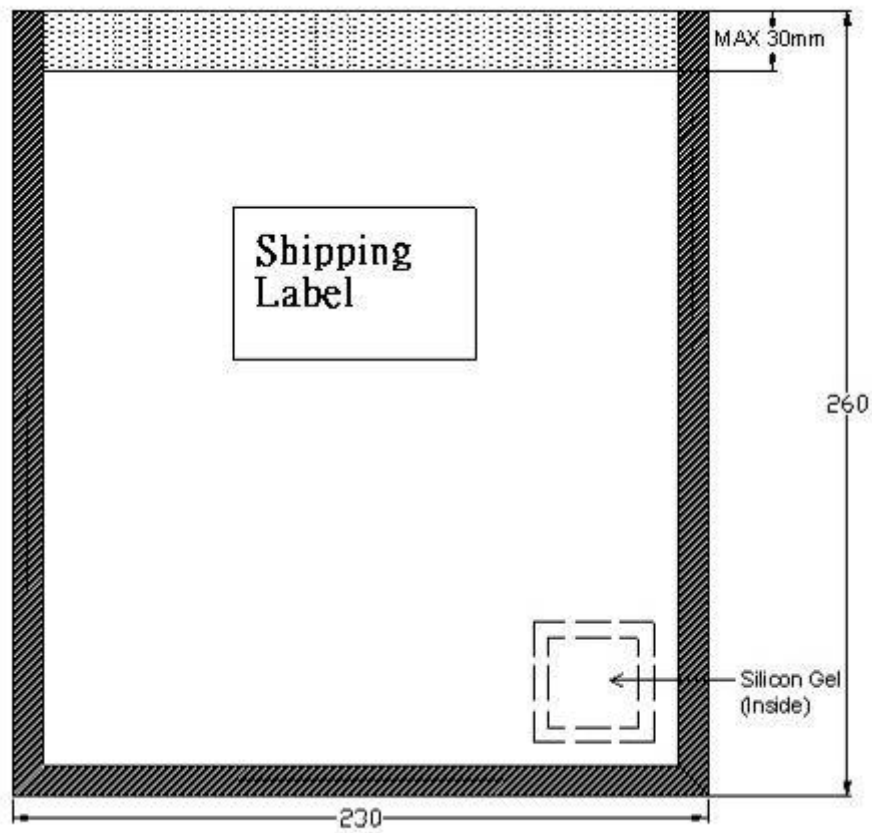
## Reel Packaging :

Reel Part :



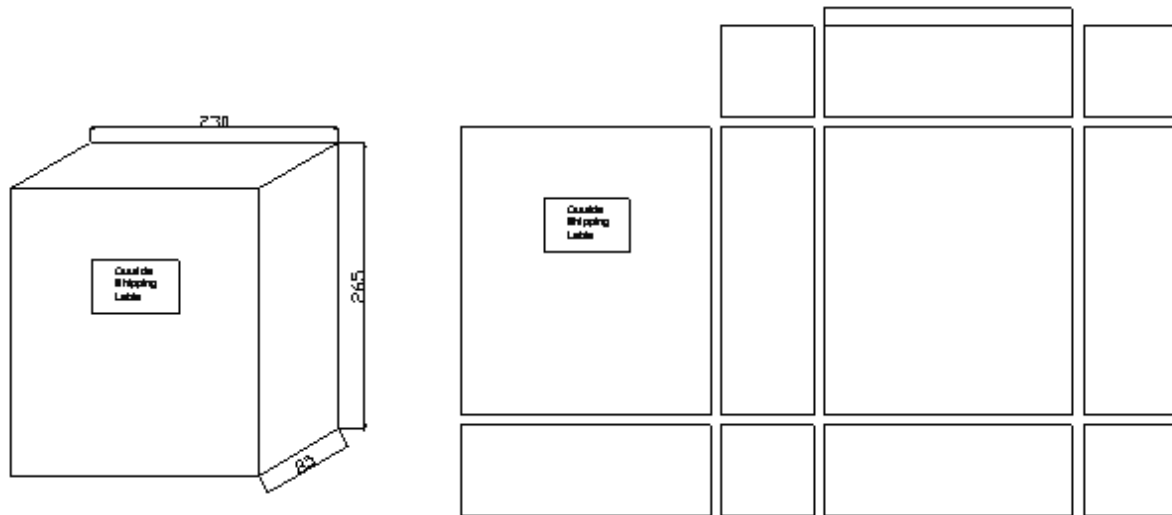
## Anti Statistic Bag :

Unit : mm



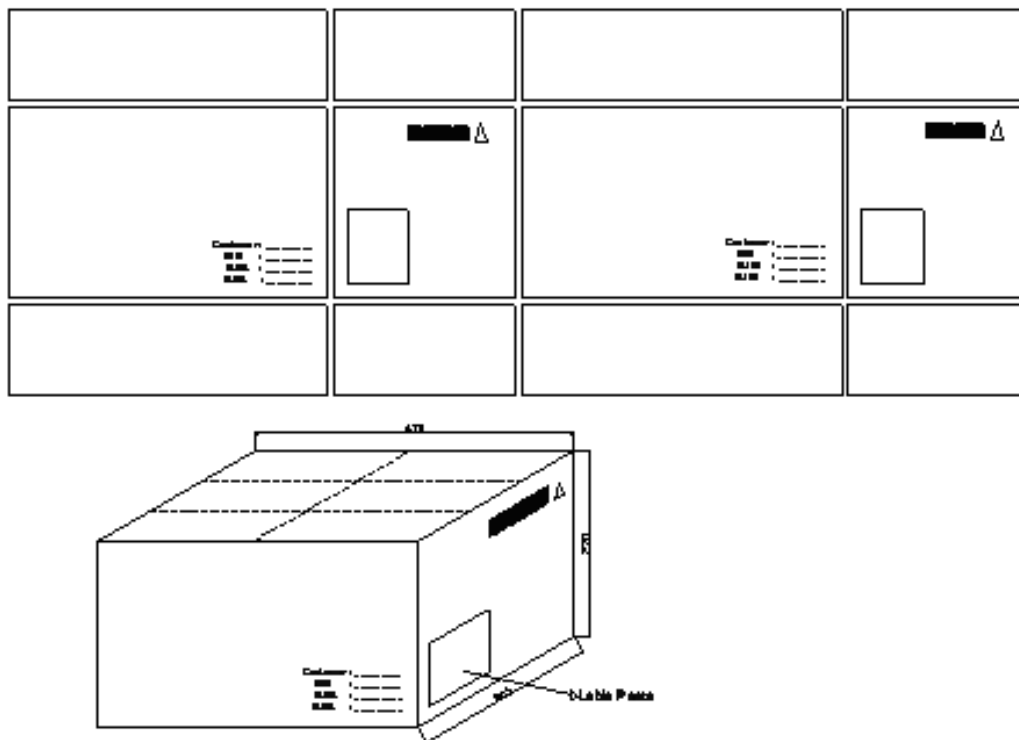
## Small Box

Unit : mm



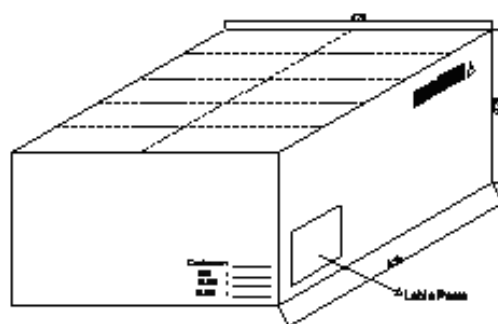
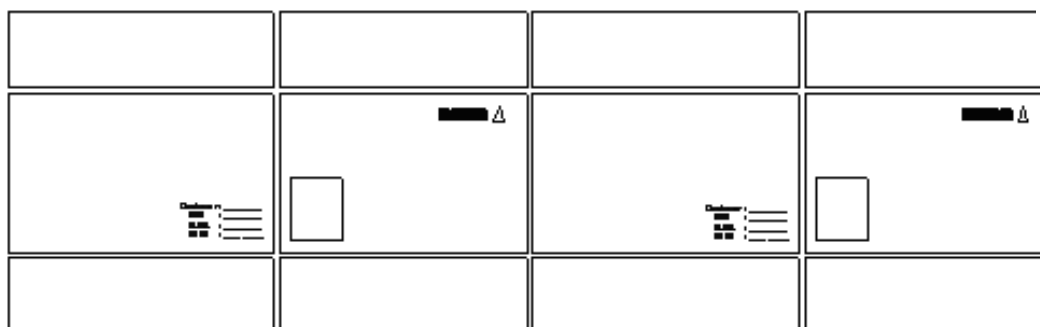
## Middle Box

Unit : mm



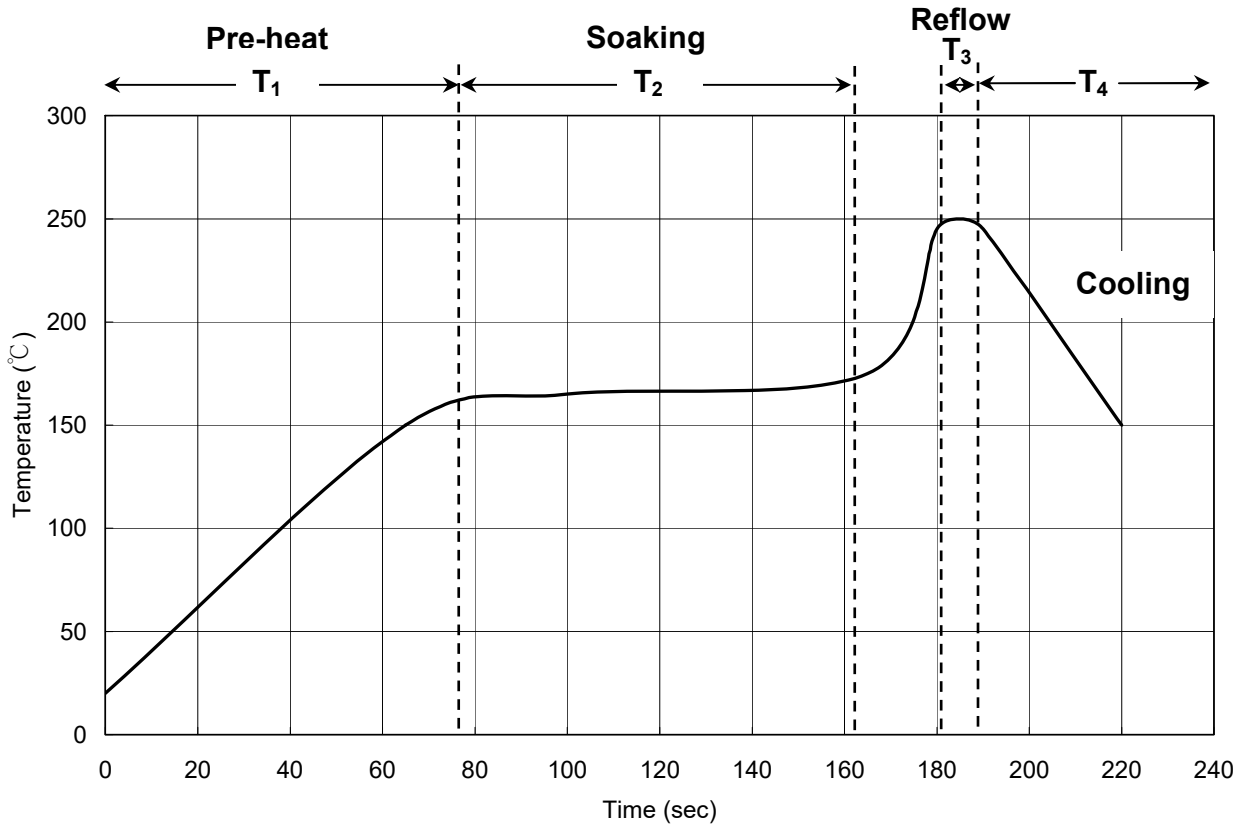
## Large Box

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	240 ~ 250 °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.

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