

Draft Specification For UV-B Series

YCS-UFDC3535F6QUS3-R0

Features

- Deep Ultraviolet LED
- Dimension : 3.9mmx3.9mmx3.1mm
- All Metal Design Cu Substrate/ Al reflector
- View Angle : 60 Degree
- Low thermal resistance

Applications

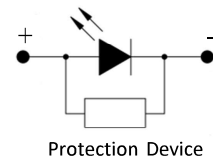
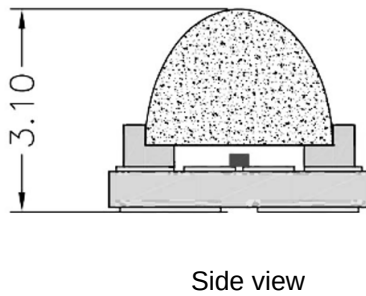
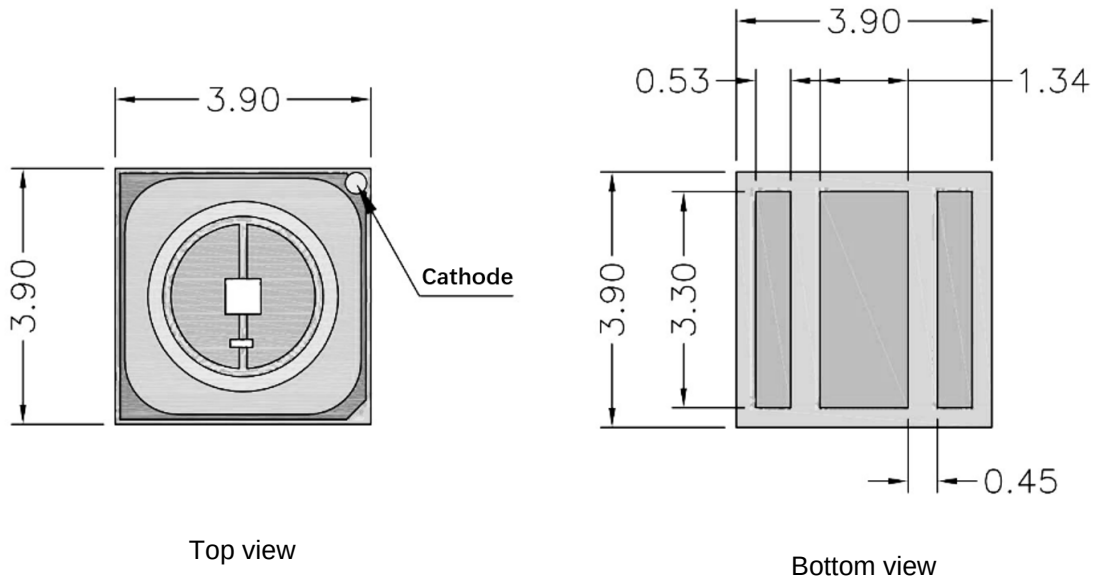
- Disinfection
- Chemical and Biological analysis



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



Notes:

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

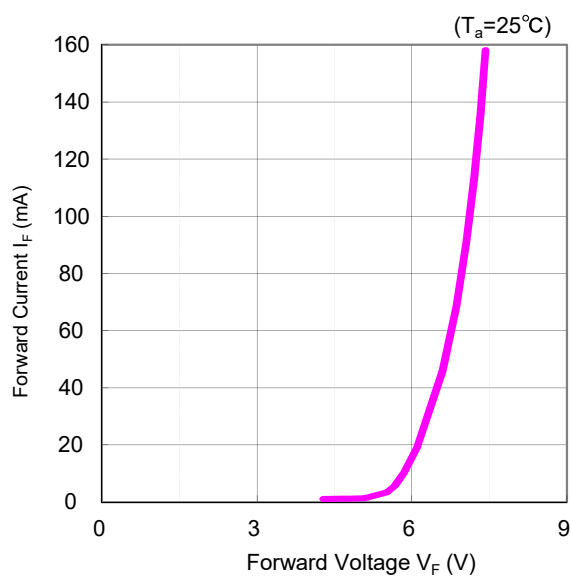
Parameter	Symbol	Min	Typ	Max	Unit
Peak wavelength	λ _p	300	308	315	nm
Radiant Flux	Φ _e	10	20	30	mW
Forward Voltage	V _F	—	6	7	V
Spectra half-width	Δλ	—	12	—	nm
LED Junction Temperature	T _J	—	60	80	°C

Note

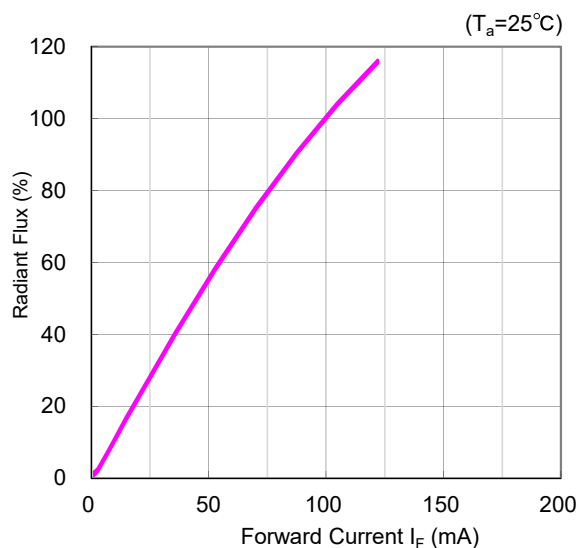
- 1. Forward voltage measurement allowance is ± 0.2V.
- 2. Radiant flux measurement allowance is ± 10%.
- 3. Irradiance tested at a distance 10mm from Al reflector.
- 4. Wavelength measurement allowance is ± 3nm.

Characteristic Diagram

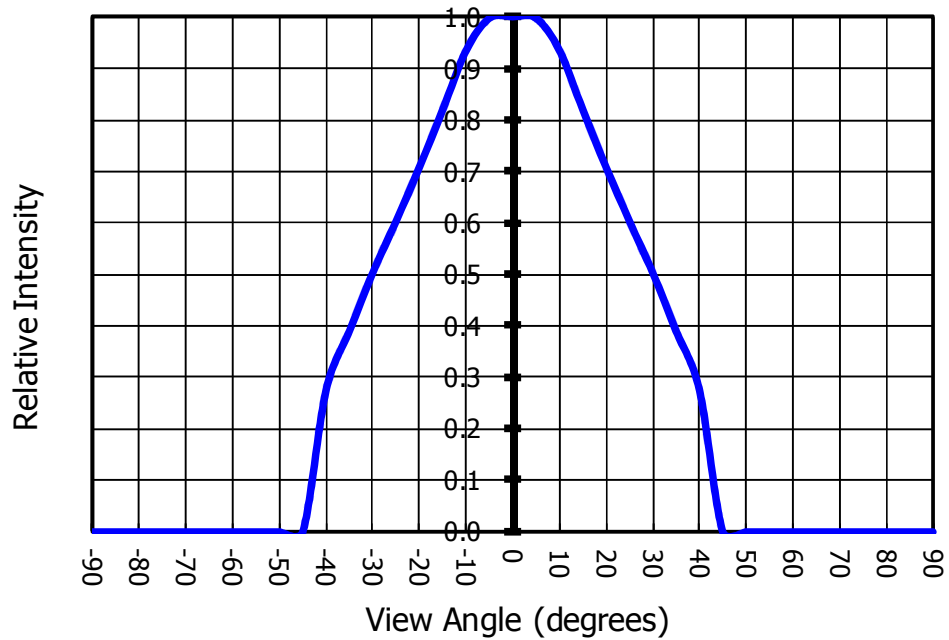
- Forward Current vs. Forward Voltage



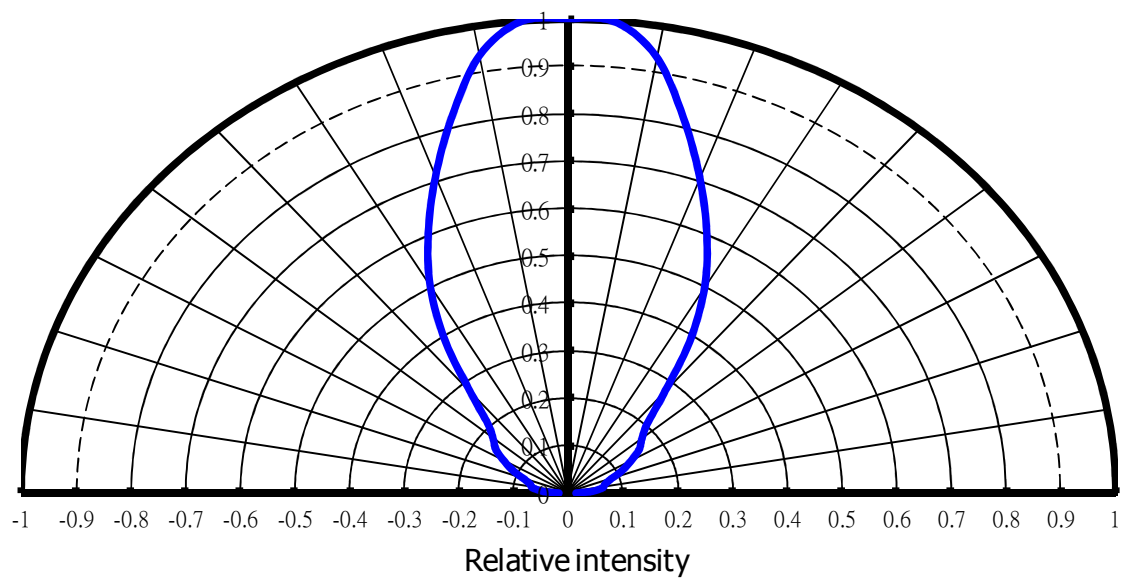
- Relative Intensity vs. Forward Current



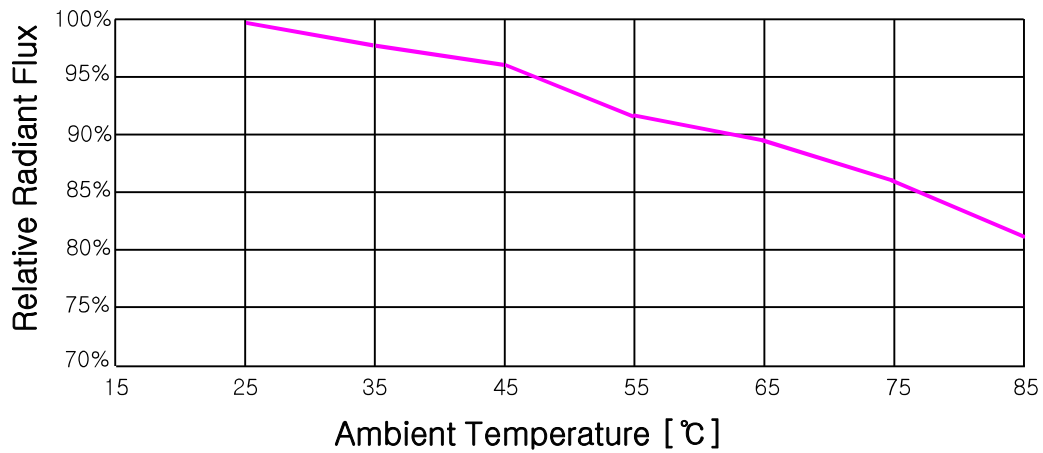
Spatial radiation pattern



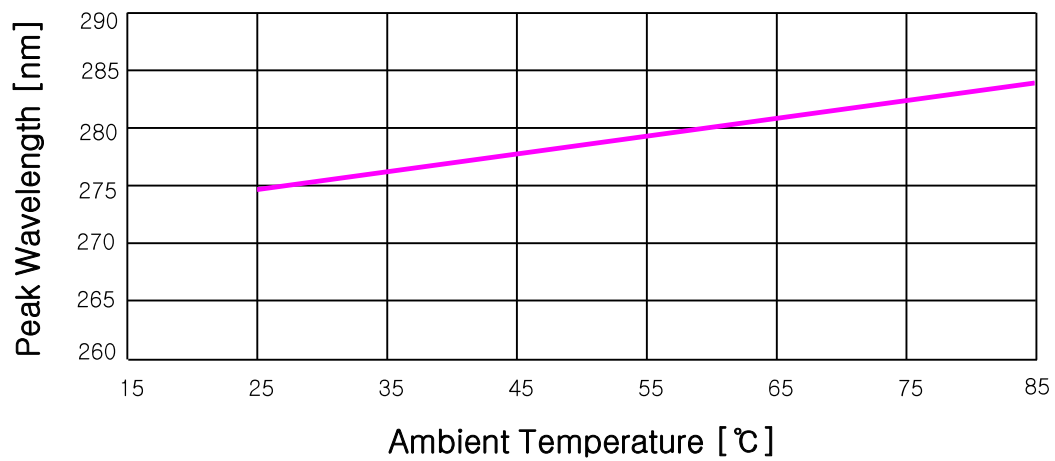
Spatial radiation pattern



● **Ambient Temperature vs. Relative Radiant Flux, $I_F=100\text{mA}$**



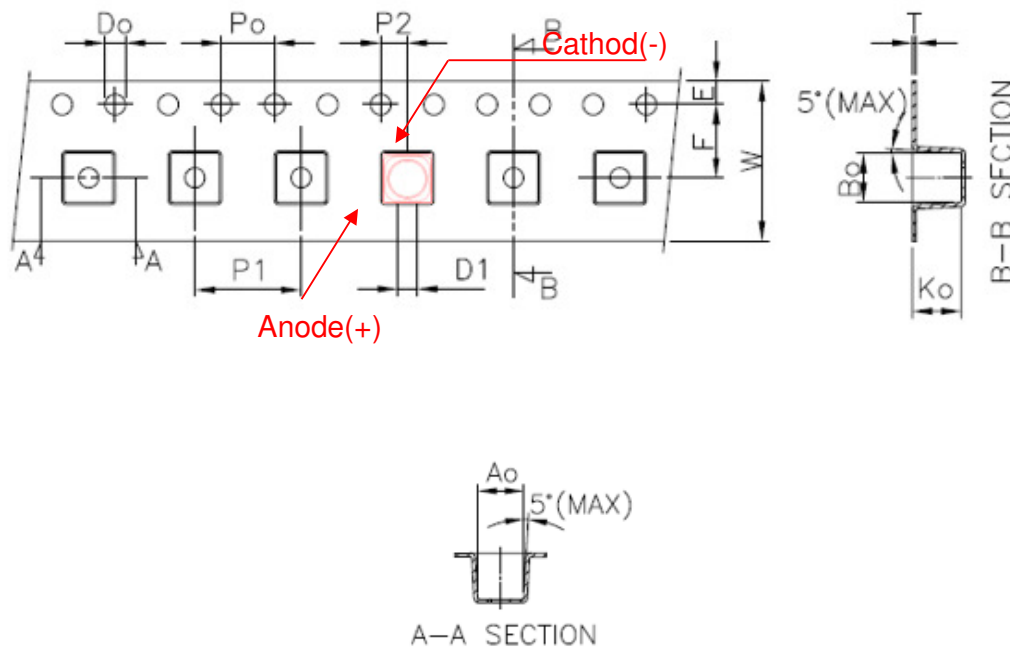
● **Ambient Temperature vs. Peak Wavelength, $I_F=100\text{mA}$**



Tapping Dimension Packaging Specification

- Moisture proof bag.
- Q'ty: 1000Pcs/Reel.

Unit : mm

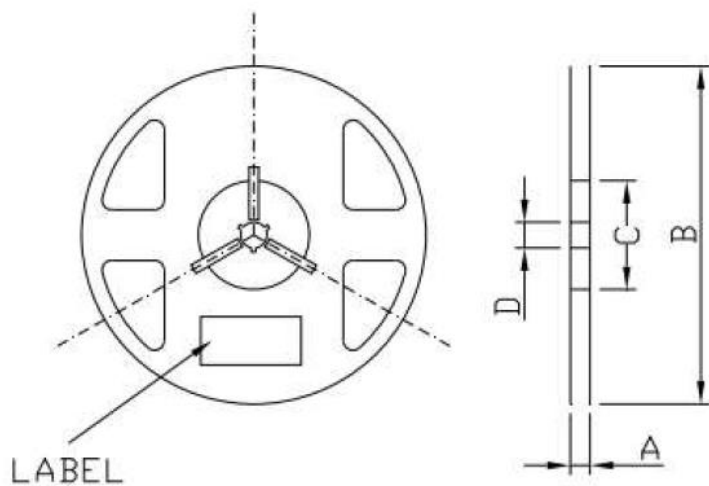


symbol	Ao	Bo	Ko	Po	P1	P2	T
spec	3.72±0.10	3.72±0.10	3.27±0.10	4.00±0.10	8.00±0.10	2.00±0.05	0.30±0.10
symbol	E	F	Do	D1	W	10Po	
spec	1.75±0.10	5.50±0.05	1.55±0.05	1.50±0.10	12.0±0.30	40.0±0.20	

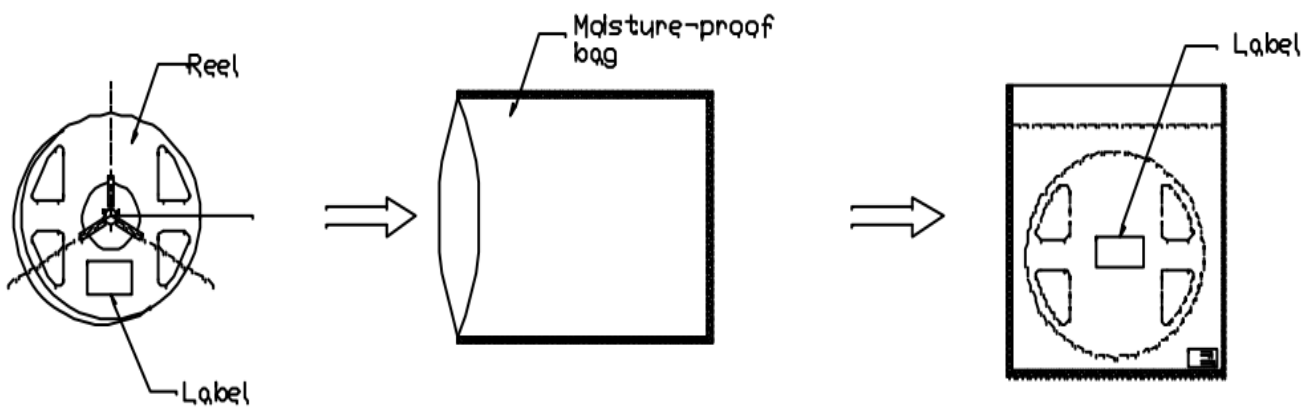
* 标注公差为±0.1毫米，单位：毫米。The tolerances unless mentioned ±0.1mm. Unit : mm

Reel Packaging :

Unit : mm

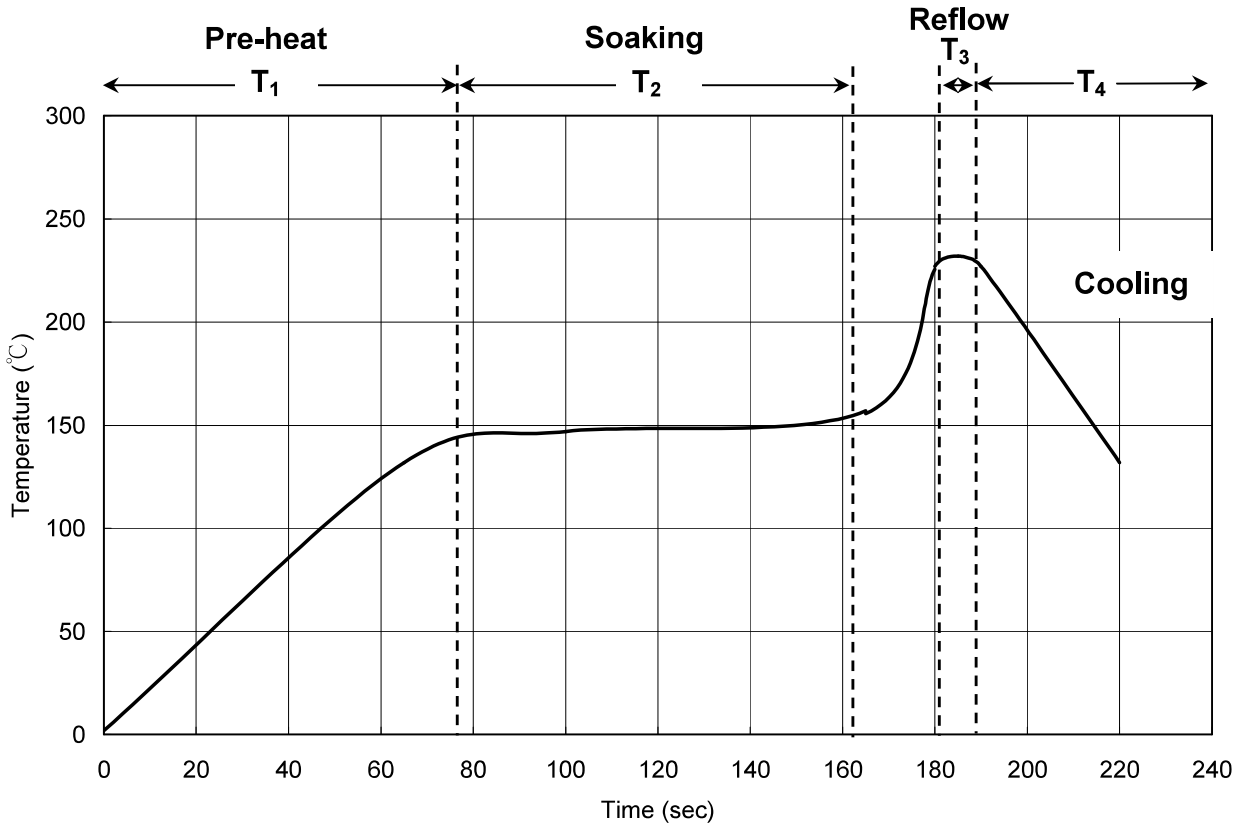


A	$13.6 \pm 0.1\text{mm}$
B	$179 \pm 1\text{mm}$
C	$58 \pm 1\text{mm}$
D	$13.5 \pm 0.5\text{mm}$



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	220 ~ 230 °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.