

UV SMD 3535 0.5W Series Data Sheet

SOL-3535UC050-XX



SOL-3535UC050-01

UVC 260-270nm

SOL-3535UC050-02

UVC 270-285nm

➤ Features:

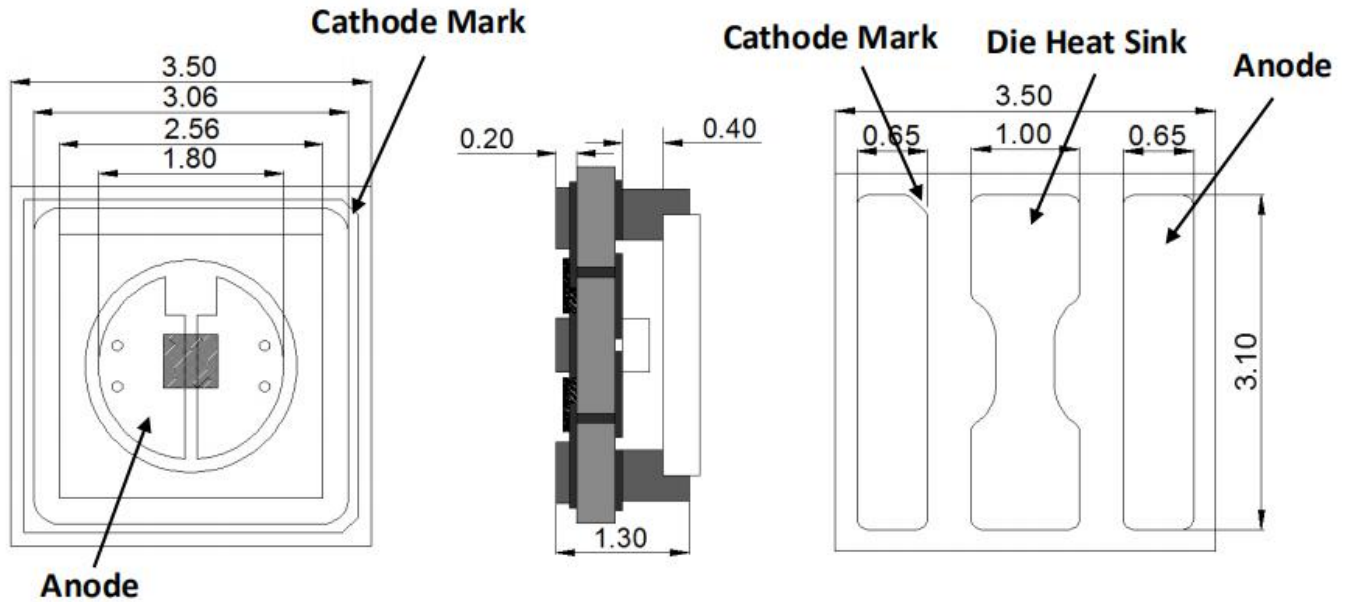
- High thermal conductivity ceramics Package
- Convenient for Miniaturized design
- Being applied to many areas and occasions for sterilization

➤ Application:

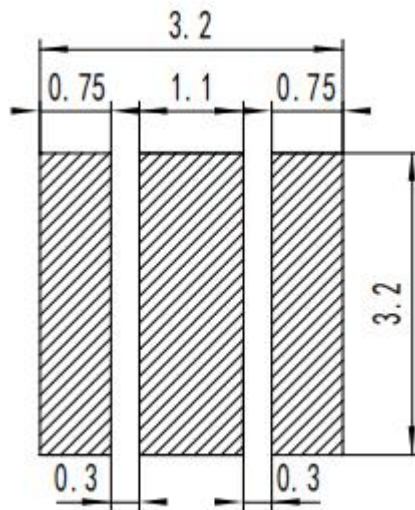
- Water Sterilization
- Air sterilization
- Analysis
- Medical care
- etc

Wavelength (nm)	Pack wavelength (nm)	Operating Current (mA)	Forward voltage (V)	Radiant flux (mW)	Viewing angle (°C)	Spectrum half width (nm)	Material number
265	260-270	100	5.0-8.0	2-5	120	8-14	SOL-3535 UC050-01
275	270-285	100	5.0-8.0	7-10	120	8-14	SOL-3535 UC050-02

➤ Outline Dimensions:



Recommended pad size:



Note:

UV LED need to have good cooling in the environmental conditions in order to obtain the most stable output. Please design the LED module or system in customer that the temperature of the LED Package does not exceed 50°C.

➤ Optical Electrical Characteristics (TA=25°C IF=100mA):

Parameter	Unit	Condition	MIN	TYP	MAX
Forward Voltage(VF)	V	IF=100mA	5		8
Optical Output Power (Pout)	MW	IF=100mA	2		10
Peak Wavelength (λ_p)	NM	IF=100mA	260	275	285
FWHM ($\Delta\lambda$)	NM	IF=100mA	8	11	14
Viewing Angle 2 θ 1/2	Deg	IF=100mA		270°	
ESD(H.B.M)	V	IF=100mA		4000V	

Note:

- Optical output power's measurement tolerance: $\pm 10\%$.
- Voltage's measurement tolerance: $\pm 0.1V$
- Dominant wavelength's measurement tolerance: $\pm 1nm$.
- Pulse Operation (1 KHZ; Duty Cycle: 5%); Maximum Current: 100mA.

➤ Absolute Maximum Ratings:

Item	Unit	Rating
Operation Temperature Range	°C	-30~60
Storage Temperature Range	°C	-30~100

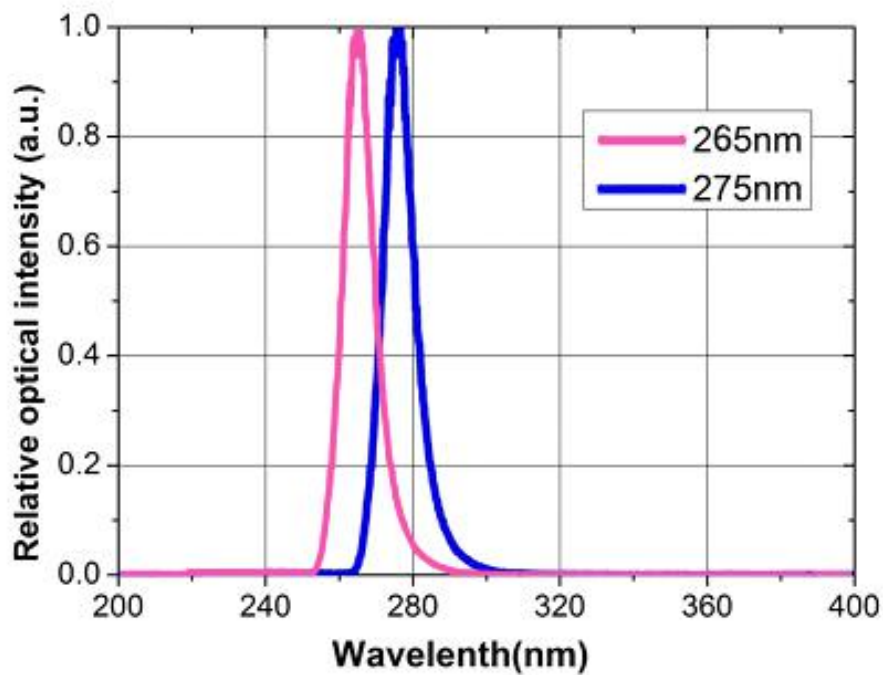
Note: Operating the LED beyond the listed maximum ratings may affect device reliability and cause permanent damage. These or any other conditions beyond those indicated under recommended operating conditions are not implied.

➤ Radiated Power Grade (IF=100mA) :

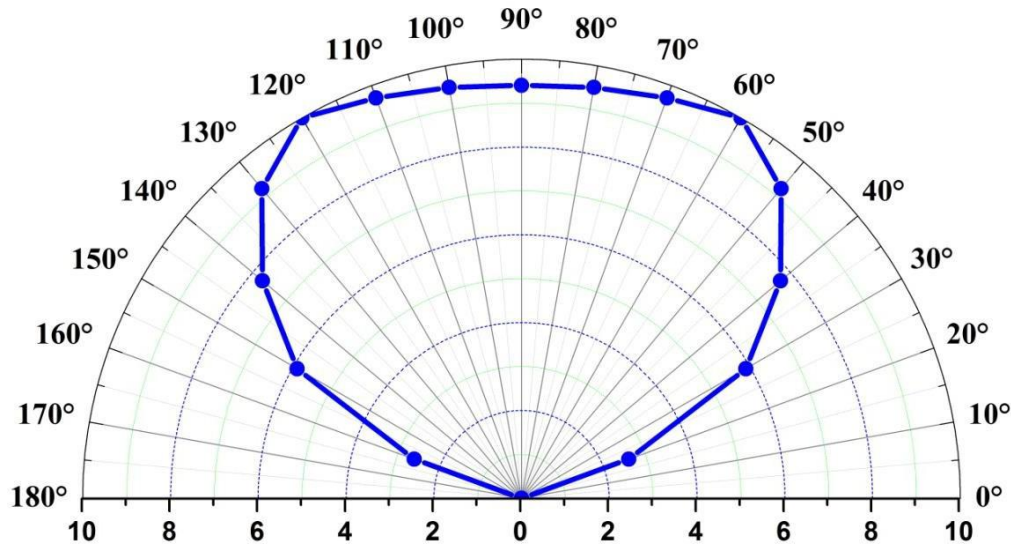
265nm	275nm
2-5mW	7.0~10.0mW

➤ Typical Characteristics Curves (TA=25°C):

Spectral Characteristic (IF=100mA)



➤ Typical Emission Distribution Curve:



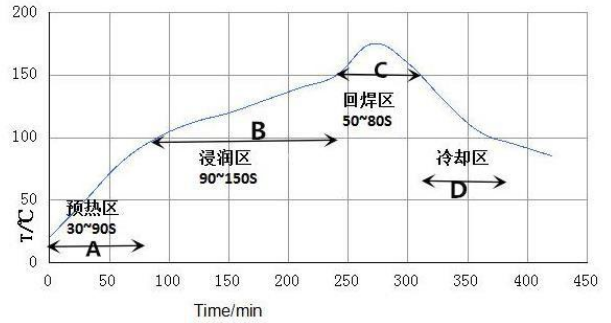
Viewing angle: 120° (for reference only)

➤ Cautions On Use:

Storage: The LEDs shall be hermetically sealed; the package shall be kept at 10°C to 60°C and < 65% Relative Humidity (RH). Before opening aluminum bag, the package should be used within 1 year from the delivery date. After opening aluminum bag, the package should be used within 28 days.

- **Operation:** The workbench shall be grounded. It is recommended to wear gloves or finger stalls when handling the LEDs. It is also recommended to seal the package promptly after opening it, or it may result in lead foot oxidation. After opening the package, use tweezers to hold the LED's body and avoid touching its obverse side with bare hands.
- Installation:
- a. Equipment and machinery handling LED chips must be properly grounded.
- b. Anti-static wrist strap must be worn during installation; check if the metal part makes close contact with skin.
- c. It is strongly recommended to wear anti-static gloves or finger stalls during installation.
- d. Put anti-static tape on the workbench; the tape shall be interconnected and grounded.
- e. The LEDs shall be soldered within 24 hours after opening the package, or it may lead to electrode

- oxidation and rustiness.
- Reflow soldering is recommended, and the temperature curve is shown in the figure on the right:
- A. Preheat : 1.0 to 3.0°C/s ; Maximum time: 90 seconds.
- B. Soak : 110 to 130°C, best time : 90 or100s.
- C. Reflow : Maximum temperature : 170 - 180°C.
- Maximum time : 50 - 80s above 138°C.
- D. Cooling :
- Cooling rate < 4°C/s.
- The LEDs' lifetime will decrease as current and temperature increase, which accelerates deterioration.
- It is recommended to include a grounded circuit when designing the PCB. To avoid circuit breakdown,
- the LEDs shall be operated at -30°C to 60°C and 30% to 65% RH, or it may result in device failure.



Cautions: DUV LEDs emits ultraviolet light, which is potentially harmful to skin and eyes.

Avoid direct or reflected exposure to UV light when LED is in operation.

Special precautions must be taken to avoid direct exposure to UV light.

Special precautions must be taken to avoid looking directly at UV light without the use of UV light protective glasses.

