

## **Deep UV LED Package(S-68FU3CY-1F)**

### **Product introduction**

Sanan S-68FU series deep ultraviolet packaging products are specially designed for applying with ultra high radiation power and directivity requirements. The package surface mount device is made of special ultraviolet glass with optimized life time and performance of the product.

### **Features& benefits**

- ✓ Customized emission wavelength
- ✓ Industry standard 6.8mm x6.8mm ceramic package
- ✓ Wide viewing angle  $> 130^{\circ}$
- ✓ High reliability package with ESD protection
- ✓ Standard SMD (PnP and reflow)
- ✓ RoHS and REACH compliant
- ✓ Radiant Power  $> 160\text{mW}$

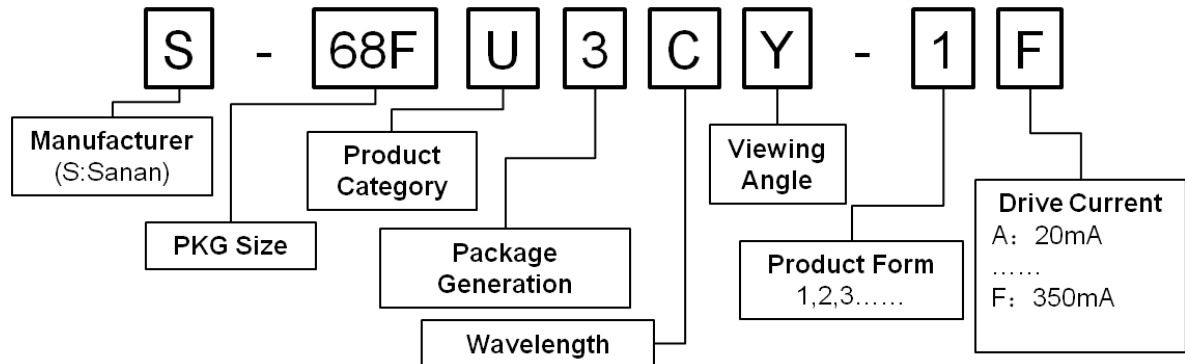
### **Target Application**

- ✓ Water/ Air/ Surface sterilization and disinfection
- ✓ Food & Pharmaceutical Processing
- ✓ Medical Spectroscopy
- ✓ Florescence analyzer
- ✓ Horticulture lighting

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## Part Number Nomenclature

The part number of Sanan S-68FU series deep UV package products is explained as follow:



## Ordering Information:

Part Number: S-68FU3CY-1F

Specification nomenclature: reference to Bin Kit Order Codes (wavelength and output radiant power) (276AG1)

## Optical and Electrical Characteristics@350mA

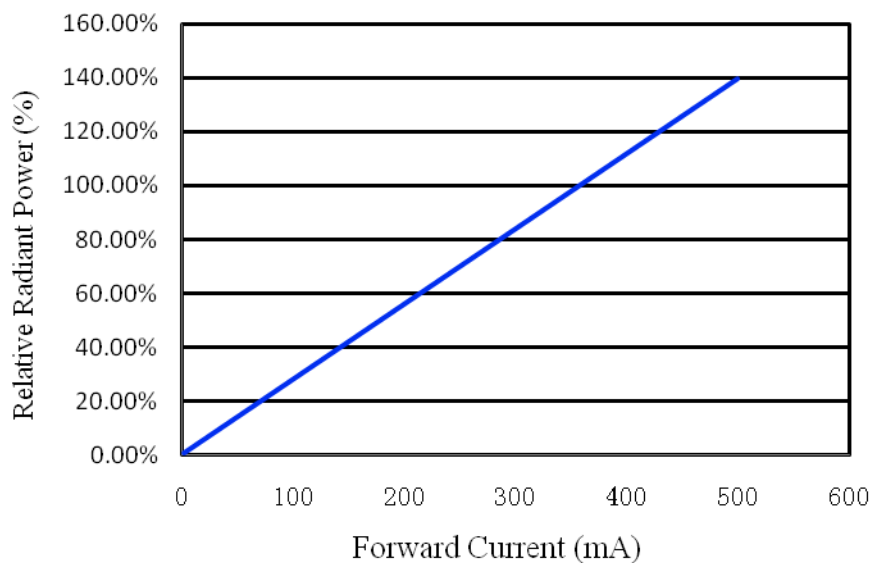
Parameter	Symbol	Bin	Minimum	Typical	Maximum	Unit
Peak Wavelength	$\lambda_P$	276A	276		286	nm
Output Radiant Power	$P_{opt}$	G1	150	-	200	mW
Forward Voltage	$V_F$		24		30	V
FWHM	$\Delta\lambda$		-	9.8	-	nm
Viewing Angle	$2\theta_{1/2}$		-	130	-	°
Thermal Resistance ( $T_j - T_{sp}$ )	$R_{th}$		-	3	-	°C/W

## Absolute Maximum Ratings

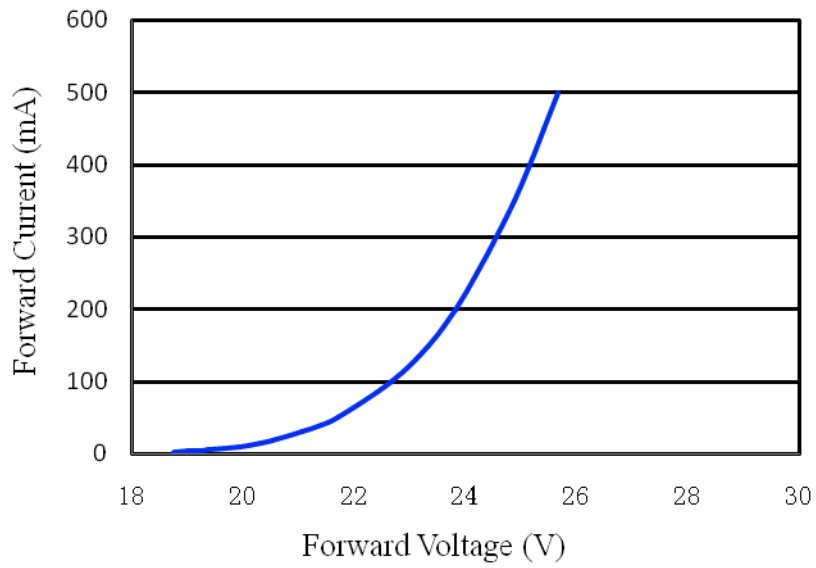
Parameter	Symbol	Max. Ratings	Units
Forward Current	$I_F$	500	mA
Operating Temperature	$T_{op}$	-40 ~ 55	°C
Storage Temperature	$T_{stg}$	-40 ~ 100	°C
Junction Temperature	$T_j$	85	°C
Soldering temperature	$T_{solder}$	260	°C

## Optical and Electrical Characteristics Curve

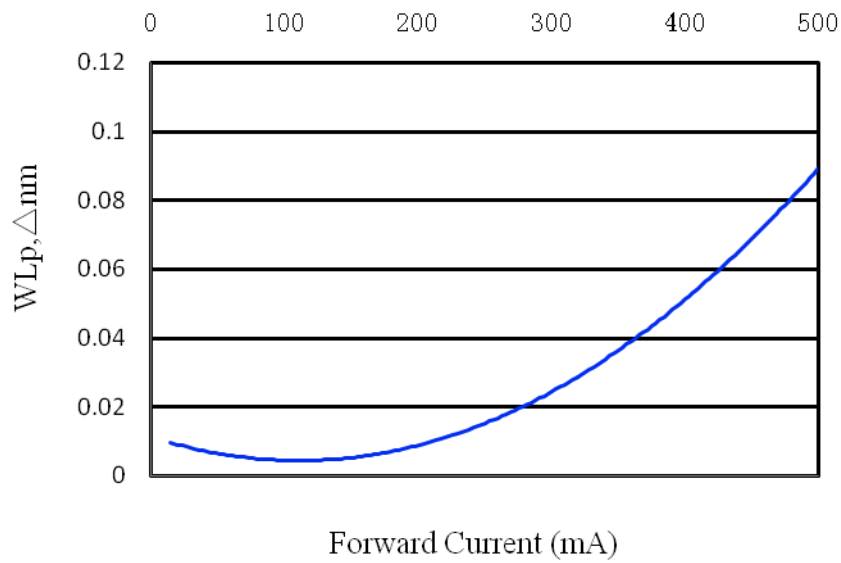
**Relative Radiant Power VS Forward Current ( $T_a=25\text{ }^\circ\text{C}$ )**



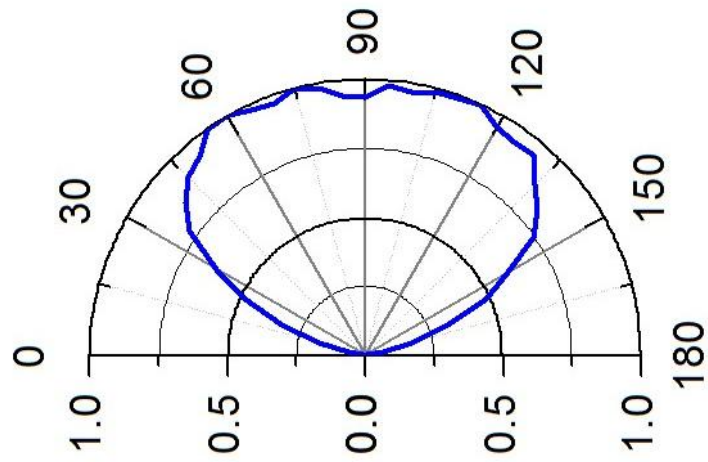
**Forward Current VS Forward Voltage (Ta=25 °C)**



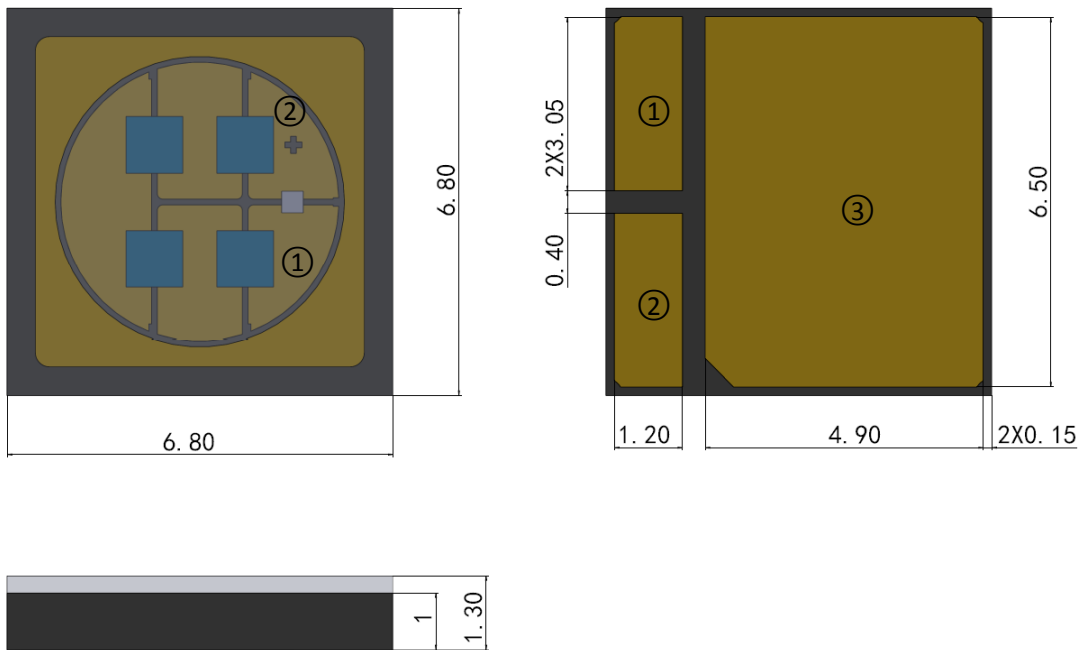
**Wavelength  $\Delta$  Vs Forward Current (Ta=25°C)**



**Radiation Pattern**

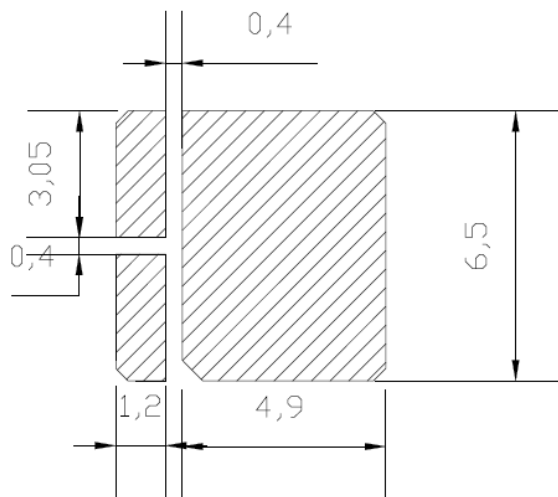


**Mechanical Dimension (Unit: mm Tolerance +/-0.1):**



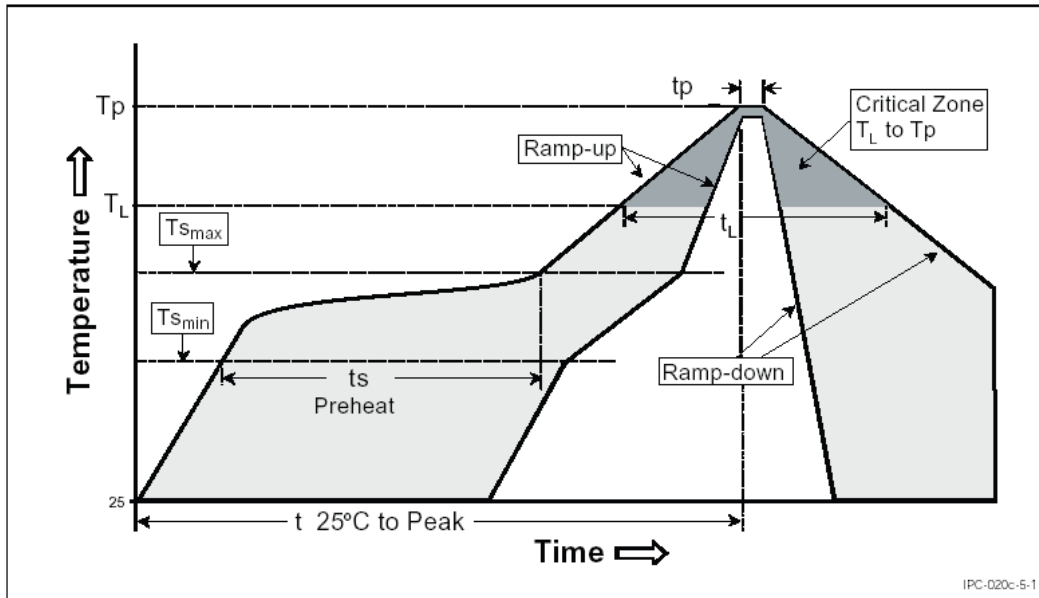
Notes: ① Cathode Pad, ② Anode Pad, ③ Heat Sink

**Recommended Stencil Pattern (Unit: mm Tolerance +/- 0.1):**



## Recommended Reflow Profile

As a general guideline, Sanan recommends that users follow the recommended soldering profile provided by the manufacturer of the solder paste used. Note that this general guideline may not apply to all PCB designs and configurations of reflow soldering equipment.

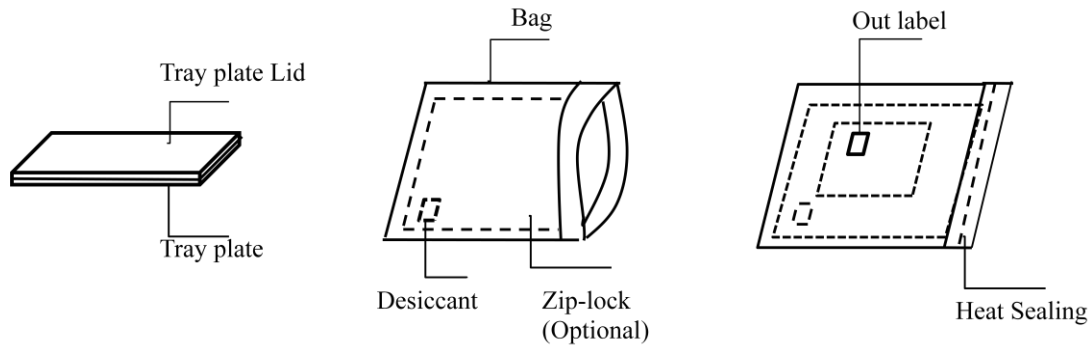
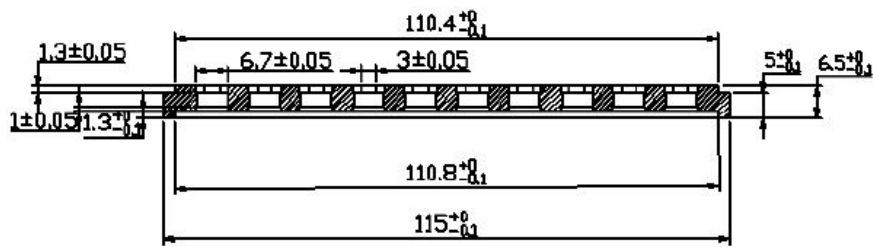
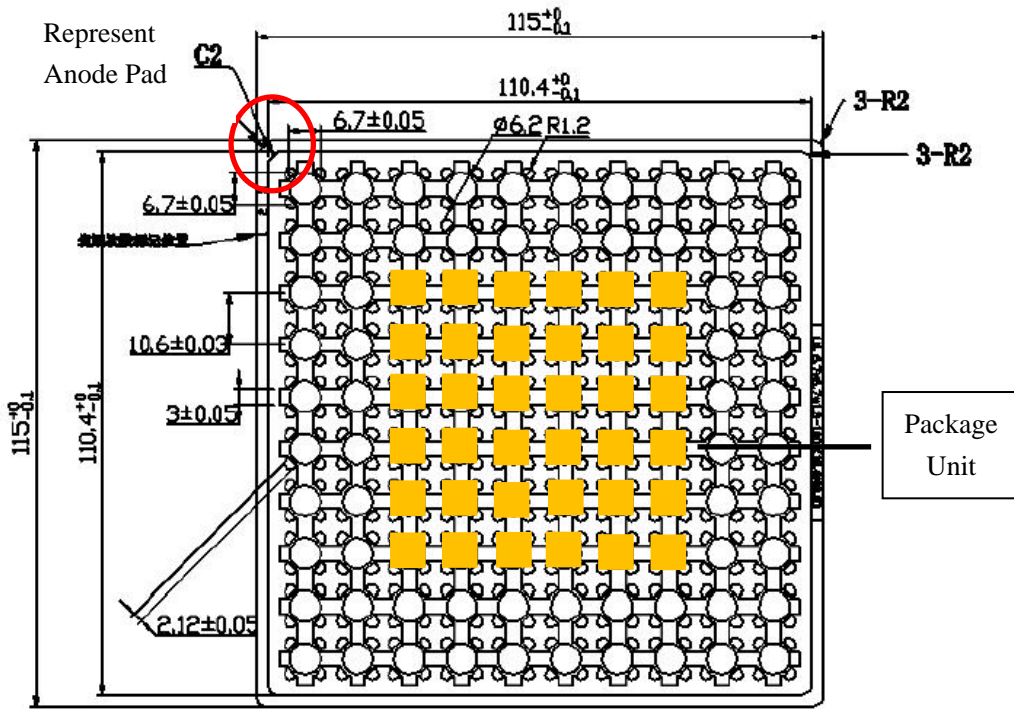


ProfileSetting	Pb-FreeProfile
Average Ramp-up Rate (Ts max, Tp)	1°C/s
PreheatTemperatureMin(Tsmin)	100-150 °C
PreheatTemperatureMax(Tsmax)	180-200 °C
Preheat Time (ts min to tsmax)	60-120s
Liquidus Temperature(TL)	217 °C
Time Maintained Above Time(tL)	50-80 s
Peak/ClassificationTemperature(TP)	260 °C
Time within 5°C of Actual Peak Temp(tp)	20-40 s
Ramp-DownRate	2-3 °C/s
Time25°CPeakTemperature	4 mins

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## Tray Packaging

(Unit: mm)





## Precautions for storage, handling and use of UV LED components

### UV Light

These devices are short wavelength Ultraviolet LED. During operation, the LED emits high intensity ultraviolet (UV) light, which is harmful to skin and eyes.

UV light is hazardous to skin and may cause cancer. Avoid exposure to UV light when LED is operational.

Precautions must be taken to avoid looking directly at the UV light without the use of UV light protective glasses. Do not look directly at the front or at the LED's lens when LED is operational.

### Static Electricity (ESD)

Despite with built-in Zener protection diodes, UV LED are particularly sensitive to ESD (Electrostatic Discharge); static electricity and surge voltages seriously damage UV LEDs and can result in complete failure of the device. Precautions must be taken against ESD when handling or operating these devices.

### Operating Conditions

In order to ensure the correct functioning of these LEDs, compliance to the typical electrical specifications is paramount. UV LEDs are particularly sensitive to any current value that exceed the max operating specifications, and will cause damage and possible complete failure to the device. The use of current regulated drive circuits are strongly recommended when operating these devices. These LEDs are susceptible to heat generation. Provide adequate thermal management to ensure LEDs do not exceed maximum recommended temperatures. Operating LEDs at temperatures in excess of specification will result in damage and possible complete failure of the device.

**The following warning labels are attached to the product/system using ultraviolet.**



**Label information**

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PN:S-68FU3CY-1F

Spec:276AG1

Lot Cd:UN19021200001

QTY:50

WIP ID:CS201902260001