

Deep UV LED Package (SCF35BU B00D1Z1)

Product introduction

Sanan SCF35BUB series UVB packaging products are specially designed for applying with mid 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

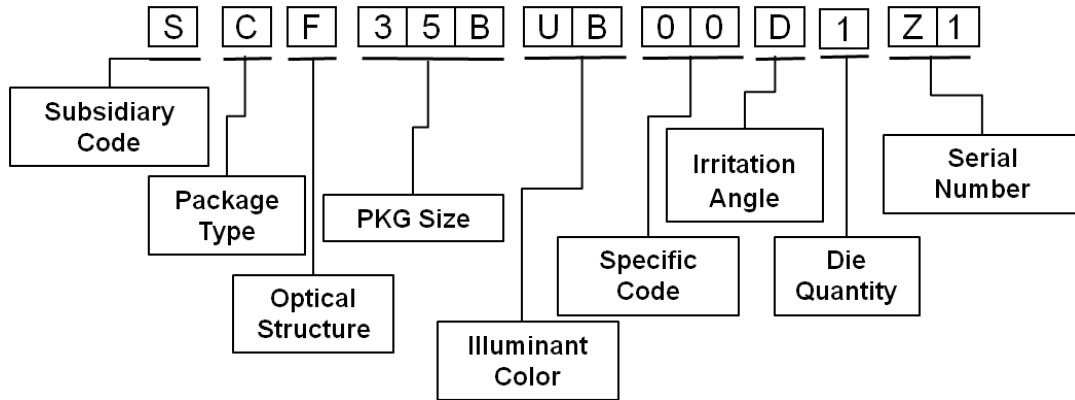
- ✓ Customized emission wavelength
- ✓ Industry standard 3.5mm x 3.5mm ceramic package
- ✓ Wide viewing angle $> 130^{\circ}$
- ✓ High reliability package with ESD protection
- ✓ Standard SMD (PnP and reflow)
- ✓ RoHS and REACH compliant
- ✓ Radiant Power up to 10mW

Target Application

- ✓ Phototherapy
- ✓ Florescence Spectroscopy
- ✓ Horticulture Lighting
- ✓ Curing

Part Number Nomenclature

The part number of Sanan SCF35BUB series UVB package products is explained as follow:



Ordering Information:

Part Number: SCF35BUB00D1Z1

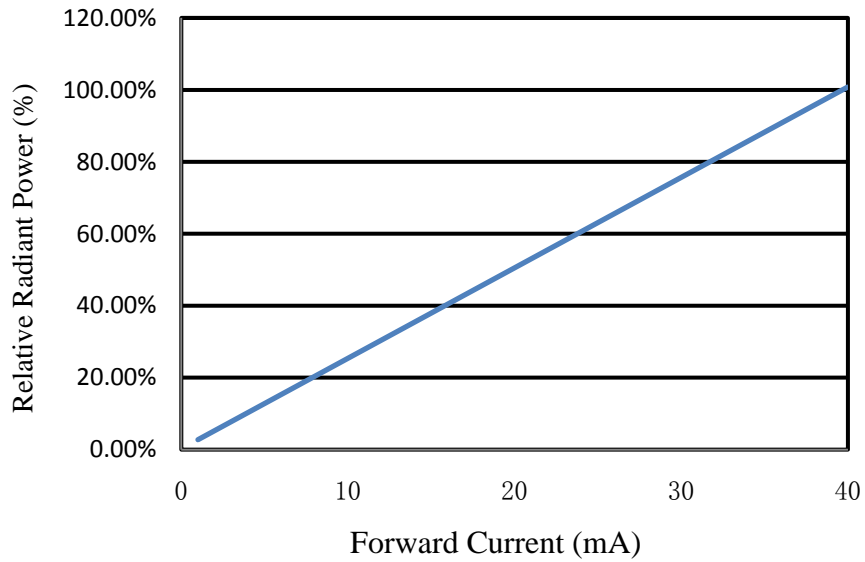
Specification nomenclature: reference to Bin Kit Order Codes (wavelength and output radiant power) (308AD3)

Optical and Electrical Characteristics@40mA

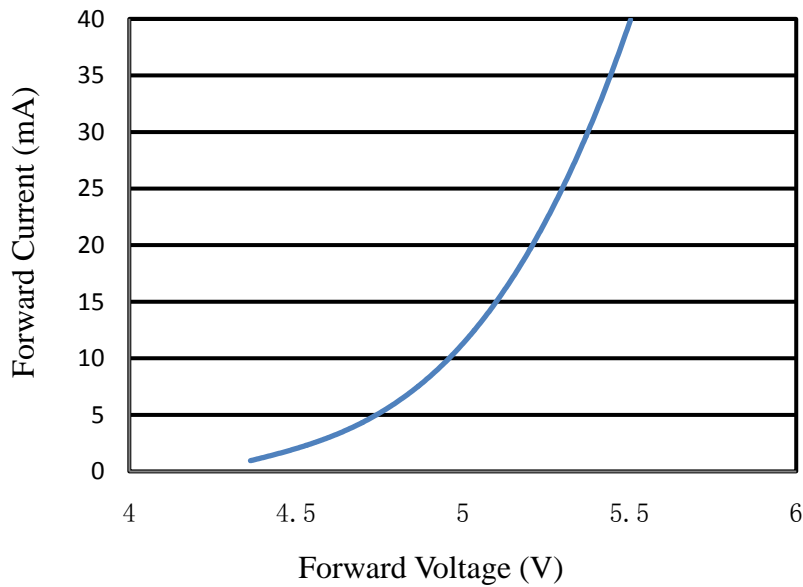
Parameter	Symbol	Bin	Minimum	Typical	Maximum	Unit
Peak Wavelength	λ_p	308A	308		310	nm
		311B	311		315	nm
Output Radiant Power	P_{opt}	D3	3	-	5	mW
Forward Current	I_F			40	40	mA
Forward Voltage	V_F		5	6	7	V
FWHM	$\Delta\lambda$		-	11	-	nm
Viewing Angle	$2\theta_{1/2}$		-	130	-	°
Thermal Resistance ($T_j - T_{sp}$)	R_{th}		-	10	-	°C/W

Optical and Electrical Characteristics Curve

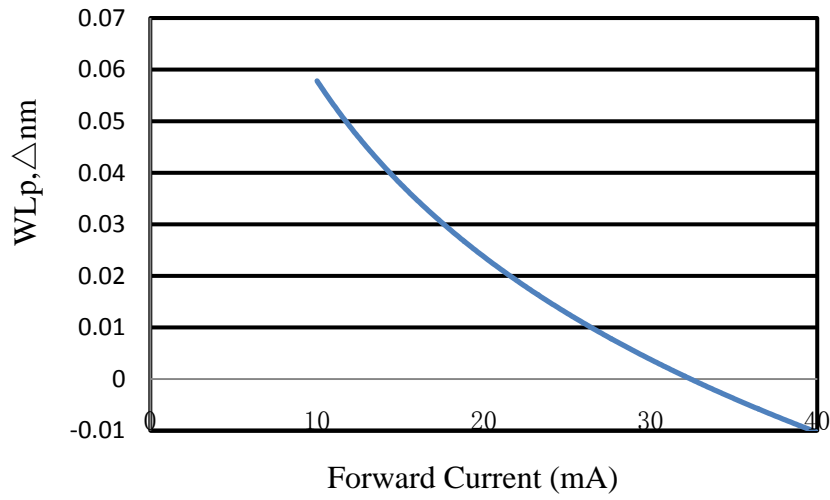
Relative Radiant Power VS Forward Current (Ta=25 °C)



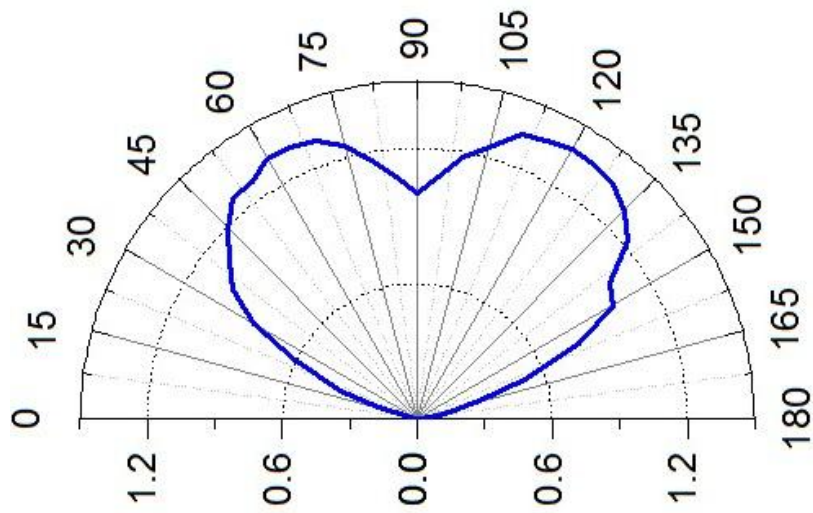
Forward Current VS Forward Voltage (Ta=25 °C)



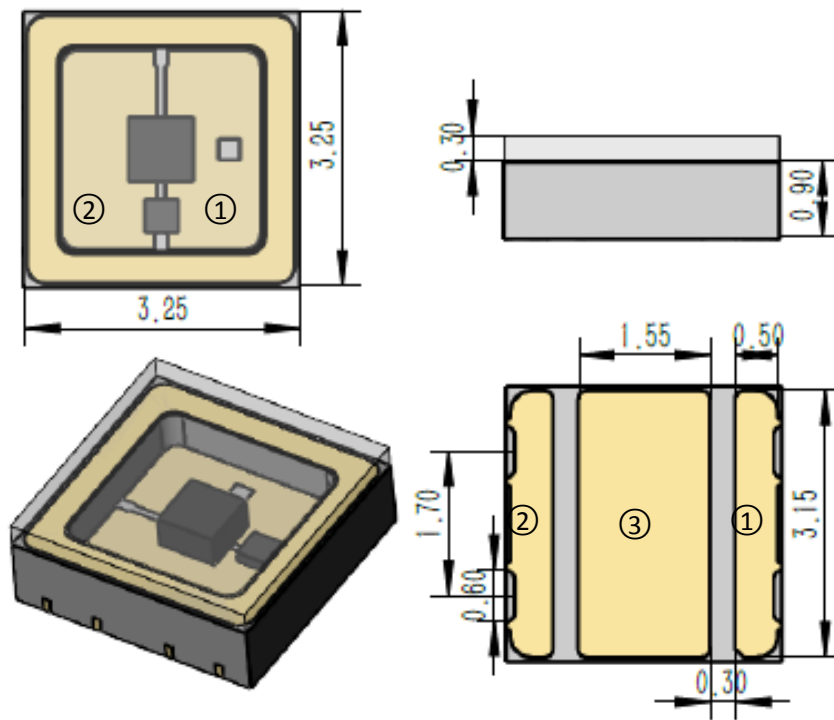
Wavelength Δ Vs Forward Current ($T_a=25^\circ\text{C}$)



Radiation Pattern

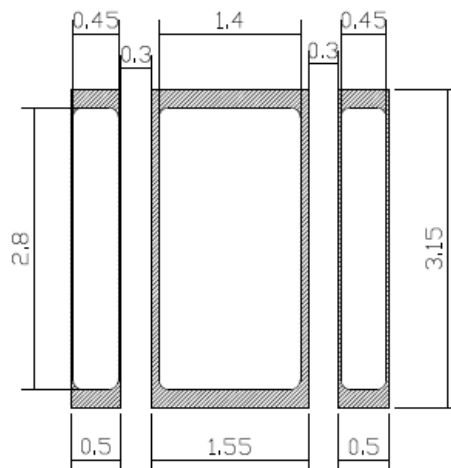


Mechanical Dimension (Unit: mm Tolerance +/-0.1):



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

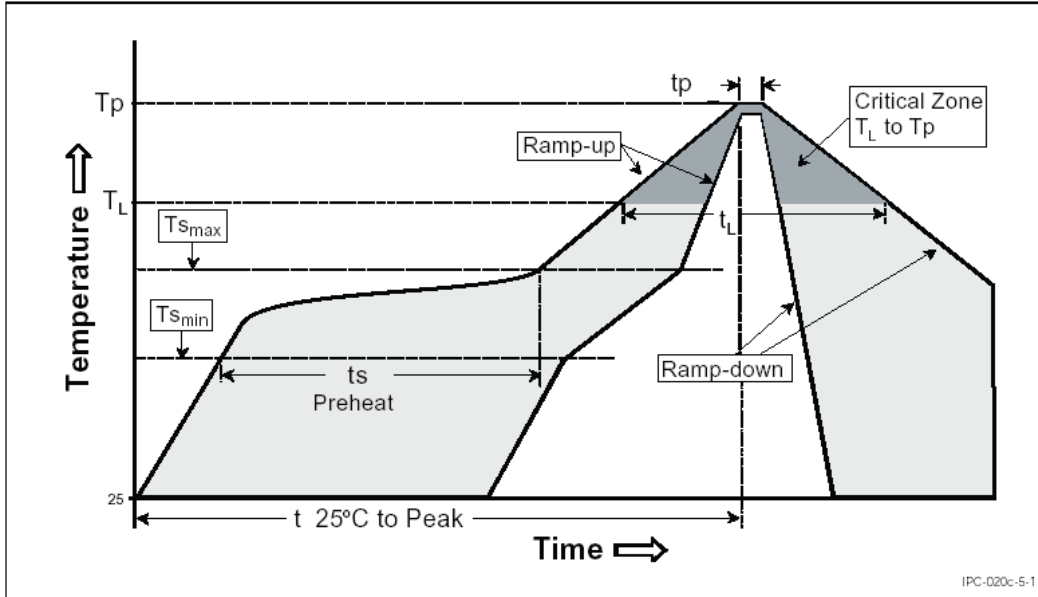
Recommended Stencil Pattern (Unit: mm Tolerance +/- 0.1):



Solder Pad	3.15mm x 0.50mm
	3.15mm x 1.55mm
Stencil Pattern	2.80mm x 0.45mm
	2.80mm x 1.40 mm

Recommended Reflow Profile

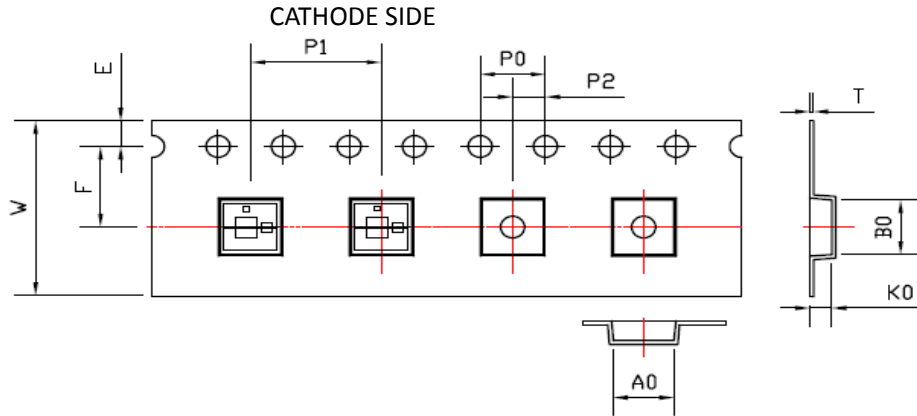
As a general guideline, Sanan recommends that users follow the recommended soldering profile provided by the manufacturer of the solder paste used. Note that this general guideline may not apply to all PCB designs and configurations of reflow soldering equipment.



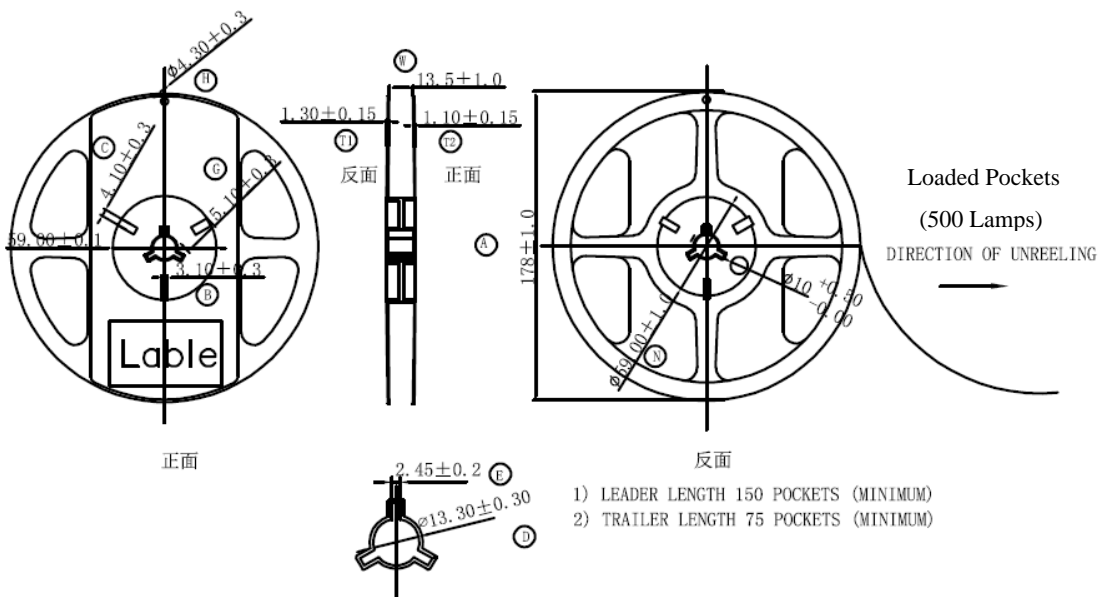
ProfileSetting	Pb-FreeProfile
Average Ramp-up Rate (Ts max, Tp)	1°C/s
PreheatTemperatureMin(Tsmin)	100-150 °C
PreheatTemperatureMax(Tsmax)	180-200 °C
Preheat Time (ts min to tsmax)	60-120s
Liquidus Temperature(TL)	217 °C
Time Maintained Above Time(tL)	50-80 s
Peak/ClassificationTemperature(TP)	260 °C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

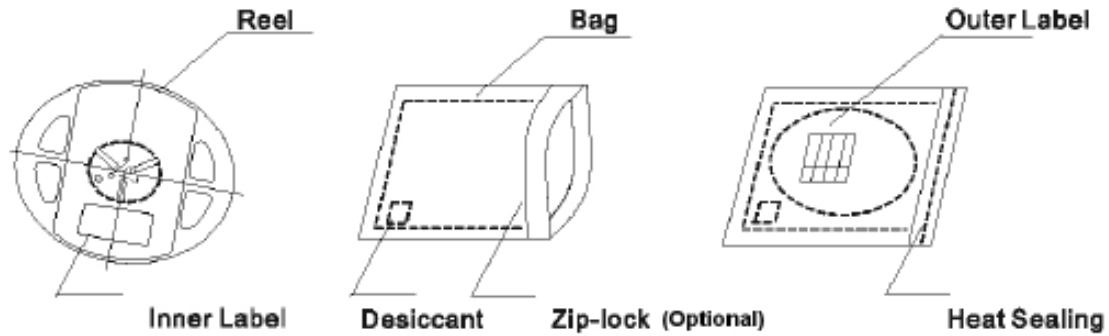
Tape & Reel Packaging

(Unit: mm)



Symbol	A0	B0	K0	P0	P1	P2
Spec	3.70±0.05	3.73±0.05	1.35±0.05	4.00±0.10	8.00±0.10	2.00±0.05
Symbol	W	T	E	F	D0	D1
Spec	12.00±0.20	0.25±0.05	1.75±0.10	5.50±0.10	1.5+0.1/-0	1.5±0.05





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

Sanan Optoelectronics

PN: SCD35BUB00D1Z1 Spec: 308A/D3
Lot Cd: UN1902250001 WIP ID: CS201904020033

	Min	Avg	Max	
PO:	3		5	[mw]
WP:	308		310	[nm]
VF:	5	6	7	[V]

I (mA) : 40

QTY: 500 