

SAMPLE APPROVE SHEET

Customer Name: _____

Productmodel: 0808SMD RGB

Product encoding : CL-SF0808RGB-05

Issue Date : 2023-08-22

Lens Color Code	C Water Transparent
	T Colored Transparent
	D White Diffused
	E Colored Diffused

Customer confirmation	Checked by	Prepared by



Features

- Long operating life
- Highest flux
- Wide range of colors:2500K-25000K
- Lambertian radiation pattern
- More energy efficient than incandescent

and most halogen lamps

- Low voltage DC operated
- Cool beam, safe to the touch
- Instant light (less than 100ns)
- Fully dimmable
- No UV
- Superior ESD protection
- Eutectic die band
- RoHS compliant

Applications

- Reading lights (car, bus, aircraft)
- LCD Backlights/light Guides
- Fiber optic alternative/ Decorative / Entertainment
- Mini-accent/Up lighters/Down lighters/

Orientation

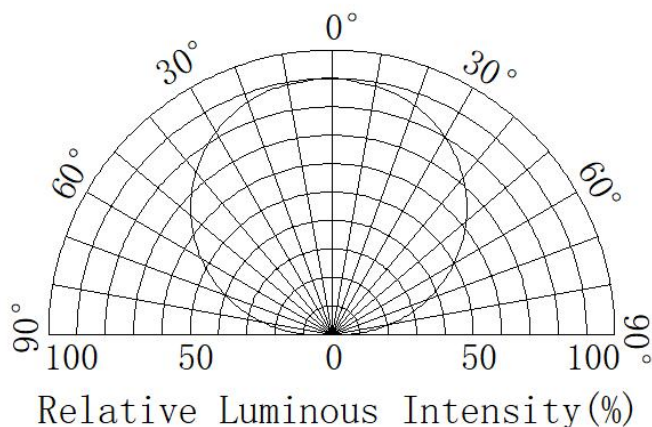
- Indoor/Outdoor commercial and Residential

Architectural

- Cove/Under shelf/Task
- Bollards/Security/Garden
- Portable (flashlight, bicycle)
- Edge-lit signs (Exit, point of sale)
- Automotive Exit (Stop-Tail-Turn,CHMSL, Mirror Side Repeat)
- Traffic signaling / Beacons / Rail Crossing

and Wayside

Radiation Pattern



Absolute Maximum Ratings at TA=25°C @TJ=25°C

Parameter		Maximum Rating	Unit
Power Dissipation	Pd	R: 0.06	W
		G: 0.06	
		B: 0.06	
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse width)	If (Peak)	20	mA
Continuous Forward Current	If	5	mA
LED Junction Temperature	Tj	120	°C
Operation Temperature Range	Topr	-40°C to +80°C	
Storage Temperature Range	TSTG	-40°C to +80°C	
ESD Sensitivity	ESD	2000V HBM	
Manual Soldering Temperature	Tsol	350±20°C for 3 Seconds (350±20 度下不超过 3 秒)	

Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Viewing Angle	2 θ 1/2	--	120	--	deg	IF=2mA
Thermal Resistance Junction To Board	RθJ-B	--	6	--	°C/W	IF=2mA
Temperature Coefficient of Forward Voltage	ΔVF/ΔT	--	-2	--	mV/°C	IF=2mA
Red Forward Voltage	VF	1.7	--	2.4	V	IF=2mA
Green Forward Voltage	VF	2.8	--	3.4	V	IF=2mA
Blue Forward Voltage	VF	2.7	--	3.3	V	IF=2mA
Reverse Current	IR	--	--	5	μA	VR=5V

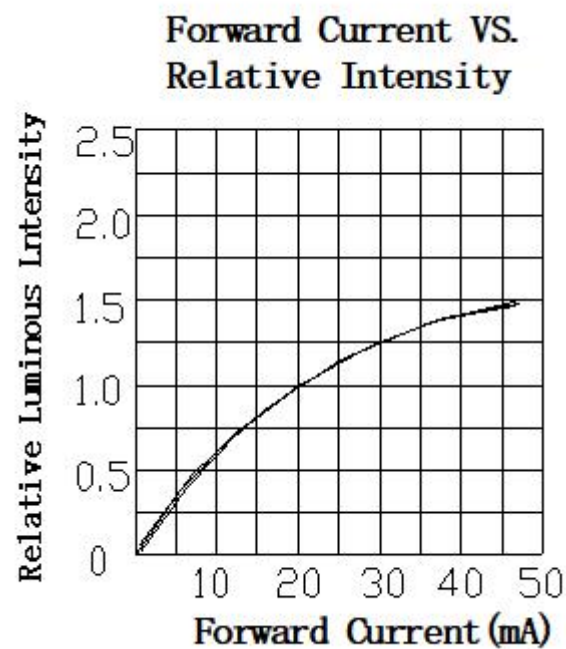
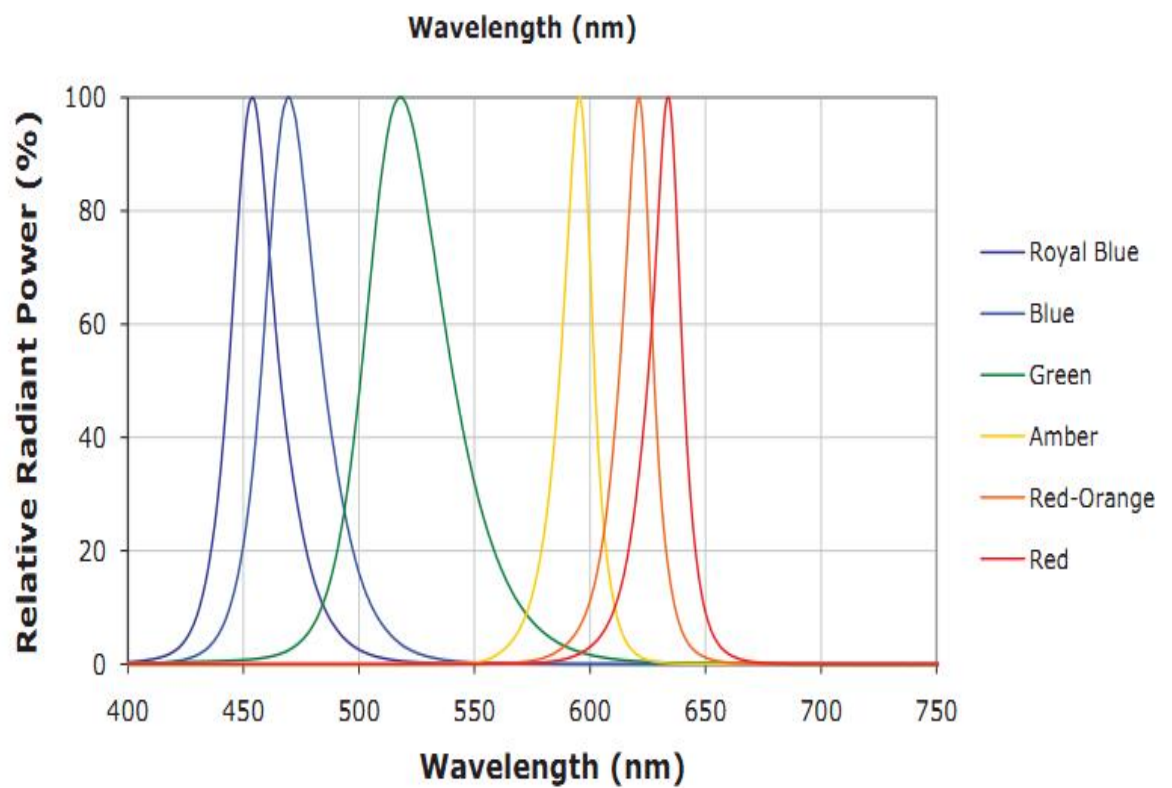
Note: Tolerance ⊕ :10%

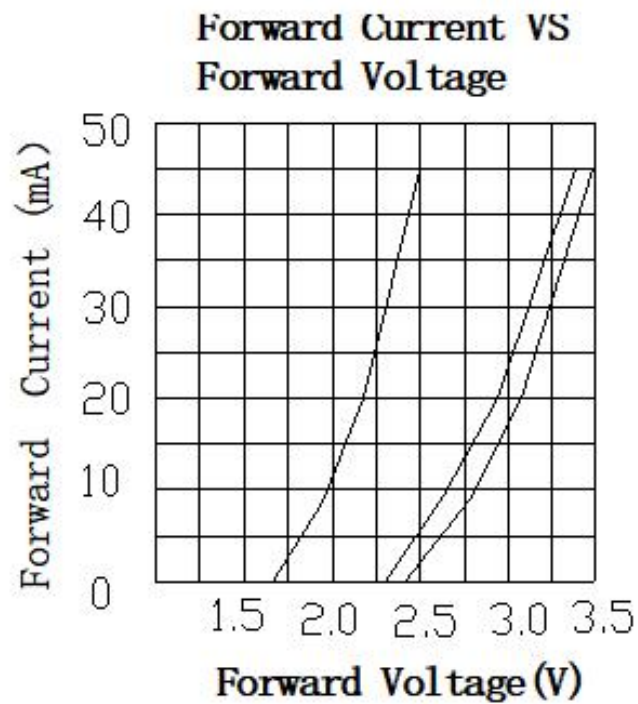
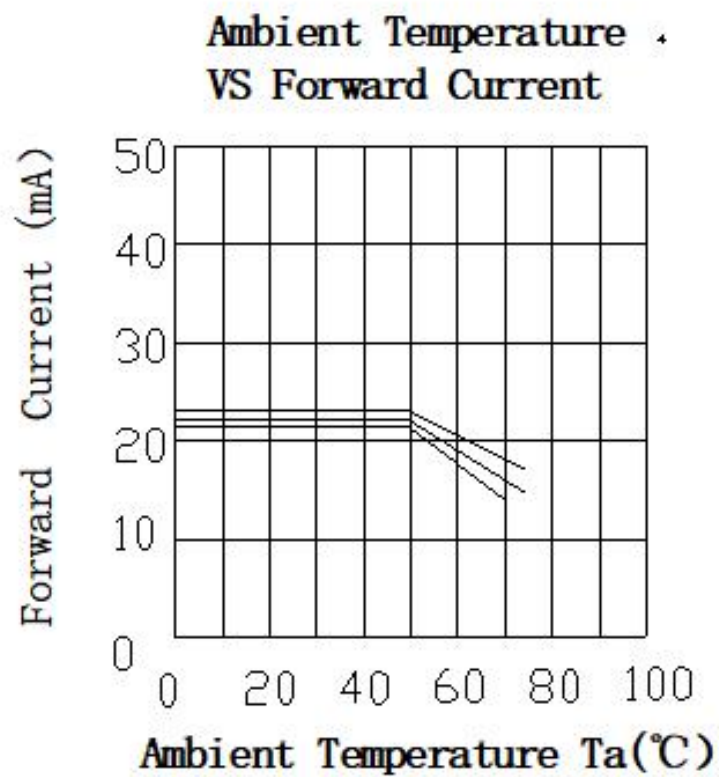
Color and flux characteristics of Ta=25°C

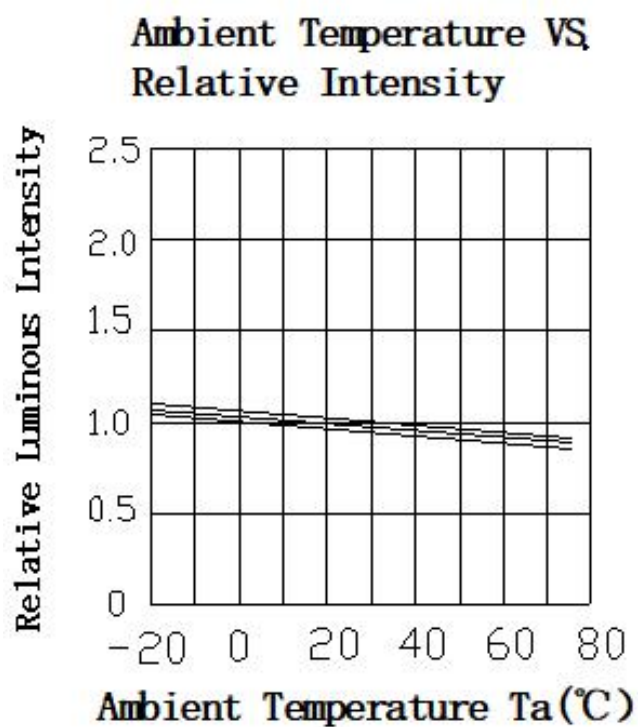
Color	Wavelength range(nm)		Luminous Flux		Test Condition
	Min	Max	Min	Max	
Red	615	630	5	18	IF=2mA
Blue	455	475	5	18	IF=2mA
Green	515	535	25	65	IF=2mA

Notes: Flux tolerance of ±7%

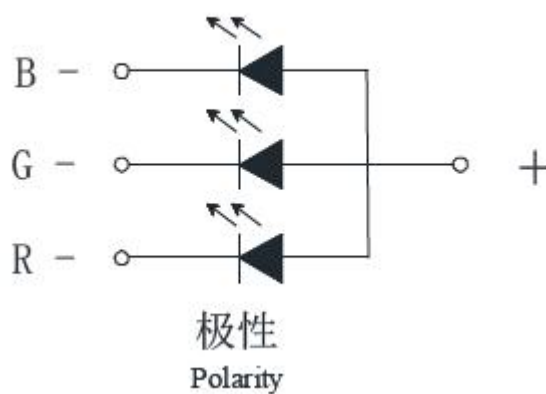
Wavelength Characteristics



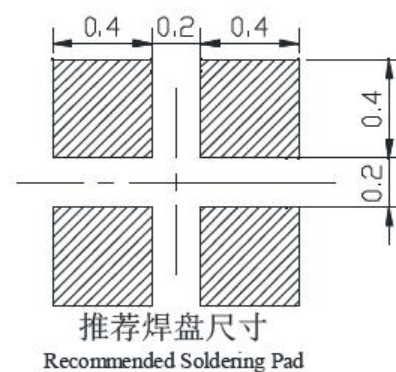
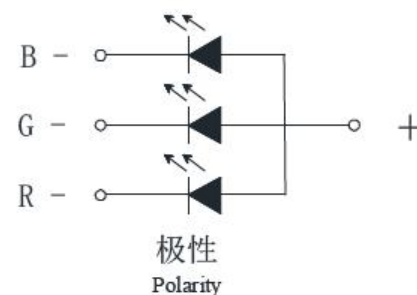
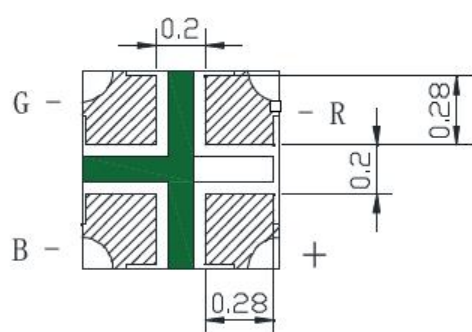
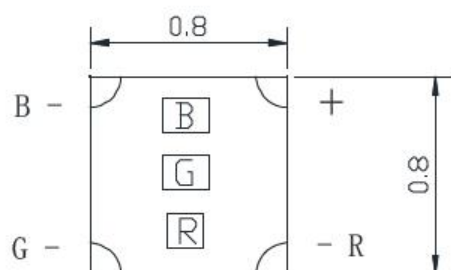




The connection method of chips :



Package Dimensions (MM)



- Notes:
1. All dimension units are millimeters.
 2. All dimension tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.
 3. The brass column of heat sink of the high power LED is Anode. Please pay more attention to the necessary installation, when installing The heat dissipate on equipments and connecting the electric circuit in avoid of short circuit and destroying

Product access and installation:

Before opening the electrostatic shielding bag, it is required to confirm whether the working table and production equipment are grounded. The operator shall wear electrostatic bracelet, gloves or fingertips for operation. After opening the package, the operator should use tweezers to hold both sides of the lamp bead to avoid direct contact with the front cover plate of the lamp bead. The workplace should be free of VOC pollution. Unnecessary pollution will lead to the strong absorption of the UV emitted from the front and affect the light power.

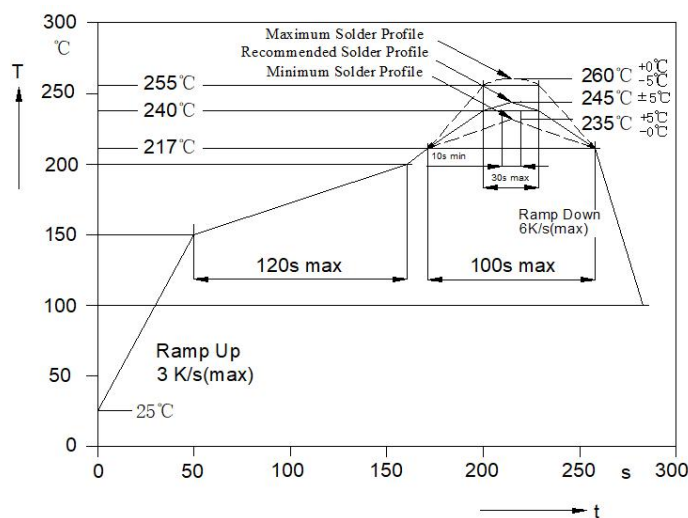
The lamp bead cover plate is a fragile component. Knocking, vibration, prying, clamp and other operations are easy to cause the cover plate to break and affect the use.

* welding of products:

It is recommended to use low temperature solder paste for reflow welding, and the temperature curve can refer to the following figure:

Note:

- 1) The actual temperature curve shall depend on the type, proportion and Different reflow soldering equipment, substrate materials, etc And adjustment;
- 2) It is recommended to do more tests before batch welding to ensure the best workers are used Art curve;
- 3) Improper return temperature and time may cause the bead surface The discoloration of the coating may cause the LED chip in the lamp bead to be desoldered and fail;
- 4) After reflow welding, the lamp beads should not be repaired again. When repair is inevitable, double head soldering iron must be used, and it is necessary to confirm in advance whether this way damages the characteristics of the lamp bead itself.



specific definition of each temperature zone in the figure:

Preheating zone: the heating rate is $1.0-3.0\text{ }^{\circ}\text{C} / \text{s}$, and the heating rate is too fast in the preheating zone, which is easy to make the mobility and composition of solder paste worsen, and easy to produce the phenomenon of tin explosion and solder bead.

Soakage zone: temperature $110-130\text{ }^{\circ}\text{C}$, time 90-100s, if the temperature is too low, there will be solder not melting after reflow (recommended temperature rise rate $< 2\text{ }^{\circ}\text{C} / \text{S}$)

Back welding area: the peak temperature shall be set at $170-180\text{ }^{\circ}\text{C}$. It is recommended to adjust the melting time above $138\text{ }^{\circ}\text{C}$ to 50-80 seconds.

Cooling zone: cooling rate $< 4\text{ }^{\circ}\text{C} / \text{S}$

Special note:

1 for any other matters not mentioned in this specification, please call our sales department.

2 important safety tips:

This product will produce deep ultraviolet after correct operation and power on, and direct irradiation may cause harm to human skin and eyes. It is recommended to wear protective clothing, gloves and goggles during operation / use. It is strictly prohibited to directly irradiate the ultraviolet without taking protective measures, and it is strictly prohibited to directly look at the ultraviolet without wearing protective glasses.

