SAMPLE APPROVE SHEET

Customer Name: _____

Product description: SMD5050 RGB 6LEAD 0.5W

Product Name: CL-SFC515BRG-05

Issue Date : 2024-04-18

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

Customer confirmation	Checked by	Prepared by

ATTENTION

OBSERVE PRECAUTIONS
ELECTOSTATIC
SENSITIVOS DEVICES

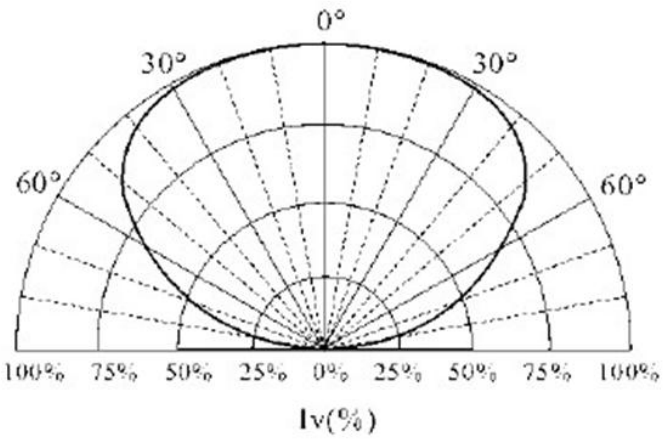
Features And Benefits

- Designed for high current operation
- Low thermal resistance
- RGB 3n1 LED, High Power
- Pb-free reflow soldering application

Key Applications

- Indoor lighting
- Outdoor lighting
- Automotive
- Architectural lighting
- Industrial lighting
- Portable torch

Radiation Pattern



Typical Optical/ Electrical Characteristics @TJ=25℃

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage Red	V_F	IF=60mA	2.0	--	2.4	V
Forward Voltage Green	V_F	IF=60mA	3.0	--	3.4	V
Forward Voltage Blue	V_F	IF=60mA	2.8	--	3.4	V
Reverse Current	I_R	VR=5v	--	5	--	μA
50% Power Angle	2θ1/2	//	--	120	--	deg
Recommend Forward Current	I_F	--	--	20	--	mA
Luminous Intensity Red	Φv	IF=60mA	6	--	8	Lm
Luminous Intensity Green	Φv	IF=60mA	15	--	20	Lm
Luminous Intensity Blue	Φv	IF=60mA	4	--	6	Lm
Junction temperature	T_J	//	--	125	--	℃
Dominant wavelength Red	Tc	IF=60mA	620	--	630	nm
Dominant wavelength Green	Tc	IF=60mA	520	--	530	nm
Dominant wavelength Blue	Tc	IF=60mA	460	--	470	nm
Thermal Resistance,Junction to Case	R_{JP}	//	--	8	--	℃/W

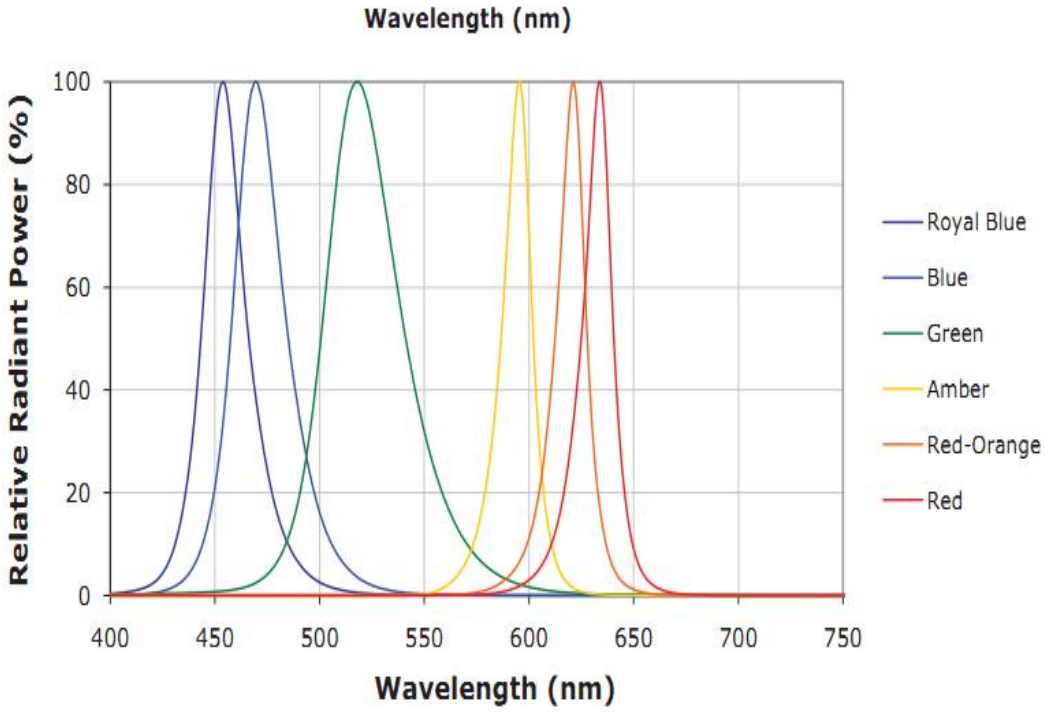
Notes:1.Tolerance of measurement of forward voltage±0.1V.
2.Tolerance of measurement of peak Wavelength±2.0nm.
3.Tolerance of measurement of luminous intensity±5%.

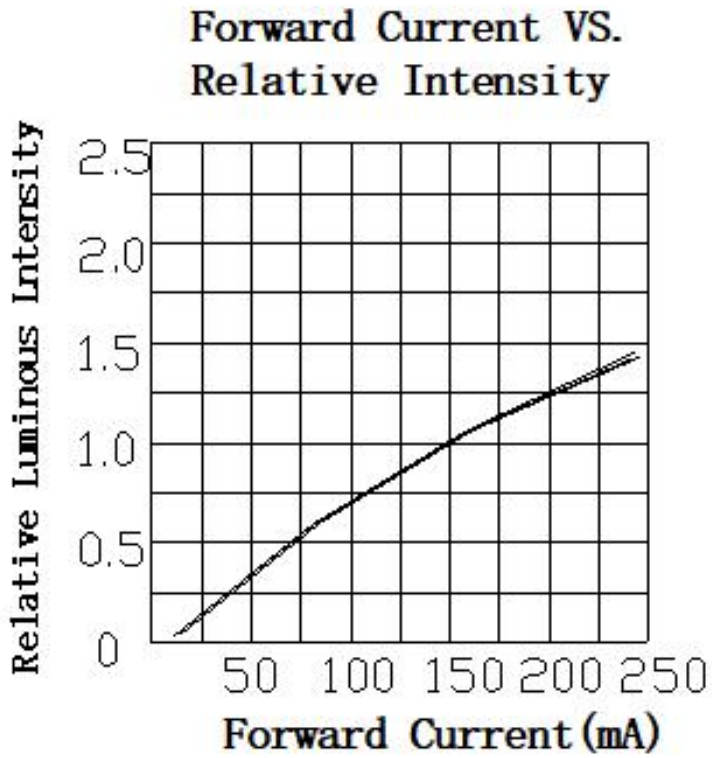
Absolute Maximum Rating

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	IF	60	mA
Peak Forward Current*	IFP	100	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	5	W
Operation Temperature	TOPR	-40~+80	℃
Storage Temperature	TSTG	-40~+100	℃
Lead Soldering Temperature*	TSOL	Max. 260℃ for 5sec Max.	

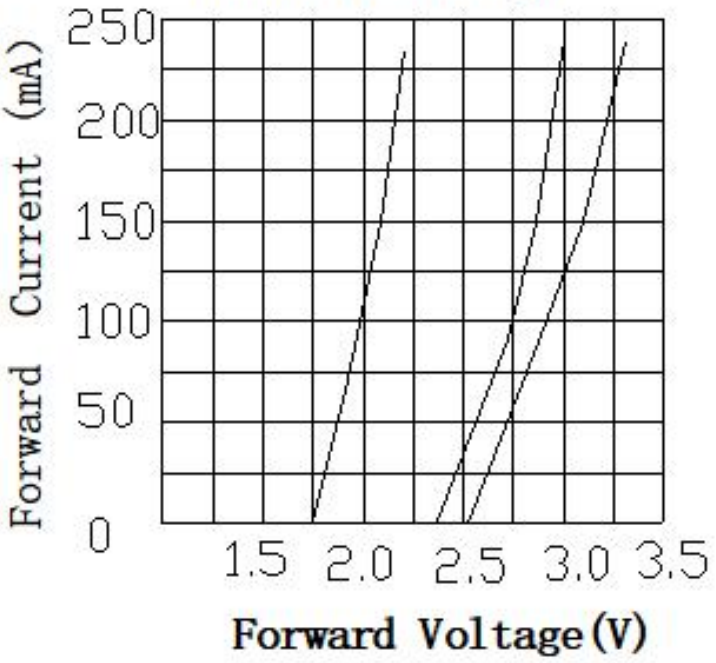
*IFP Conditions：Pulse Width≤10msec duty≤1/10
* All high power emitter LED products mounted on aluminum metal-core printed circuit board, can be lighted directly, but we do not recommend lighting the high power products for more than 5 seconds without a appropriate heat dissipation equipment.
*Re-flow,wave peak and soak-stannum soldering etc.is not suitable for this products.
*Suggest to solder it by professional high power LED soldering machine.
*Can use invariable-temperatur e searing-iron with soldering condition :≤260 degree less than 3 seconds.

Wavelength Characteristics

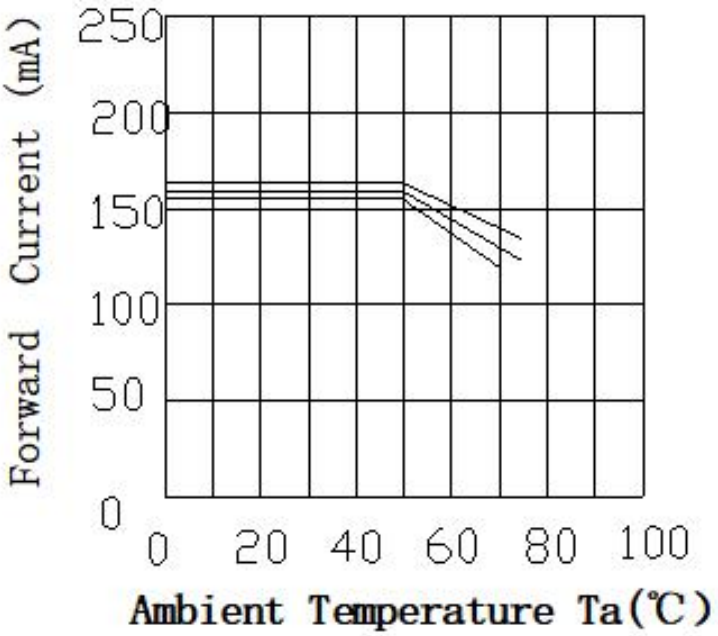


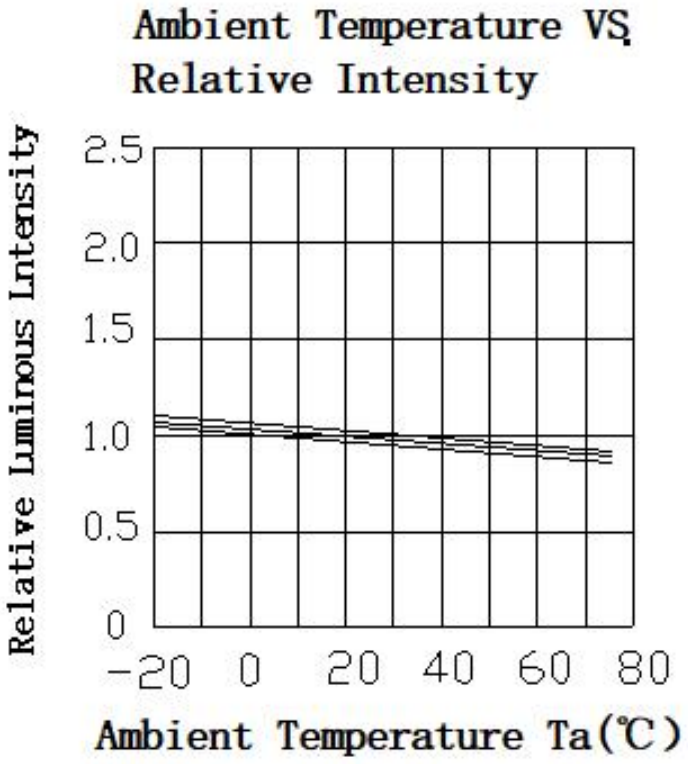


Forward Current VS
Forward Voltage

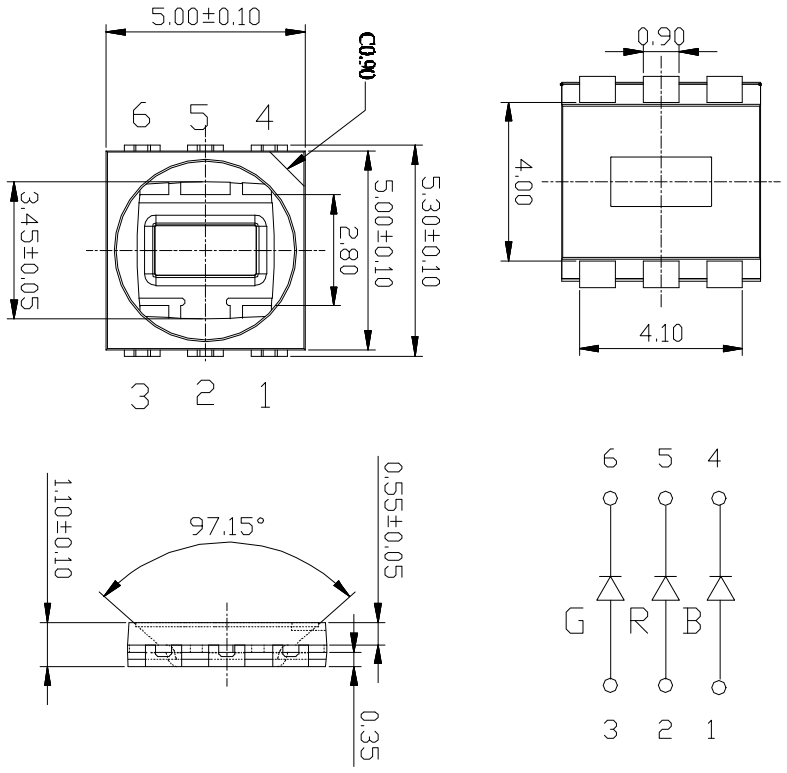


Ambient Temperature .
VS Forward Current



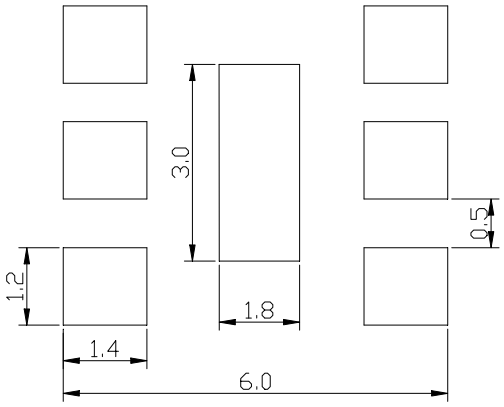

Ambient Temperature VS
Relative Intensity
Relative Luminous Intensity
2.5
2.0
1.5
1.0
0.5
0
-20
0
20
40
60
80
Ambient Temperature Ta(℃)

Package Dimensions

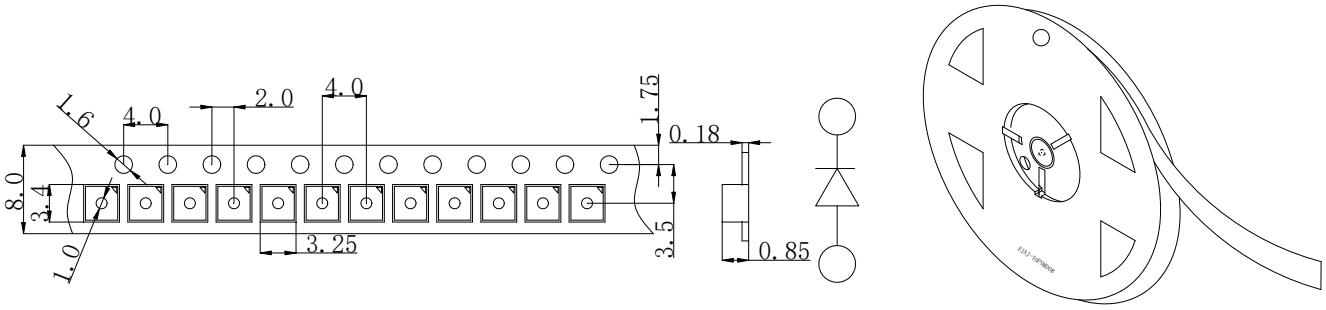


Notes: 1. All dimension units are millimeters.
2. All dimension tolerance is ±0.2mm unless otherwise noted.
3. The brass column of heat sink of the high power LED is Anode。Please pay more attention to the necessary installation，when installing The heat dissipate on equipments and connecting the electric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

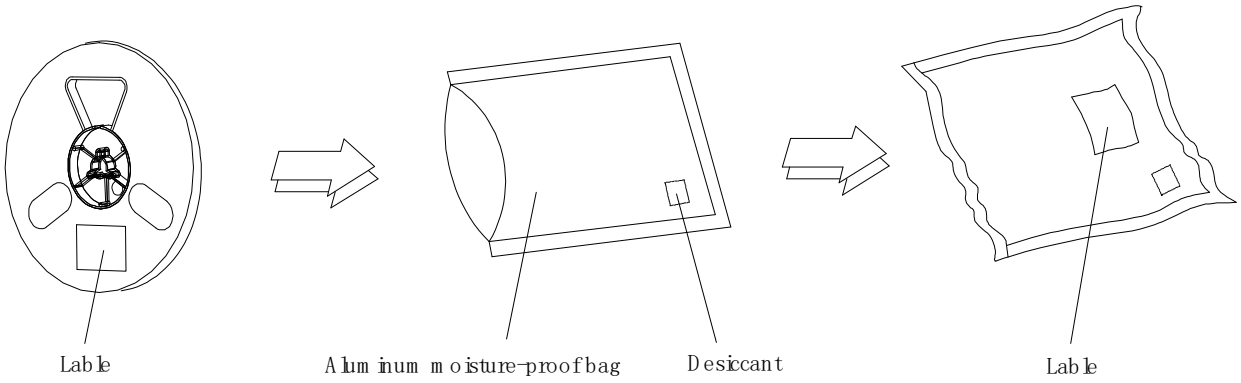
Recommended Soldering Patter：



Tape leader and reel



Moisture Resistant Packaging



Note:

1 LED bracket forming method: The pin of LED canbe bent where is at least 2mm out of LED colloid; Finishing the forming of LED bracket must be before soldering; Guarantee the gap between two pin of LED tallys with LED pads in PCB when forming;

2 Manual soldering: The tip temperature of soldering iron don't exceed300℃;soldering time don't exceed 3s and soldering position must be 3mm out of led colloid;

3 Static electricity and high volt can damage LED,The production whose Die material is InGaN must strictly required ESD,Must put on static glove and static fillet,soldering tool and the cover of device must connect the ground,soldering condition follows the related stating of production specification manual.

4 Protecting countermeasure when over current: Need add the protecting resistor in circuit in order to avoid damaging led due to big current and voltage fluctuation

5 LED installation method： LED can be stored for a year under the condition,the temperture of 5℃~35℃ and humidity of RH60%, These production must be re-inspected and tested before use if their storage time exceed a year.

6 If LED is exposed in air for a week under the condition,the temperature of 5 ℃ ~35℃, humidity of RH60%,must place the LED in the ambience of 65℃ ±5℃for 24 hours .