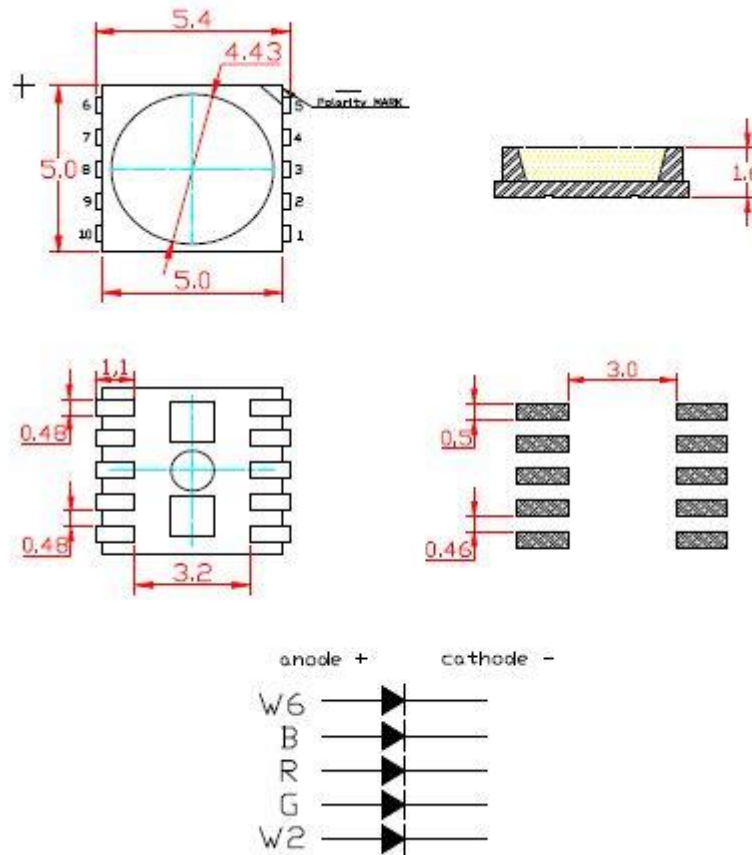


PRODUCT SPECIFICATION

SLM-5050RGB2W6D06

5-in-1 RGBW+W

Outline Dimension



Absolute maximum ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	PD	240	mW
Forward Current	IF	20	mA
Peak Forward Current *1	IFP	120	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge	ESD	2000	V
Operating Temperature	Topr	-40~+85	°C
Storage Temperature	Tstg	-40 ~+100	°C

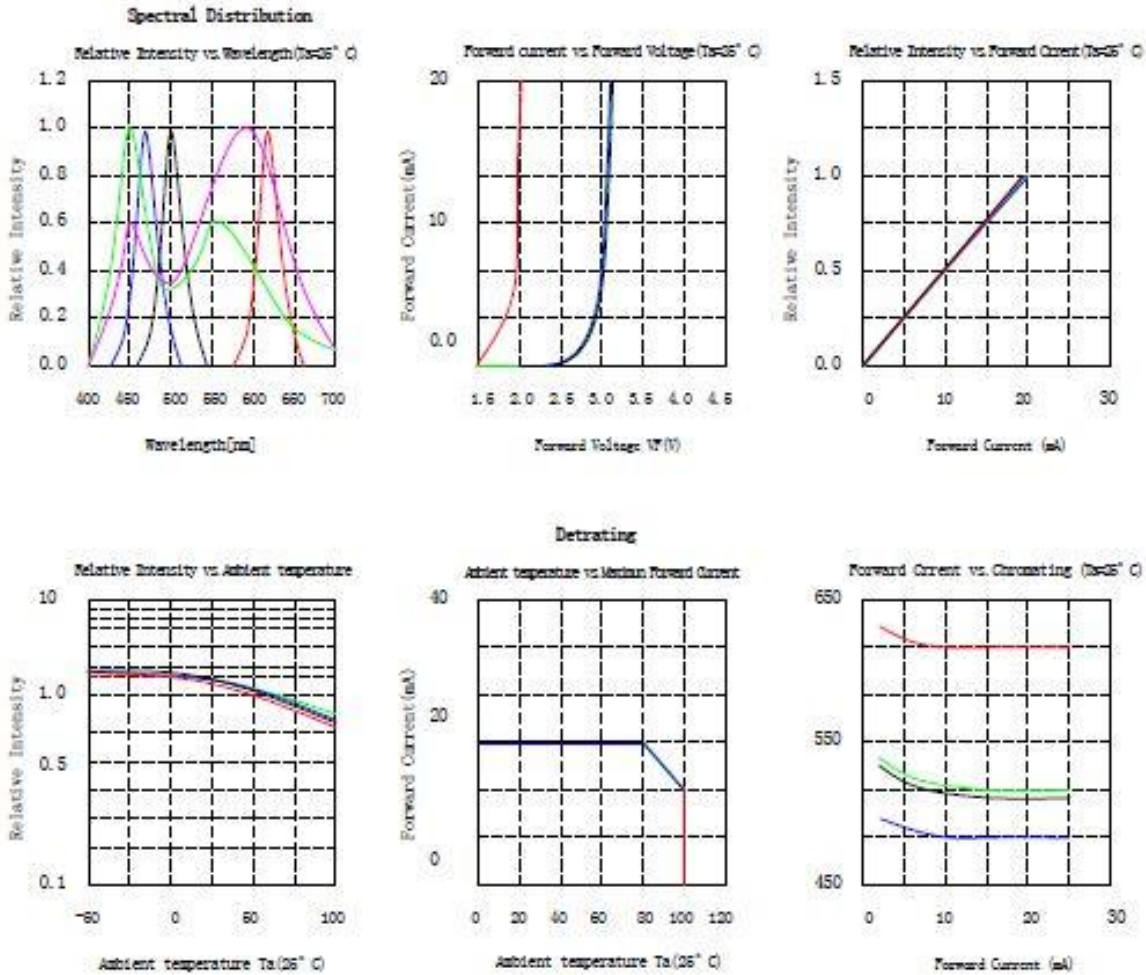
* Pulse width ≤ 0.1msec Duty Ratio ≤ 1/10

Electro-optical characteristics at Ta=25°C

Parameter		Symbol	Min	Typ	Max	Unit	Condition
Forward Voltage	W2	Vf	2.8		3.2	V	IF=20mA
	R		2.0	-	2.4		
	G		2.8		3.2		
	B		2.8		3.2		
	W6		2.8		3.2		
Luminous Intensity	W2		7		8	lm	
	R	Iv	500		700	mcd	
	G		1300		1800		
	B		400		600		
	W6		7		8	lm	
Chromaticity CCT	W2		2300		2500	K	
Dominant Wavelength	R	λD	620		625	nm	
	G		520		525		
	B		465		470		
Chromaticity CCT	W6		6000		6500	K	
Viewing Angle		2θ _{1/2}	-	100	-	deg	-
Reverse Current		IR	-		5	μA	VR=5V

Note: Tolerance Iv ±10% λD ±2nm Vf±0.05V

Typical Characteristics Curves



Guideline for Soldering

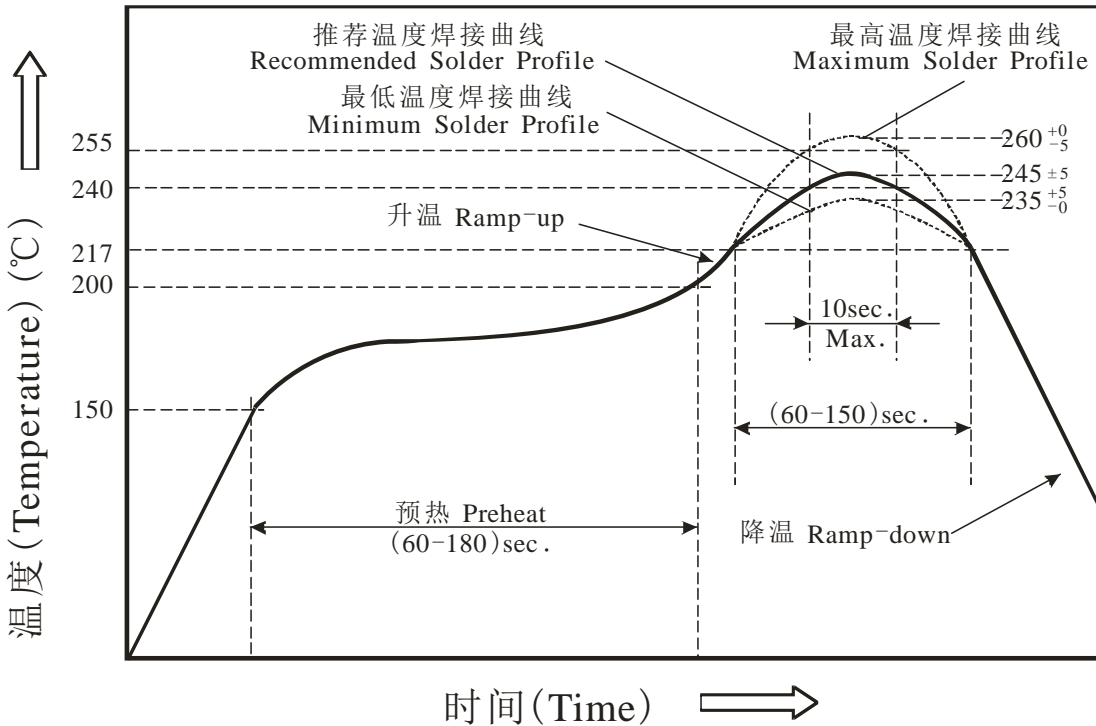
1. Hand Soldering

A soldering iron of less than 20W is recommended to be used in Hand Soldering. Please keep the temperature of the soldering iron under 300°C while soldering. Each terminal of the LED is to go for less than 3 second and for one time only.

Be careful because the damage of the product is often started at the time of the hand soldering.

2. Reflow Soldering: Use the conditions shown in the under figure of Pb-Free Reflow Soldering.

3.



Reflow soldering should not be done more than two times.

Stress on the LEDs should be avoided during heating in soldering process.

After soldering, do not deal with the product before its temperature drop down to room temperature.

4. Cleaning

It is recommended that alcohol be used as a solvent for cleaning after soldering. Cleaning is to go under 30°C for 3 minutes or 50°C for 30 seconds. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not.

Ultrasonic cleaning is also an effective way for cleaning. But the influence of Ultrasonic cleaning on LED depends on factors such as ultrasonic power. Generally, the ultrasonic power should not be higher than 300W. Before cleaning, a pre-test should be done to confirm whether any damage to LEDs will occur.

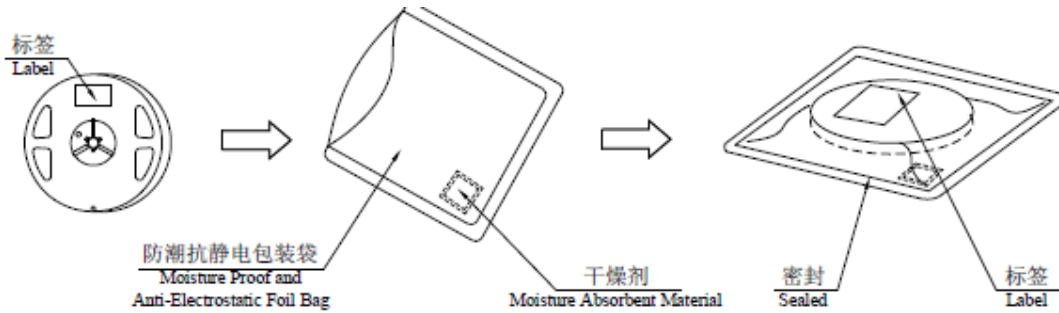
*Note: This general guideline may not apply to all PCE designs and configurations of all soldering equipment. The techniques in practice is influenced by many factors, it should be specialized base on the PCB designs and configurations of the soldering equipment.

Reliability tests

Test Items (测试项目)	Ref. Standard (参考标准)	Test Condition (测试条件)	Time (时间)	Quantity (数量)	Ac/Re (接收/拒收)
Reflow (回流焊)	JESD22-B106	Temp=260°Cmax T=10sec	3 times	0/22	0/1
Temperature Cycle (温度循环)	JESD22-A104	-20°C ± 5°C 30min ↑↓5min 120°C ± 5°C 30min	200 cycle	0/22	0/1
Thermal Shock (冷热冲击)	JESD22-A106	-40°C ± 5°C 15min ↑↓5sec 100°C ± 5°C 15min	200 cycle	0/22	0/1
High Temperature Storage (高温存储)	JESD22-A103	Temp=100°C ± 5°C	1000 hrs	0/22	0/1
Low Temperature Storage (低温存储)	JESD22-A119	Temp=-40°C ± 5°C	1000 hrs	0/22	0/1
Power temperature Cycling (点亮高低温循环)	JESD22-A105	On5min-40°C>5min ↑↓ ↑↓<5min Off5min100°C>5min	200 cycle	0/22	0/1
Life Test (老化测试)	JESD22-A108	T _a =25°C ± 5°C I _F =100mA	1000 hrs	0/22	0/1
High Temperature High Humidity Life Test (高温高湿)	JESD22-A101	85°C ± 5°C / 85%RH I _F =100mA	1000 hrs	0/22	0/1

Packaging

Moisture Proof and Anti-Electrostatic Foil Bag



Precautions

1. Storage

Moisture proof and anti-electrostatic package with moisture absorbent material is used, to keep moisture to a minimum.

Before opening the package, the product should be kept at 30°C or less and humidity less than 60% RH, and be used within a year.

After opening the package, the product should be stored at 30°C or less and humidity less than 10%RH, and be soldered within 168 hours (7 days). It is recommended that the product be operated at the workshop condition of 30°C or less and humidity less than 60%RH.

If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (60±5 °C for 24 hours).

2. Static Electricity

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current., even not light. All devices, equipment and machinery must be properly grounded. At the same time, it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs