



# SPEC. TITLE

## WS2812S/B Products Using Instructions

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### 1. Purpose:

**WS2812S/B** LED lamp's surface use the high hardness silicone resin,can ensure that no matter customers use PU glue or epoxy resin to do the silicone drop rubber processing,won't lead the LED to die;also has a very good anti sulfide capacity. Good compatibility with bracket, but the silicon resin has a higher requirements on the humidity and dehumidification process, especially pay attention during wet season,ensure the production safety.

### 2. Transport and application area:

All WS2812S/B products during the transportation process, need to maintain a positive upward, moisture-proof, during the transport process,shall avoid the extrusion, collision and vibration.

### 3. Product storage and deadline:

Sealed storage at room temperature: 20 °C ~ 30 °C, 40% ~ 60%RH, the product is valid for 3 months;

Moisture seal storage: 20 °C ~ 30 °C, 25% ~ 60%RH, the product is valid for 6 months;

After opening the product packaging , suggest using them within 1 hours,(environmental conditions of temperature <30 °C, humidity <60%).

### 4. Dehumidification process:

LED products which is beyond the prescribed time limit,or for getting damp for some other reasons,we recommend the customer first do the dehumidification process,then use them.Dehumidification method:under 70 °C -75 °C / 22 ±2 hours.

## 5. Electrostatic protection:

LED is the electrostatic sensitive devices, although the LED product has excellent anti-static ability, but after each ESD impact, will cause a certain degree of damage to LED. Thus in using process of LED products, must do the electrostatic protection measures, such as anti-static gloves, anti-static Bracelet etc..

## 6. Manual welding operation instruction

Suggest using the Electric soldering iron whose power is less than 30W, then control the electric soldering iron's temperature being not higher than 350 °C, every time when welding electric iron in the bracket pin, stay time shall be no more than 3 seconds, if requiring repeat welding, then interval time shall be no less than 2 seconds. Please don't touch or extrusion the LED's surface, in order to avoid damage to the internal LED, at the same time, please pay attention to avoid the electric iron burns the colloid on the surface of LED and other injuries.

## 7. Reflow instructions

Set the reflow parameters, check the following drawing and table for reference., recommend using Senju, Alfa, Henkel loctite brand solder paste, recommends customers do the necessary adjustments according to foundation of material properties provided by the solder materials suppliers.

Curve description	Lead in solder reflow	SMT LINE
The lowest preheat temperature(Tsmin)	100°C	150°C
The highest preheat temperature(Tsmax)	150°C	200°C
Preheating time (Tsmin to Tsmax)(ts)	60-120 S	60-180 S
Average rate of temperature rise(Tsmax to Tp)	<3°C/S	<3°C/S
liquid phase temperature (TL)	183°C	217°C



Holding time liquid region (tL)	60-150 S	60-150 S
peak temperature(Tp)	235 °C	250°C
High temperature region (the peak temperature -5 °C) residence time (tp)	<10 S	<10 S
Decreasing temperature rate	<6°C/S	<6°C/S
Stay time from room temperature to the peak temperature	<6 min	<6 min

## 8. Notice of Production

- 1.All products ,during SMT, please carefully check, if the vacuum packaging intact, no leakage phenomenon,Please use directly, can don't do the bake dehumidification.
2. During use, please open a bag and use a bag,please don't open many bags at one-time which shall lead the LEDs absorb moisture in the air since you don't use them at once.
3. After SMT,please do the reflow soldering furnace immediately,please don't leave them in in the pre reflow for a long time which absorb moisture.Especially when off work,please use out the LEDs which is out of packaging,please SMT and reflow,do not let them stay in the air for a long time.
4. Dehumidification process,please under 75°C, bake for 48 hours. Also note during using, use the LEDs immediately after taking out of the bake box,please don't take many reels at one-time, since it is very hot when taking out,LED in the cooling process more easily absorb the moisture in the air into the inside of the LED ,which shall cause led dead during reflow.
- 5.Please pay attention that it is forbidden to secondary reflow soldering.