

## sk6812 LED Digital RGB full color SMD

SK6812 as new type of 5050 RGB LED Pixel, it is similar to our APA104 LED WS2812B, they are 4pin, RGB dimming, can use the same PCB of ws2812b and apa104.

It is stable as apa104, ws2812b. Also SK6812 can be compatible with ws2812b apa104 controllers. SK6812 full color RGB led strip provide us one more choice.

### Product Description

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#### Product Overview

SK6812 is a set of smart control circuit and a light emitting circuit in one of the controlled LED source. The outer type is the same with a 5050 LED chip, each element is a pixel. Pixels contained within the intelligent digital interface data latch signal shaping amplification circuit, power supply circuit, a built-in constant current circuit, high precision RC oscillator, the output is driven by the patented PWM technology, effectively guarantee the pixels in the color of the light high consistency. Data protocol using unipolar NRZ communication mode, the pixel is reset after the end of DIN, accept the data transmitted from the controller to the 24bit, the first to send data by the first pixel to pixel extraction, internal data latch, the remaining data after the internal plastic the processing circuit after shaping amplification through the DO port output began to turn to the next cascade of pixels, each pixel through a transmission signal, reduce. Pixel using automatic shaping forwarding technology, makes the number of cascade without signal transmission limit of the pixel, only limited signal transmission speed. The LED has a low driving voltage, environmental protection and energy saving, high brightness, scattering angle, good consistency, low power, long life and so on. The control circuit is integrated in the LED above, more simple circuit, small volume, easy installation.

#### Main Application Field:

1. Full color LED string light, LED full color module, LED super hard and soft lights, LED guardrail tube, LED appearance / scene lighting
2. LED point light, LED pixel screen, LED shaped screen, a variety of electronic products, electrical equipment etc.

#### Description:

Top SMD internal integrated high quality external control line serial cascade constant current IC;

1. control circuit and the RGB chip in SMD 5050 components, to form a complete control of pixel, color mixing uniformity and consistency;
2. built-in data shaping circuit, a pixel signal is received after wave shaping and output waveform distortion will not guarantee a line;

- 3.The built-in power on reset and reset circuit, the power does not work;
- 4.gray level adjusting circuit (256 level gray scale adjustable);
5. red drive special treatment, color balance;
6. line data transmission;
7. plastic forward strengthening technology, the transmission distance between two points over 10M;
- 8.data transmission frequency up to 800Kbps, when the refresh rate of 30 frames per second, a cascade of not less than 1024;
9. built-in powerpolarity protection module, powerpolarity will not damage.

Name	S5050-SK6812
Emitting Color	BGR(Blue,Green,Red)
Wavelength	Red: 620-625nm; Green: 522.5-525nm; Blue: 467.5-470nm
Luminous flux	Red: 700-1000mcd; Green: 1500-2200mcd; Blue: 700-1000mcd
Viewing angle	120 degree
Color rendering index	75Ra
Forward Current	20mA
Peak Forward Current	100mA
Forward Voltage	R:2.0-2.2V; G:3.0-3.3V; B:3.0-3.3V
Reverse Voltage	5V
Frequency	50/60Hz
Material	AlGaInP/InGaN
Operating temperature	-40~ 80°C
Store temperature	-45~ 150°C
Operating Humidity	10%-60%RH
Store Humidity	40%-60%RH

