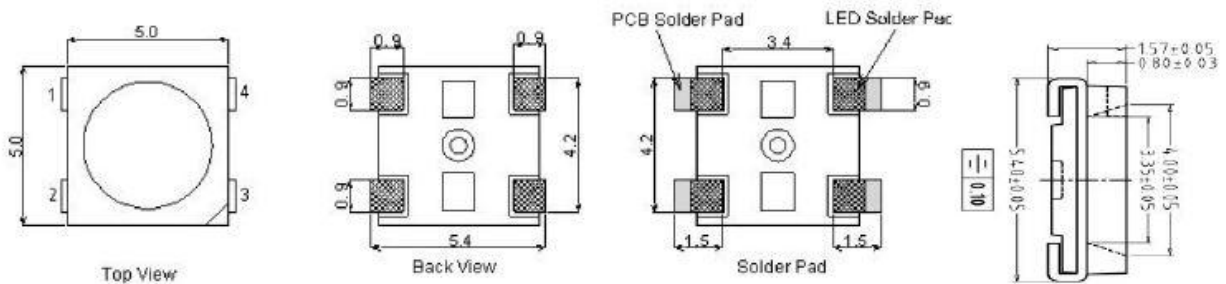


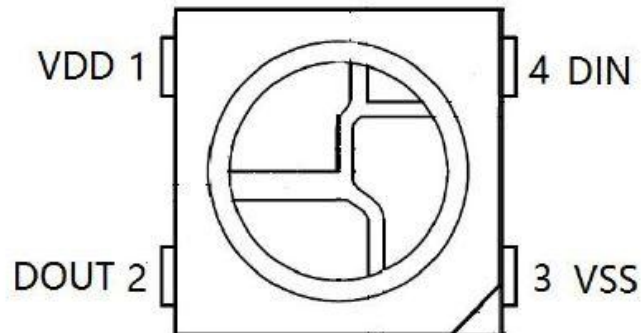
5050 RGB LED 4-Pin With Integrated IC WS2812

We have SMD 5050 RGB LED with inside IC, that you can control the RGB LED easily. This led is 1000pcs/reel.SMD 5050 addressable chip full color LED.



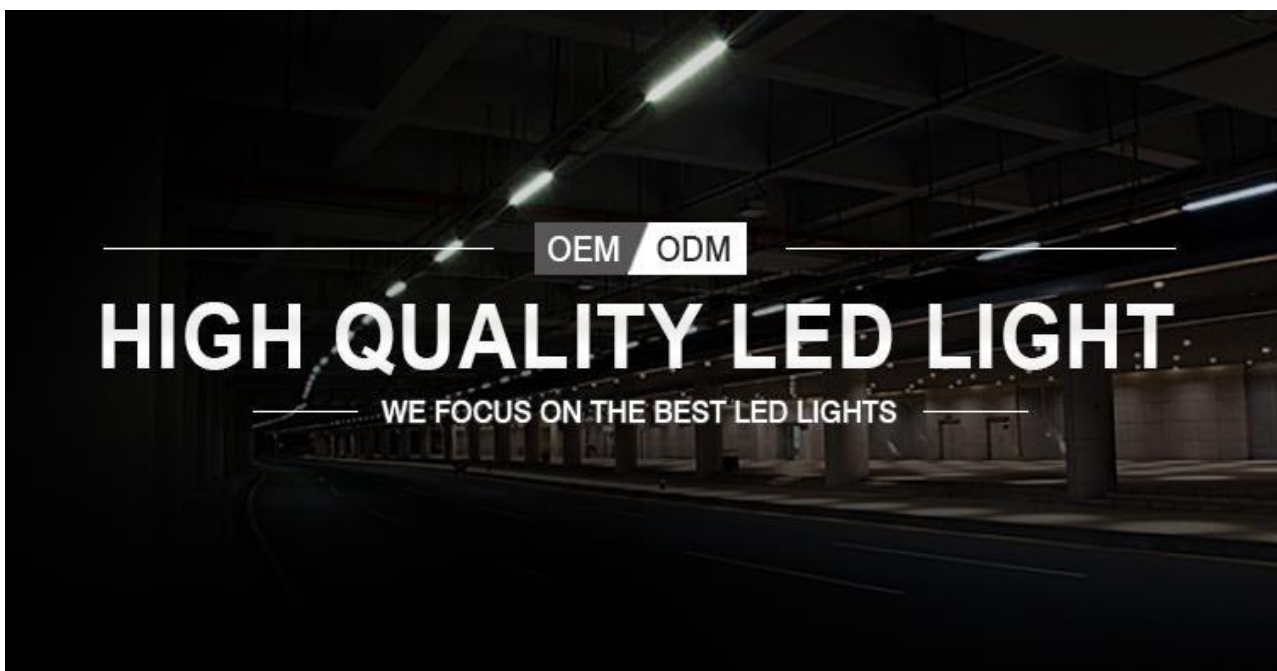
Remarks: Dimension of 5.0*5.4*1.57mm, default Tolerance of 0.05mm.

PIN Configuration



Features

1. 5050 with integrated high quality constant current IC and RGB LED chip.
2. Built-in IC, with high precision of constant current and internal RGB chips spectral processing in advance.
3. Single line data transmission (return to zero code) .
4. Specific Shaping Transmit Technology - number of LED stacked is not restricted.
5. Cascading Enhancement Technology - any 2 LED spacing can be up to 10 meters
6. Data transfer rate of 800 kbp/s at 30 frames per second.
7. RGB output port PWM control can achieve 256 grey level adjustments
9. Upon powering up, IC performs self-inspection then lights connection on the pin B lamp.
10. SA-I Anti-interference patent technology for single line data transmission.
11. Built-in power supply reverse connect protection module, reversed power input will not damage the IC.



More energy saving



High brightness



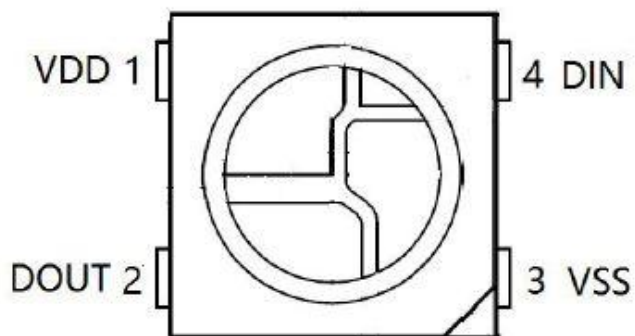
Durable



High-quality materials

PRODUCT PRESENTATION

PIN Configuration



PIN Function

NO.	Symbol	Function description
1	VDD	Power supply LED
2	DOUT	Control data signal output
3	VSS	Ground
4	DIN	Control data signal input

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Power supply voltage	V_{DD}	+3.5~+5.3	V
Input voltage	V_I	-0.5~ $V_{DD}+0.5$	V
Operation junction temperature	T_{opt}	-25~+85	°C
Storage temperature range	T_{stg}	-40~+105	°C

Electrical Characteristics ($T_A=-20\sim+70^\circ\text{C}$, $V_{DD}=4.5\sim5.5\text{V}$, $V_{SS}=0\text{V}$, unless otherwise specified)

Parameter	Symbol	Conditions	Min	Tpy	Max	Unit
Input current	I_I	$V_I=V_{DD}/V_{SS}$	—	—	± 1	μA
Input voltage level	V_{IH}	D_{IN}, SET	0.7 V_{DD}	—	—	V
	V_{IL}	D_{IN}, SET	—	—	0.3 V_{DD}	V
Hysteresis voltage	V_H	D_{IN}, SET	—	0.35	—	V

Switching Characteristics ($T_A=-20\sim+70^\circ\text{C}$, $V_{DD}=4.5\sim5.5\text{V}$, $V_{SS}=0\text{V}$, unless otherwise specified)

Parameter	Symbol	Condition	Min	Tpy	Max	Unit
Transmission delay time	t_{PLZ}	$CL=15\text{pF}$, $D_{IN}\rightarrow D_{OUT}$, $RL=10\text{K}\Omega$	—	—	300	ns
Fall time	t_{THZ}	$CL=300\text{pF}$, $OUTR/OUTG/OUTB$	—	—	120	μs
Input capacity	C_I	—	—	—	15	pF

LED Characteristics

	Ref. Value
Quiescent Current	0.7mA
RGB Channel Constant Current	16mA
RED Brightness (Central Value)	600mcd
GREEN Brightness (Central Value)	1200mcd
BLUE Brightness (Central Value)	300mcd
WHITE Brightness (Central Value)	2100mcd
RED Wavelength	620-630nm
GREEN Wavelength	520-530nm
BLUE Wavelength	465-475nm

Data Transfer Time

T0H	0 code, high voltage time	220ns~380ns
T1H	1 code, high voltage time	580ns~1.6μs
T0L	0 code, low voltage time	580ns~1.6μs
T1L	1 code, low voltage time	220ns~420ns
RES	Frame unit, low voltage time	>280μs

PRODUCTION PROCESS



Die Bond



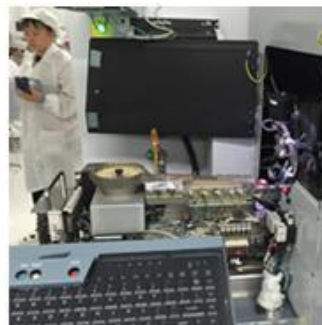
Wire Solder



Compression Moulding



Taping



Spectrometer



Slicing

Precautions

Please read the following notes before using the product:

1. Storage

1.1 Do not open moisture proof bag before the products are ready to use.

1.2 Before opening the package, the LEDs should be kept at 30°C or less and 80%RH or less.

1.3 The LEDs should be used within a year.

1.4 After opening the package, the LEDs should be kept at 30°C or less and 60%RH or less.

1.5 The LEDs should be used within 24 hours (1 day) after opening the package.

1.6 If the moisture adsorbent material has fabled away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 60±5°C for 24 hours.

Shipping:

1.FedEx/DHLUPSITNT for samples, Door-to-Door

2. By Air or by Sea for batch goods, for FCL; Airport Port receiving

3 Customers specifying freight forwarders or negotiable shipping methods

4.Delivery Time. 3-7 days for samples; 5-25 days for batch goods



Sales Representative

Elsa Xiao

Oversea Sales Manager

Dongguan Zhiding Electronics Technology CO., LTD

Add: No. 8, Yinling street, XiaQiao, Dongcheng Dist., Dongguan, Guangdong, China

Web: <http://www.allightled.com/>

E-mail: sales@zhidingled.com

Skype: elsa.xiao0418

Mobile/Whatsapp: 86-13412570091

Tel: 86-769-22665151

Fax: 86-769-22665155

WELCOME TO CONTACT US>>>>WWW.ZHIDINGLED.COM



Oversea Sales Manager
Elsa Xiao
E-mail:sales@zhidingled.com
Skype: elsa.xiao0418
Mobile: 86-13412570091
WhatsApp: 86-13412570091
Tel: 86-769-22665151
Fax:86-769-22665155