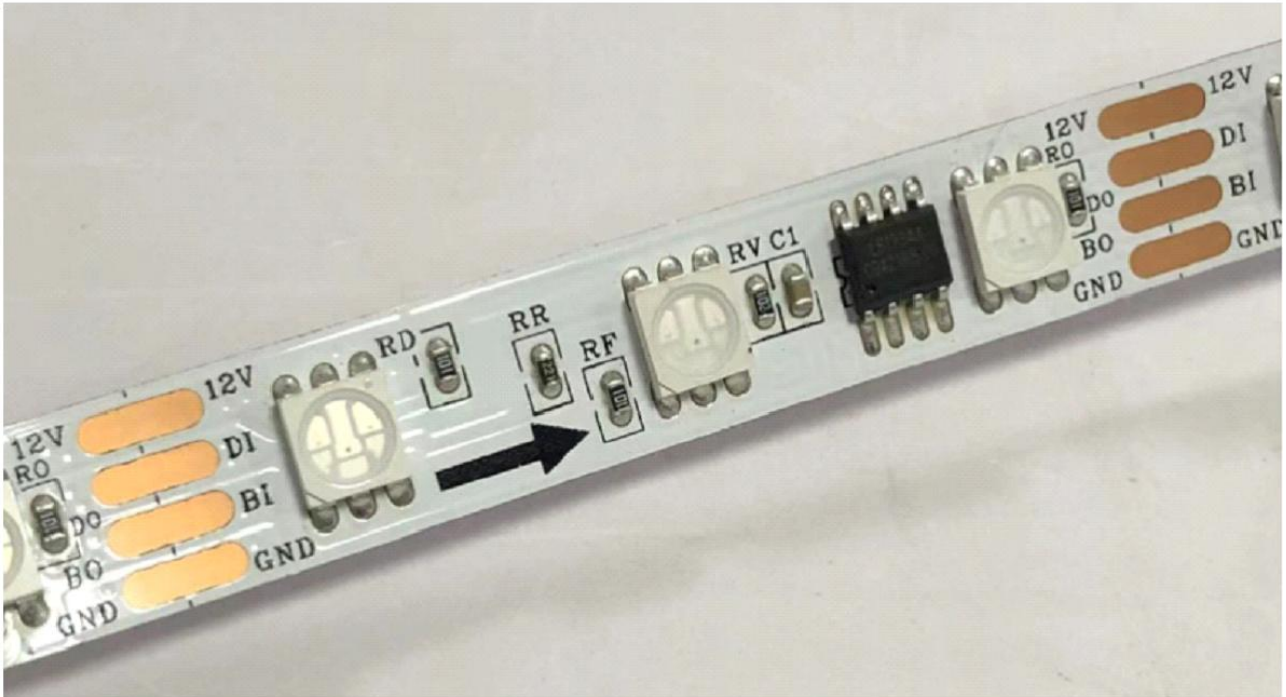


## RL-STR -TM1934A-5050RGB-60-12V

**Best seller: Dual signal digital 5050 RGB pixel led strip**



<https://www.rose-lighting.com> Email:info@rose-lighting.com

TEL:0755-23763467

Phone:008618675649004

Add: No.53 Yuexing Rd, Guanlan Street ,Longhua District,Shenzhen, China 518110

## Feature

- 1) Brightness > 2100mcd, 5050 RGB led lamp with copper bracket and gold wire
- 2) 2oz pure copper PCB board with 10mm width - 10meter long voltage drop
- 3) Double membrane covering the FPCB board for better protection
- 4) Standard SPI protocol - TM1934 IC chipset - dual signals
- 5) Cutting unit every 3 led/50mm
- 6) DC12V, 14.4W per meter(max)
- 7) LED density: 60pcs per meter
- 8) Controller system: artnet or offline or online led controller

## Parameter

Part No	RL-STR-TM934A-5050RGB-60-12V
Lighting Source	San an 5050RGB led
Operate Voltage	DC12V
Consumption Watt/M	14.4 Watt per meter (max)
PCB quality	Double layer 25um 50um Copper, <b>2oz</b>
LED quantity/M	60 LEDs per meter
Luminance (mcd)	2100MCD for one RGB 5050 led
IC chip	LB1934A(TM1934)
Cable	AWG22
Plug and cable	4pin female and male connector with 15cm cable at ends
Waterproof Grade	IP20/65/67/68
PCB width	10mm
warranty	2years

## LED Electro-optical Characteristic



参数 Parameter	符号 Symbol	测试条件 Test Condition	发光颜色 Emitted Color	数值 Value			单位 Unit
				Min	Typ	Max	
主波长 Dominant Wavelength	$\lambda_d$	$I_F = 20\text{mA}$	R	620	---	630	nm
			G	515	---	530	
			B	455	---	470	
正向电压 Forward Voltage	$V_f$	$I_F = 20\text{mA}$	R	1.8	---	2.4	V
			G	2.8	---	3.4	
			B	2.8	---	3.4	
发光强度 Luminous Intensity	IV	$I_F = 20\text{mA}$	R	500	---	650	mcd
			G	1000	---	1500	
			B	400	---	500	
角度 Viewing Angle	---	---	2 $\theta$ 1/2	---	120	---	deg
反向电流 Reverse Current		$V_R = 5\text{V}$	IR	---	---	10	$\mu\text{A}$

Wavelength Group( $I_F=20\text{mA}$ ,  $T_a=25\text{C}$ )

红光 Red	Rank	E	F	G
	WLD	615-620	620-625	625-630
绿光 Green	Rank	E	F	G
	WLD	515-520	520-525	525-530
蓝光 Blue	Rank	H	I	J
	WLD	455-460	460-465	465-470

备注：单位 nm，波段测试误差 $\pm 1$  Notes：Unit nm,Wavelength Tolerance is: $\pm 1$ .

## Terminal

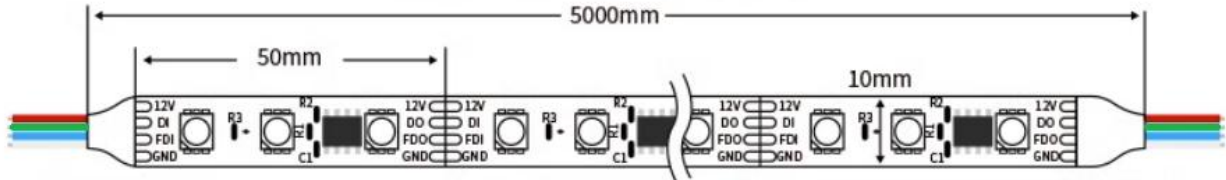
There is 4 Pin JST SM female/male connector on both end for signal input/output and power inputs at ends.

Color definition:

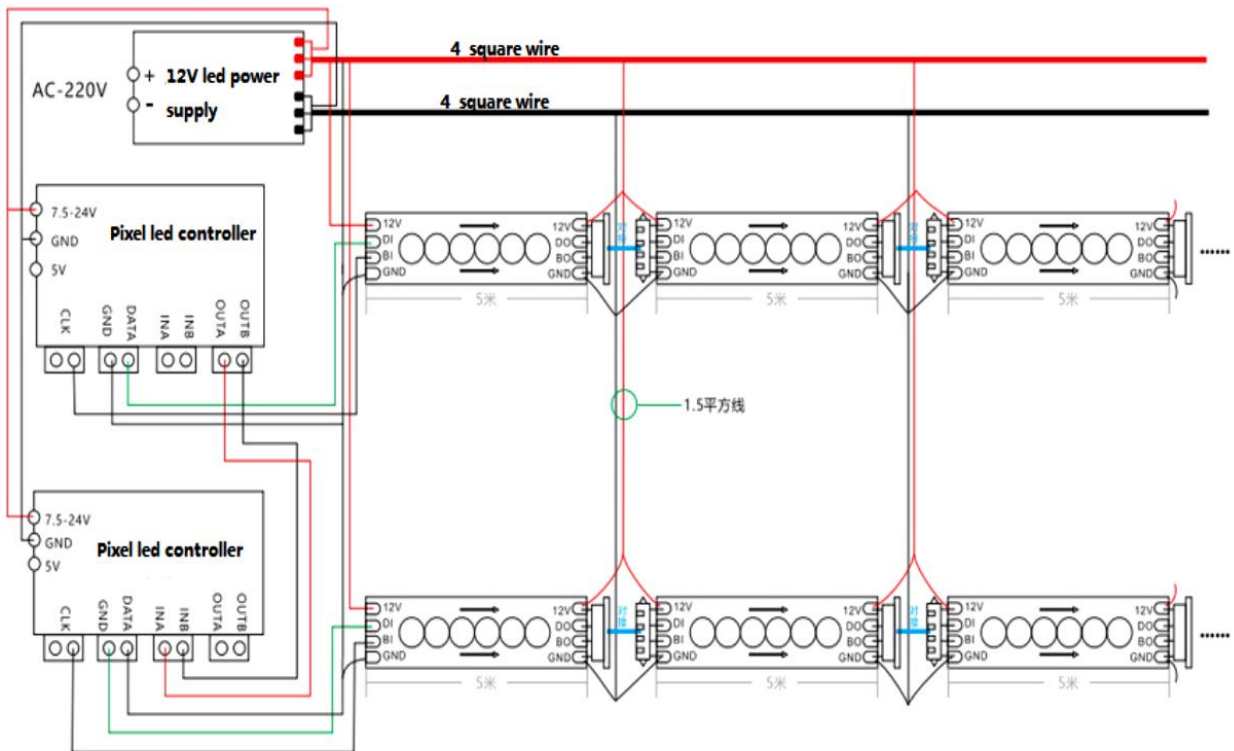
12V -- RED, DI -- GREEN, BI/FDI -- BLUE, GND -- WHITE

Input: Female Connector

output : male Connector



## Wiring Chart





# Test Report

## RED

### Product Information

Product Type: 12V 10mm 1934-60灯RGB-R

Product Number: 4

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.6941$   $y=0.3026$   $u(u')=0.5296$   $v=0.3463$   $v'=0.5194$

CCT:  $T_c=1000K$  ( $duv=-0.08185$ )

Color Ratio:  $R=0.979$   $G=0.020$   $B=0.001$

Peak Wavelength: 630.9nm

Half Bandwidth: 16.7nm

Dominant Wavelength: 623.2nm

Color Purity: 0.991

Central Wave: 629.3nm

Gravity Wave: 629.9nm

CRI:  $R_a=13.6$ ,  $avgR(1\sim14)=7.5$ ,  $avgR(1\sim15)=4.3$

TM30:  $R_f=7$ ,  $R_g=-1$

GAI:  $GAI\_BB\_8=25.1$ ,  $GAI\_BB\_15=26.3$ ,  $GAI\_EES=0.2$

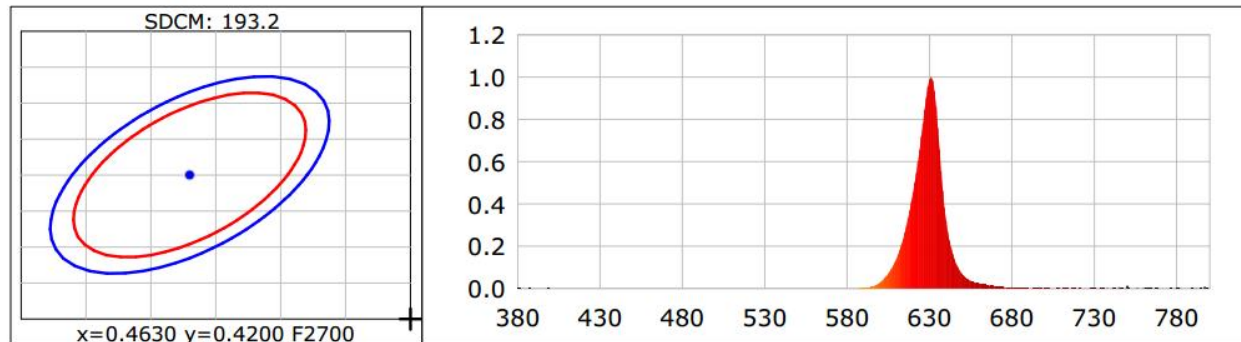
R1 =6      R2 =79      R3 =31      R4 =-22      R5 =7      R6 =94      R7 =-5      R8 =-80

R9 =-239    R10=73      R11=-4      R12=75      R13=31      R14=60      R15=-40

Color Quality Scale:  $Q_a=-1.\$$ ,  $Q_f=-1.\$$ ,  $Q_p=-1.\$$ ,  $Q_g=-1.\$$

Q1 =6      Q2 =13      Q3 =18      Q4 =14      Q5 =12      Q6 =11      Q7 =6      Q8 =1

Q9 =9      Q10=0      Q11=0      Q12=0      Q13=0      Q14=0      Q15=7



### Photometric Parameters

Luminous Flux: 68.381 lm

Efficiency: 13.99 lm/W

Radiant Power: 0.349 W

Total mains efficacy: 13.99 lm/W    Energy Efficiency Class: G (EU 2019/2015)

Auxiliary lamp correction factor: 1.00

### Electric Parameters

Voltage: 12.000V

Current: 0.4073A

Power: 4.89W

Power Factor: 1.0000

Frequency: 0.00Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 1 Min    ALC.: 1.0000

Max of Signal: 45803 (3394)

Photometric Method: sphere-spectroradiometer

Photometric Condition: Sphere diameter: 1.50m, 4T

CCD Integration Time: 640.89 ms

## GREEN

### Product Information

Product Type: 12V 10mm 1934-60灯RGB-G

Product Number: 4

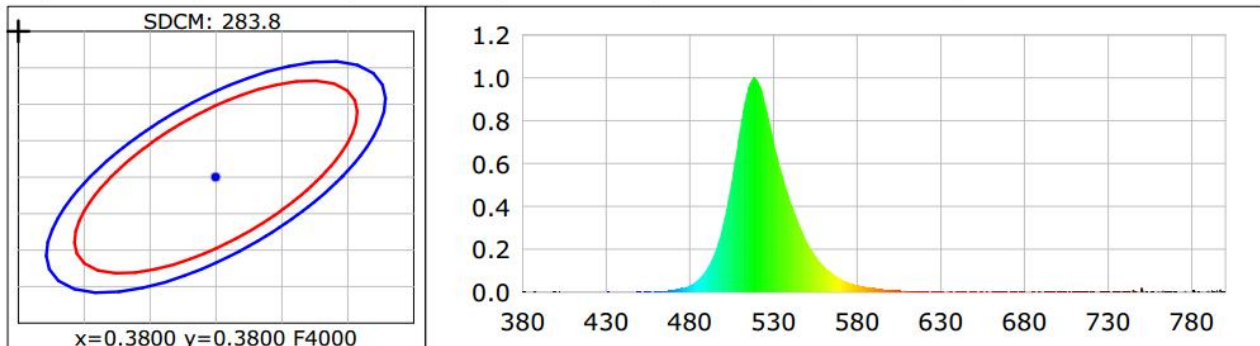
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.1644$   $y=0.7223$   $u(u')=0.0580$   $v=0.3822$   $v'=0.5733$   
 CCT:  $T_c=7930K$  ( $duv=0.15870$ ) Color Ratio:  $R=0.003$   $G=0.974$   $B=0.023$   
 Peak Wavelength: 518.4nm Half Bandwidth: 32.5nm  
 Dominant Wavelength: 525.8nm Color Purity: 0.794  
 Central Wave: 520.8nm Gravity Wave: 519.9nm  
 CRI:  $R_a=-23.8$ ,  $avgR(1\sim14)=-55.4$ ,  $avgR(1\sim15)=-53.8$  TM30:  $R_f= 2$ ,  $R_g= 9$   
 GAI:  $GAI\_BB\_8=0.7$ ,  $GAI\_BB\_15=1.1$ ,  $GAI\_EES=0.7$   

$R1 = -34$	$R2 = -8$	$R3 = -23$	$R4 = -65$	$R5 = -9$	$R6 = -14$	$R7 = -5$	$R8 = -31$
$R9 = -354$	$R10 = -105$	$R11 = -94$	$R12 = -30$	$R13 = -40$	$R14 = 38$	$R15 = -32$	

 Color Quality Scale:  $Q_a= 0.3$ ,  $Q_f= 0.7$ ,  $Q_p= 0.0$ ,  $Q_g= 5.2$   

$Q1 = 2$	$Q2 = 3$	$Q3 = 18$	$Q4 = 37$	$Q5 = 22$	$Q6 = 1$	$Q7 = 0$	$Q8 = 0$
$Q9 = 0$	$Q10 = 0$	$Q11 = 0$	$Q12 = 0$	$Q13 = 0$	$Q14 = 0$	$Q15 = 0$	



### Photometric Parameters

Luminous Flux: 202.15 lm Efficiency: 41.01 lm/W Radiant Power: 0.427 W  
 Total mains efficacy: 41.01 lm/W Energy Efficiency Class: G (EU 2019/2015)  
 Auxiliary lamp correction factor: 1.00

### Electric Parameters

Voltage: 12.000V Current: 0.4108A Power: 4.93W  
 Power Factor: 1.0000 Frequency: 0.00Hz

### Test Information

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 1 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4T  
 Max of Signal: 46234 (3400) CCD Integration Time: 648.46 ms

## BLUE

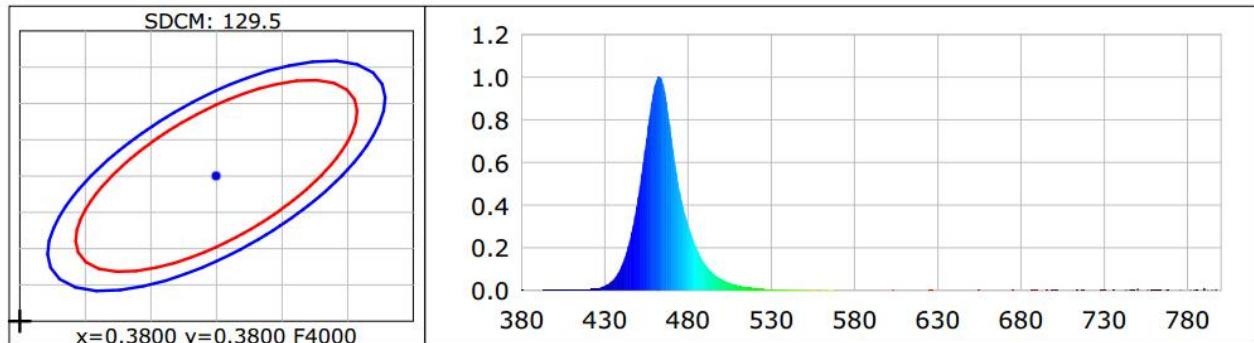
### Product Information

Product Type: 12V 10mm 1934-60灯RGB-B

Product Number: 4

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.1377$   $y=0.0551$   $u(u')=0.1627$   $v=0.0977$   $v'=0.1465$   
 CCT:  $T_c=100000K$  ( $duv=-0.16922$ ) Color Ratio:  $R=0.008$   $G=0.163$   $B=0.830$   
 Peak Wavelength: 462.7nm Half Bandwidth: 22.9nm  
 Dominant Wavelength: 474.7nm Color Purity: 0.968  
 Central Wave: 462.7nm Gravity Wave: 462.8nm  
 CRI:  $R_a=-48.5$ ,  $avgR(1\sim14)=-80.8$ ,  $avgR(1\sim15)=-75.0$  TM30:  $R_f=1$ ,  $R_g=36$   
 GAI:  $GAI\_BB\_8=3.2$ ,  $GAI\_BB\_15=4.2$ ,  $GAI\_EES=3.5$   
 R1 = -10 R2 = -38 R3 = -131 R4 = -82 R5 = 3 R6 = -51 R7 = -44 R8 = -33  
 R9 = -261 R10 = -214 R11 = -113 R12 = -100 R13 = -28 R14 = -27 R15 = 7  
 Color Quality Scale:  $Q_a=8.2$ ,  $Q_f=11.1$ ,  $Q_p=2.3$ ,  $Q_g=27.2$   
 Q1 = 62 Q2 = 35 Q3 = 8 Q4 = 13 Q5 = 33 Q6 = 63 Q7 = 86 Q8 = 32  
 Q9 = 1 Q10 = 0 Q11 = 0 Q12 = 0 Q13 = 2 Q14 = 8 Q15 = 50



### Photometric Parameters

Luminous Flux: 47.656 lm Efficiency: 9.63 lm/W Radiant Power: 0.745 W  
 Total mains efficacy: 9.63 lm/W Energy Efficiency Class: G (EU 2019/2015)  
 Auxiliary lamp correction factor: 1.00

### Electric Parameters

Voltage: 12.000V Current: 0.4126A Power: 4.95W  
 Power Factor: 1.0000 Frequency: 0.00Hz

### Test Information

Scan Range: 380~800:1nm  
 Stabilization Time: 1 Min ALC.: 1.0000  
 Max of Signal: 45781 (3168)

Photometric Method: sphere-spectroradiometer  
 Photometric Condition: Sphere diameter: 1.50m, 4π  
 CCD Integration Time: 259.77 ms



## WHITE

### Product Information

Product Type: 12V 10mm 1934-60灯RGB-全亮

Product Number: 4

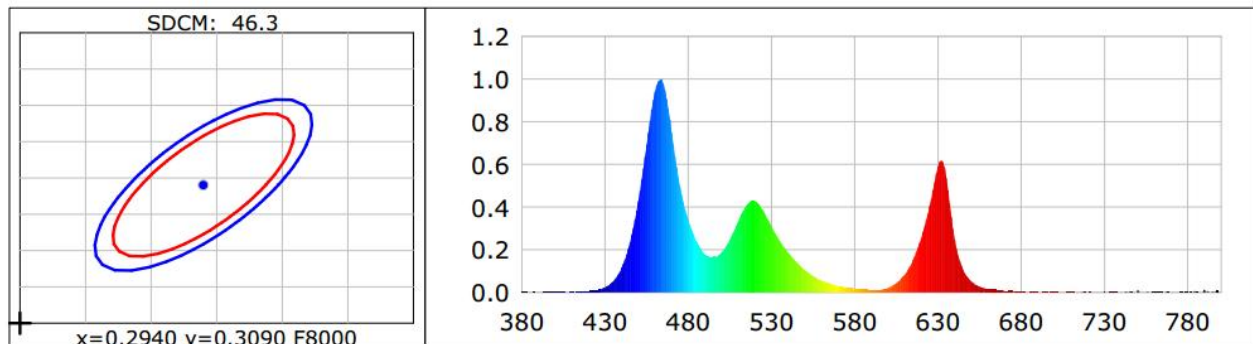
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.2308$   $y=0.2337$   $u(u')=0.1728$   $v=0.2625$   $v'=0.3937$   
 CCT:  $T_c=100000K$  ( $duv=-0.00860$ ) Color Ratio:  $R=0.201$   $G=0.657$   $B=0.142$   
 Peak Wavelength: 463.6nm Half Bandwidth: 23.5nm  
 Dominant Wavelength: 477.5nm Color Purity: 0.441  
 Central Wave: 463.2nm Gravity Wave: 463.4nm  
 CRI:  $R_a=53.0$ ,  $avgR(1\sim14)=32.7$ ,  $avgR(1\sim15)=31.6$  TM30:  $R_f=56$ ,  $R_g=102$   
 GAI:  $GAI\_BB\_8=130.9$ ,  $GAI\_BB\_15=129.4$ ,  $GAI\_EES=142.5$   

R1 =39	R2 =59	R3 =75	R4 =62	R5 =61	R6 =61	R7 =60	R8 =7
R9 =-210	R10=5	R11=54	R12=63	R13=39	R14=82	R15=16	

 Color Quality Scale:  $Q_a=58.3$ ,  $Q_f=48.8$ ,  $Q_p=76.9$ ,  $Q_g=123.7$   

Q1 =61	Q2 =70	Q3 =79	Q4 =69	Q5 =86	Q6 =90	Q7 =81	Q8 =74
Q9 =73	Q10=49	Q11=28	Q12=22	Q13=40	Q14=73	Q15=57	



### Photometric Parameters

Luminous Flux: 302.16 lm Efficiency: 26.97 lm/W Radiant Power: 1.437 W  
 Total mains efficacy: 26.97 lm/W Energy Efficiency Class: G (EU 2019/2015)  
 Auxiliary lamp correction factor: 1.00

### Electric Parameters

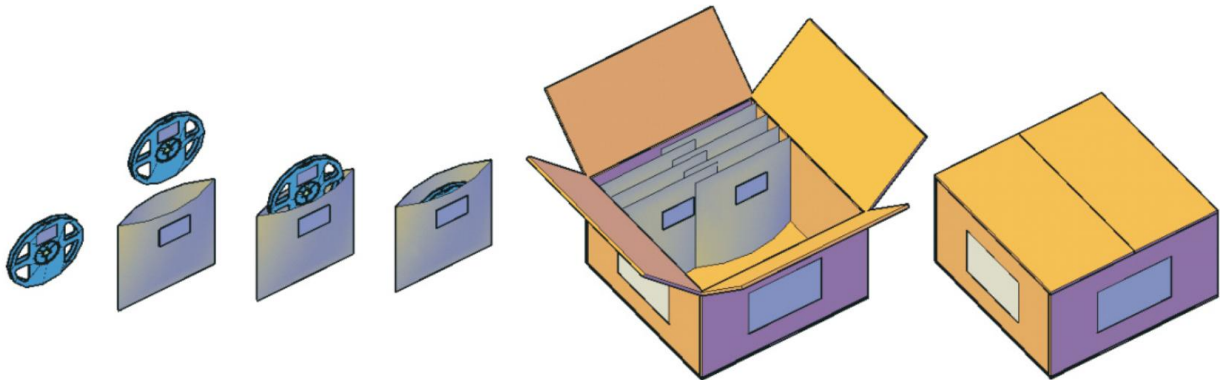
Voltage: 11.999V Current: 0.9336A Power: 11.20W  
 Power Factor: 1.0000 Frequency: 0.00Hz

### Test Information

Scan Range: 380~800:1nm Photometric Method: sphere-spectroradiometer  
 Stabilization Time: 1 Min ALC.: 1.0000 Photometric Condition: Sphere diameter: 1.50m, 4T  
 Max of Signal: 43119 (3171) CCD Integration Time: 260.11 ms



## Package

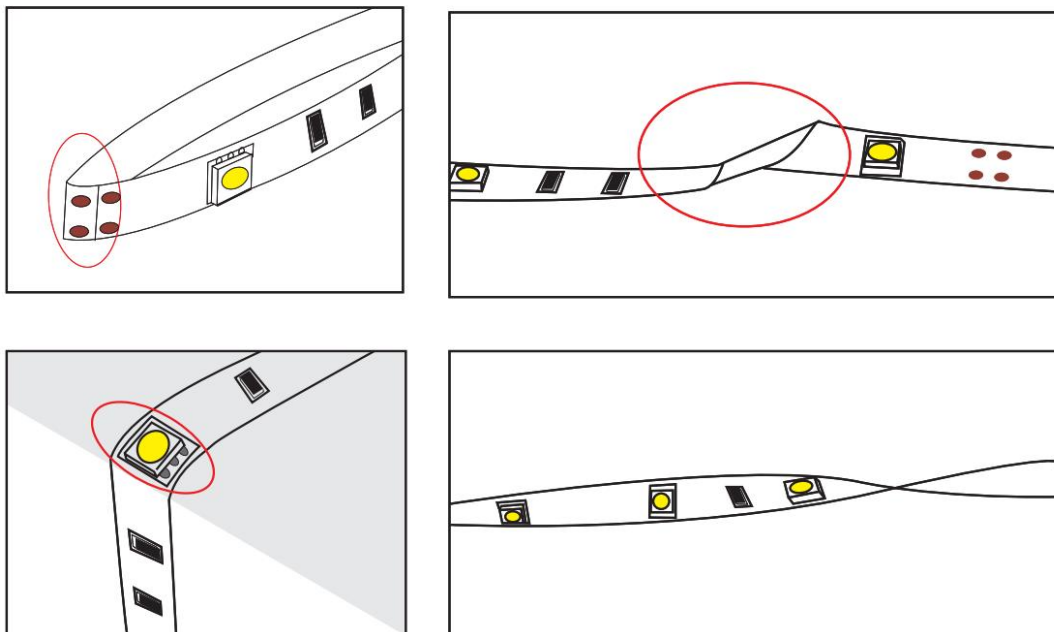


### Note:

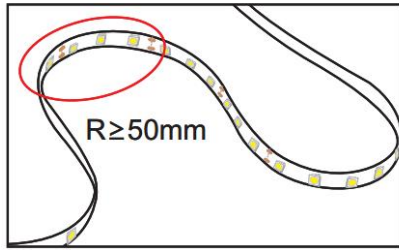
1. One Aluminum Foil Bag for one roll of LED strip, 5M/roll.
2. All the packaging materials are RoHS standard.
3. Heavy stuff are not allow to be loaded above the packaging box.

## Cautions:

- When install the led strip , please note the installation technique. The led strip can be bent, but not distorted, as shown below:



Distortion(Wrong)



Bend(Right)

- LED strips are low voltage products, you must use the power supply(transformer). Please don't connect the led strip directly to the AC110 or AC220V, otherwise it will burn out the LED strips.
- Clean up the installation surface, it will ensure the reliability of the adhesive.
- The electrical connection process must be operated by a professional person.