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AB-FCVVVI8-19712-XA2S

Features:

- UL listed
- IP65 waterproof rating
- Top emitting, wide viewing angle 90°
- Environment temperature :-40°C~45°C
- Operating temperature -40°C~85°C
- Storage temperature -40°C~85°C
- Environment humidity 40-70%RH

Application:

- Conference/meeting rooms
- Hospitals
- Commercial/ residential buildings
- Entertaining lighting
- Hotels

Product performance parameter:

Serial number	Partnumber	CCT	nm	LED TYPE	Light Angle	QTY/M (39.3in)	Luminous flux(LM/12in)	working voltage (12V/24V) /IF(A)	Rated power (W/12in)
1	AB-FC012I8 -19712-XA2S	RED	620-630nm	5050	120degree	60LED	- -	12V/0.08A	1
		Blue	624-470nm					12V/0.08A	1
		Green	520-535nm					12V/0.08A	1
2	AB-FC024I8 -19712-XA2S	RED	620-630nm	5050	120degree	60LED	- -	24V/0.04A	1
		Blue	624-470nm					24V/0.04A	1
		Green	520-535nm					24V/0.04A	1

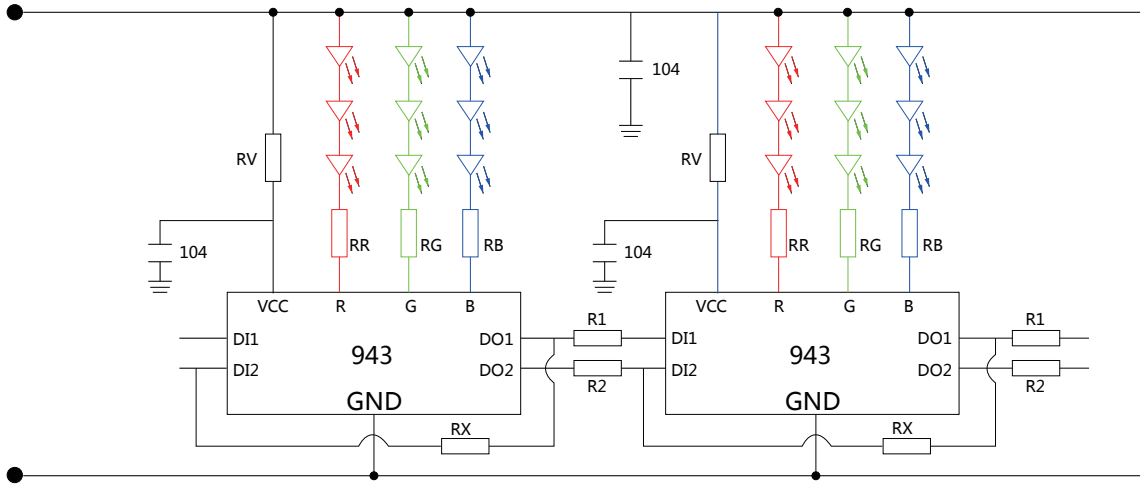
Notes:

1. Luminous flux plus or minus 10% is allowed in the floating.
2. Maximum length current attenuation 15%.
3. Photometric standards are based on CIE eye sensitivity curve diagram test.

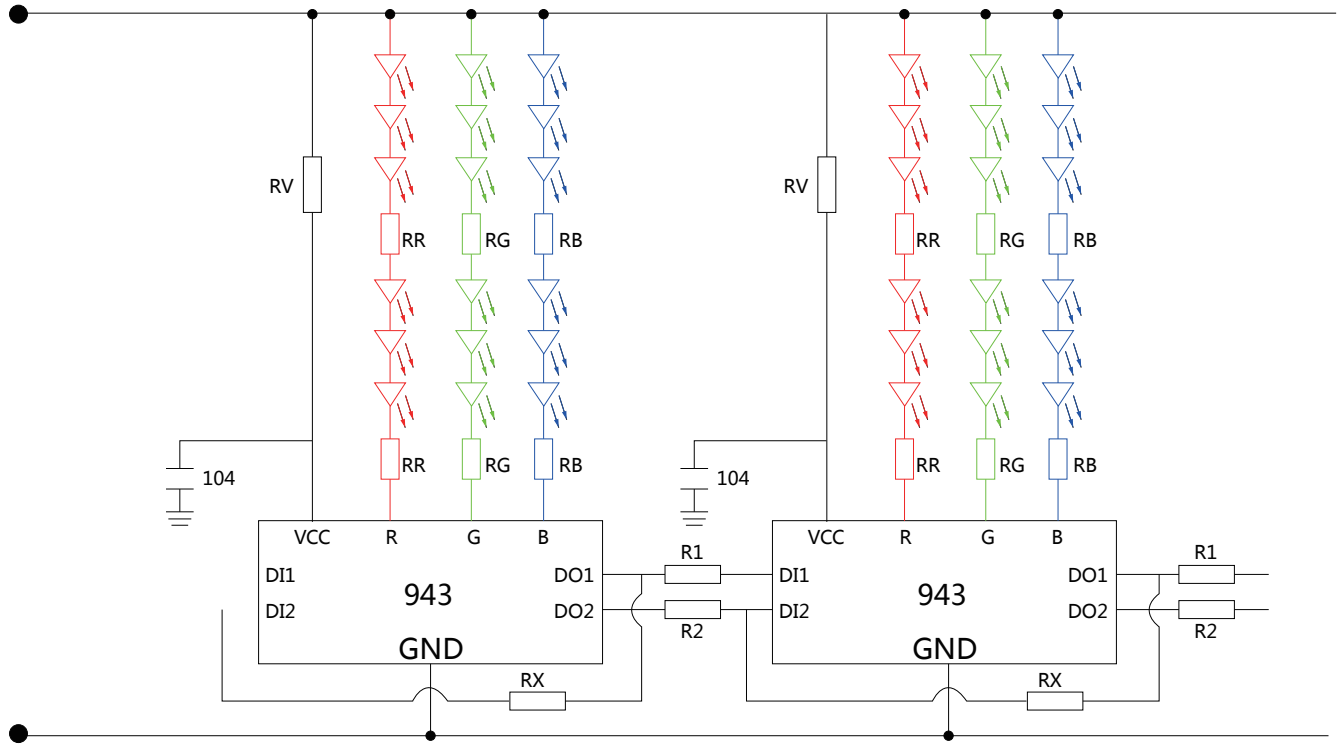
Schematic diagram:

Schematic:

(DC12V)



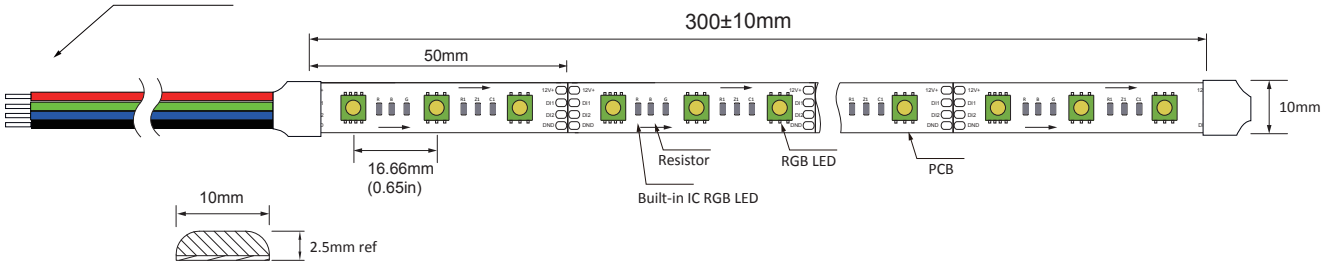
(DC24V)



Product size chart:

DC12V

UL1007 AWG20 310mm(12in) Red(+) Green(DI) Blue(DI) Black(-)

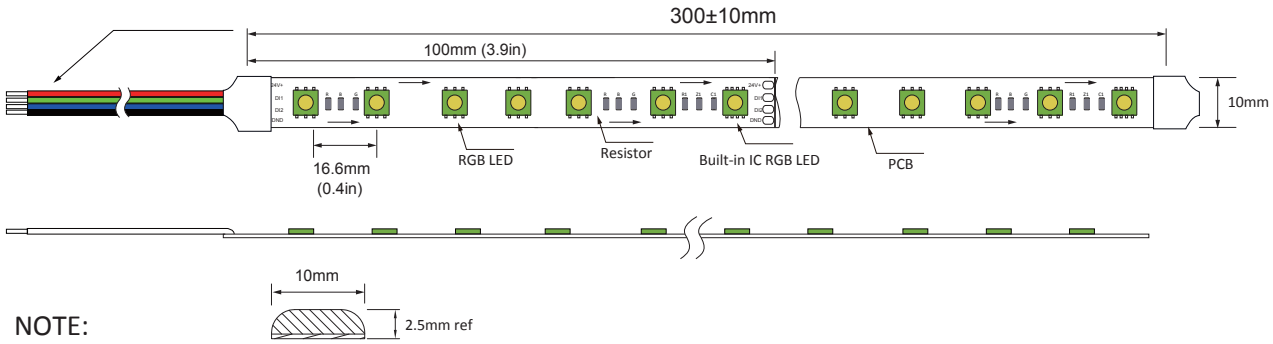


NOTE:

1. UNIT:MM(IN)
2. COLOR:WHITE
3. 3M 9495 double-sided tape on the back

DC24V

UL1007 AWG20 310mm(12in) Red(+) Green(DI1) .Blue(DI2) Black(-)



NOTE:

1. UNIT:MM(IN)
2. COLOR:WHITE
3. 3M 9495 double-sided tape on the back

Technical Specs for the LED with built-in driver:

WESP943-8P device is an easy-to-use, 3-channel LED driver. Each channel has an individually-adjustable, 8-bit (256-step), pulse-width modulation (PWM) grayscale (GS) brightness control. GS data are input through a serial single wire interface port. The single-wire, 800-kbps serial interface provides a solution for minimizing wiring cost.

Features:

- Control circuit and RGB chip in SMD 5050 packages
- Single-Wire Interface for line data transmission
- Gray scale adjustment circuit (256 gray level adjustable);
- Data Transfer Maximum Rate: Bits per Second (bps): up to 800 kbps, when the refresh rate of 30 frames per second, a cascade of not less than 1024.

Absolute maximum ratings:

Table 3. Absolute Max Ratings at Ta=25℃

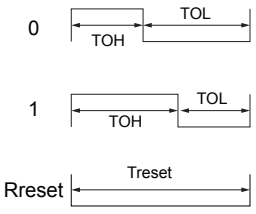
Parameter	Symbol	Value	Unit
Power Supply Voltage	VDD	4.5-7.5V	V
LED Voltage	VLED	5V	V
PWM frequency	PWM	1.6	kHZ
Max output current	Iomax	18	mA
Power dissipation	Pd	<350	mW
Reverse voltage	Vr	5V	V
Operating temperature range	Top	-25~+80	℃
Storage temperature range	Tstg	-40~+100	℃

Table 4. Electrical-optical characteristics at Ta = 25℃

Parameter	Test condition	Symbol		Value	Unit
Forward Voltage	If = 20mA	Vf	R	2 - 2.4	V
			G	3 - 3.4	
			B	3 - 3.4	
Luminous Intensity	If = 20mA	Vr	R	800 -900	mcd
			G	1400 -1600	
			B	300 -450	
Wavelength	If = 20mA	Top	R	620 -630	nm
			G	520 -530	
			B	465 -470	

Communication Protocol and Sequence

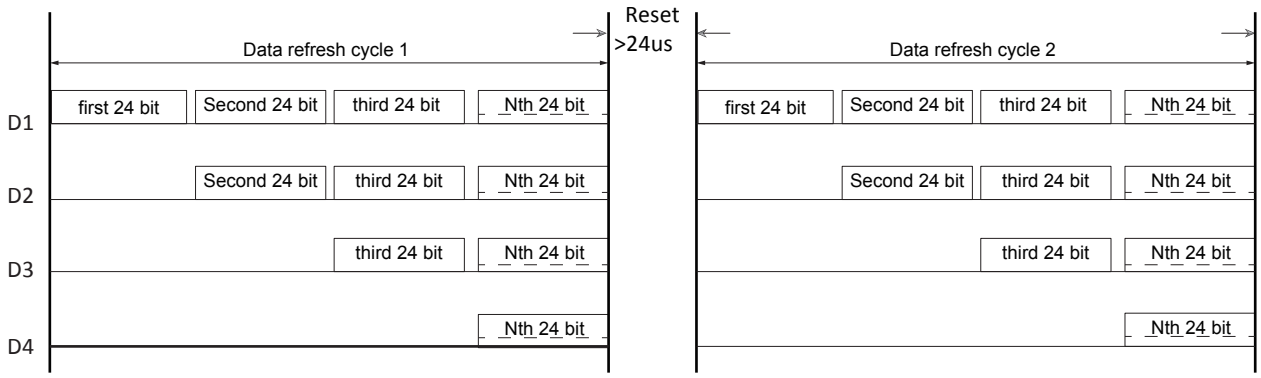
Input Code:



Data Transfer Time (TH+TL = 1.25 µs± 300ns):

Symbol	Description	Typ	Tolerance
T0H	0 code, high level time	0.35µs	±150ns
T1H	1 code, high level time	1.36µs	±150ns
T0L	0 code, low level time	1.36µs	±150ns
T1L	1 code, low level time	0.35µs	±150ns
WT	Waiting time	12µs	±150ns
TRES	Reset code, low level time	50µs	

Data Transmission Mode:



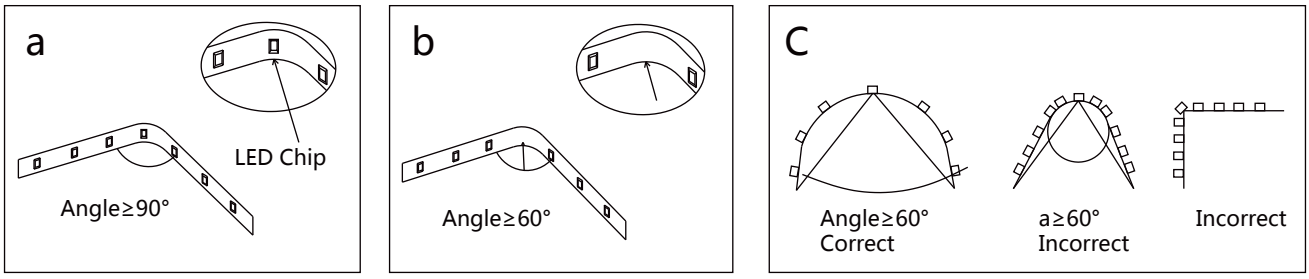
Note: the D1 data is from MCU, and D2, D3, D4 is forwarded through automatic shaping cascade circuit.

24 bit Data Structure:

G7	G6	G5	G4	G3	G2	G1	G1	R7	R6	R5	R4
R3	R2	R1	R0	B7	B6	B5	B4	B3	B2	B1	B0

Note:Data transmission sequence GRB, higher bit is sent first

LED STRIP INSTALLATION

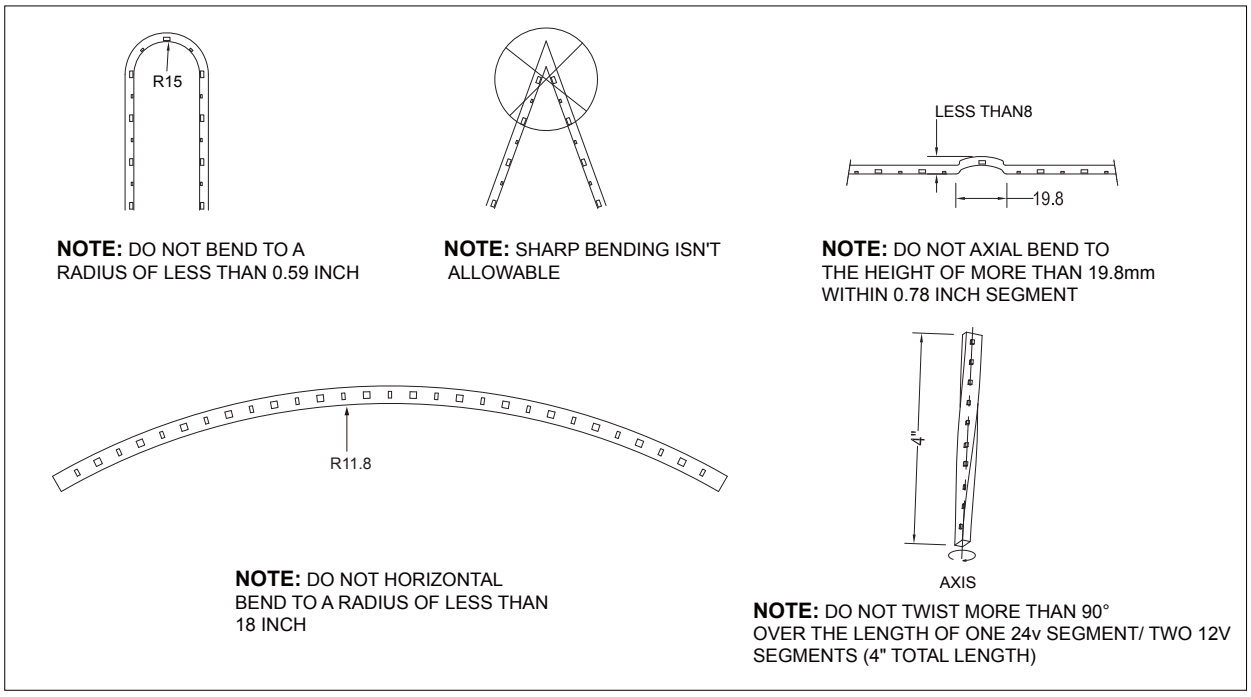


a: use an angle greater or equal to 90 degrees when there is an LED chip on the corner while placing the strip in a concave position （Angle≥90degree)

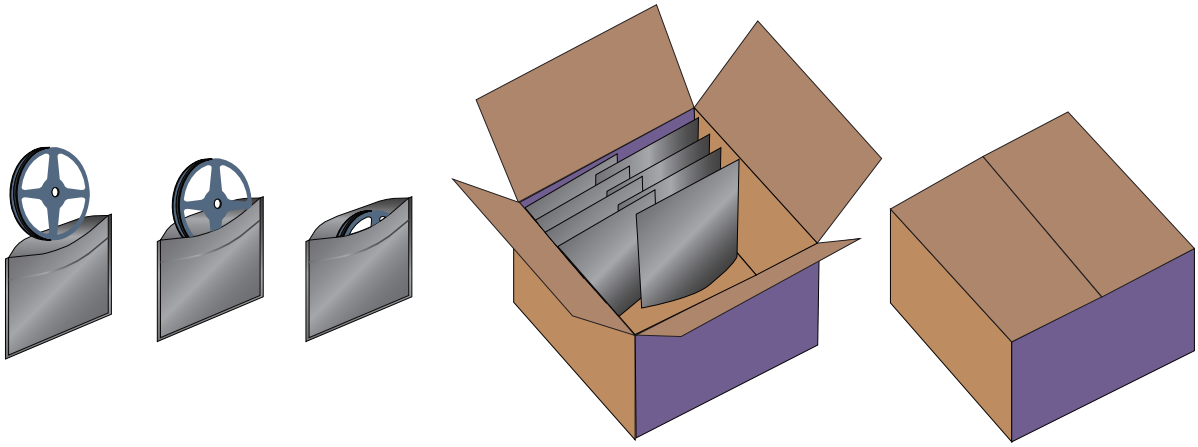
b: use an angle greater or equal to 60 degrees when there is an LED chip on the corner while placing the strip in a concave position （Angle≥60degree)

c:use an angle greater or equal to 60 degrees when there is an LED chip on the corner while placing the strip in a concave position （Angle≥60degree) In the convex position the angle should not reach 90 degrees .See above diagram.

Maximum Flexibility Precaution



Product packaging



Model	Part Number	Roll/box (PCS)	Net Weight/box	Gross Weight/box
1	AB-FCVVVI8-19712-XA2S			