

AB-FD Flexible Light Series

IP68 flexible light in 12V/24V DC - Single color, RGB, and RGBW options.



Features:

- UL listed
- IP68 waterproof rating
- Top emitting, wide viewing angle 120°
- Storage temperature -40°C~+70°C
- Operating temperature -20°C~+50°C
- Environment humidity 40-90%RH

Applications:

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



AB-FD Flexible Light Series

Copyright © 2019 American Bright Optoelectronics Corp. All right reserved. Version: 3 Date: 12/17/2019

Part number naming system:

A B – F D V V V K K – L L L W L – X A 1

V V V – Voltage (volt) of the light strip (012=12V, 024=24V)

K K – Color/CCT (27 – 2700K, 30 – 3000K, 40 – 4000K, 50 – 5000K, 63 – 6300K, 65 – 6500K CCT, RD – Red, GR – Green, BL – Blue, AM – Amber, 06 – RGB, 08 – RGBW)

L L L – Light strip length (unit: inch);

Length selection of the strip:

	<u>12V</u>	<u>24V</u>
Single Color	Multiple of 25mm	Multiple of 50mm
RGB/RGBW	Multiple of 50mm	Multiple of 100mm

W L – Lead length (unit: inch); standard length is 12 inches.

X – CRI (8 – 80, 9 – 90, X – not applicable)

Ax – Version (Internal Code)

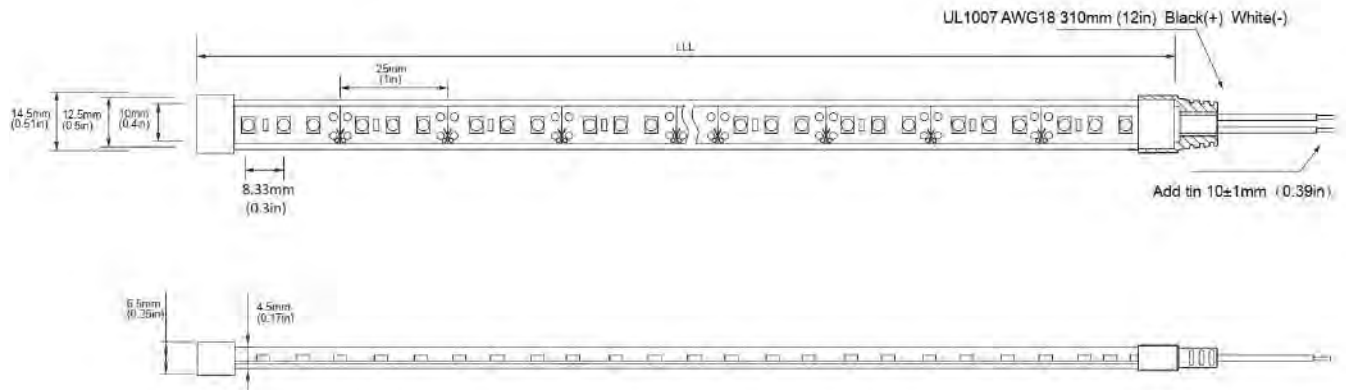
For example, part number below calls out a flexible light with IP68 rating, 24V DC in 3000K CCT, CRI80, 197 inches long with 12 inches wire lead.

A B – F D 0 2 4 3 0 – 1 9 7 1 2 – 8 A 1

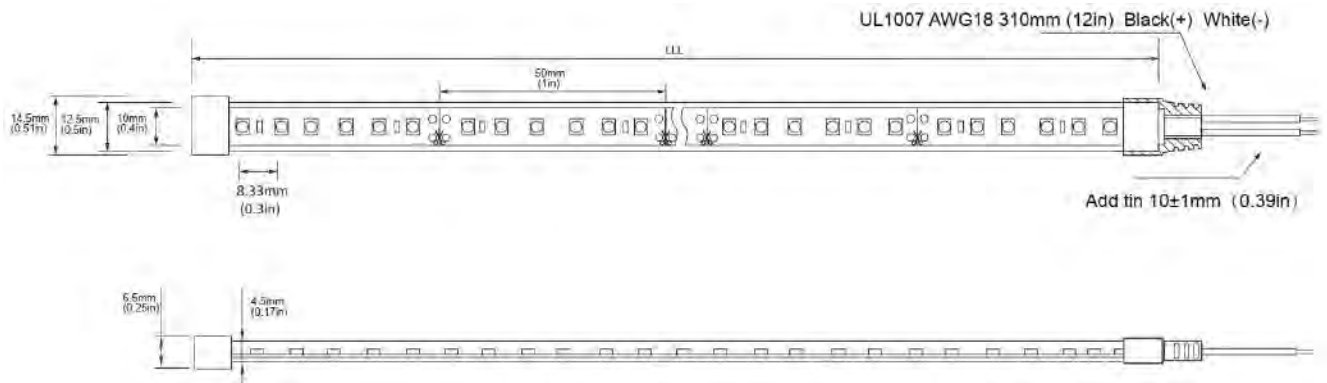
Outline Dimension:

Single Color:

DC 12V

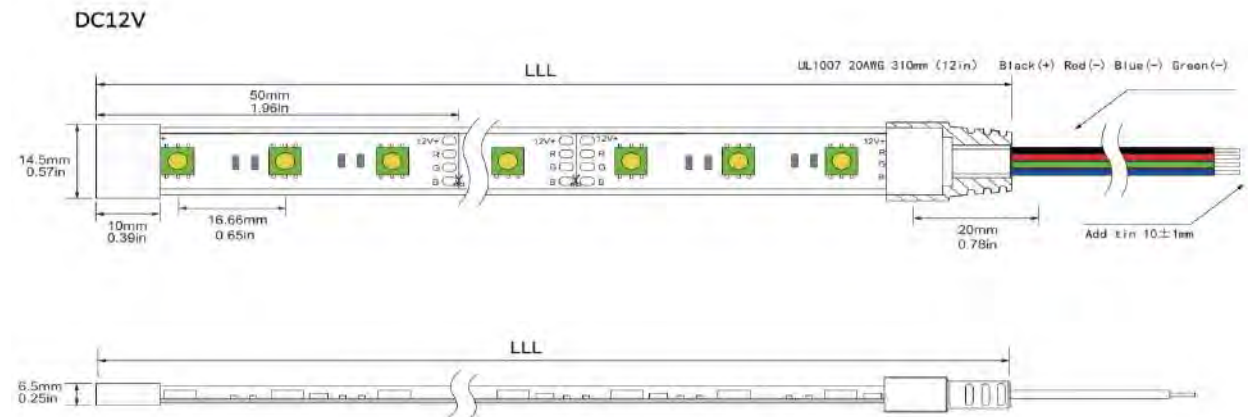


DC 24V

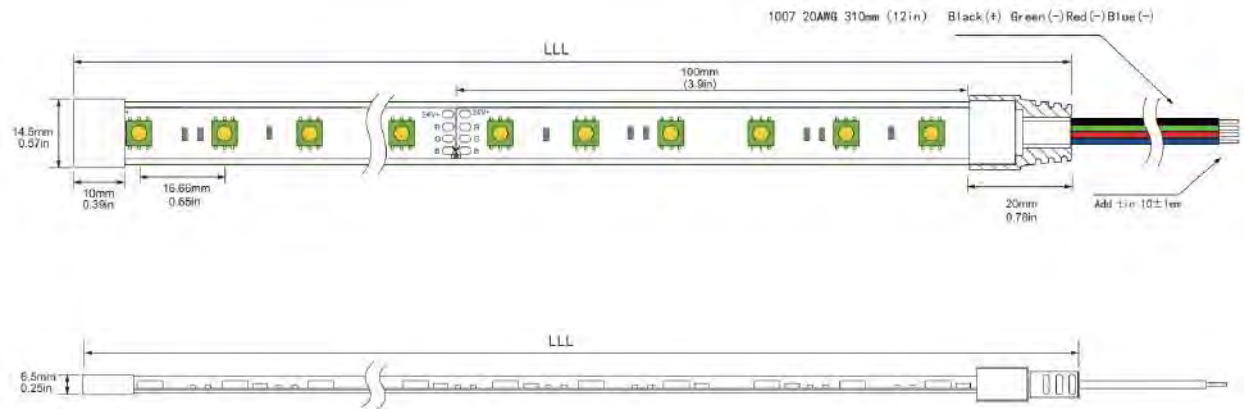


RGB Color:

DC 12V:

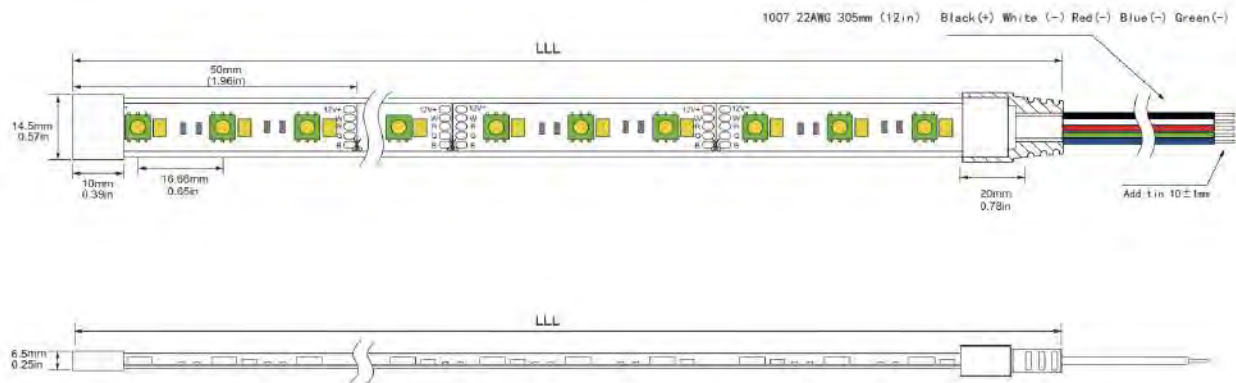


DC 24V:



RGBW Color:

12V:



24V:



1

¹ Silicon tube: durometer, shore A 60~65 or equivalent. Color: Clear

Cutting Mark is imprinted on the strip:

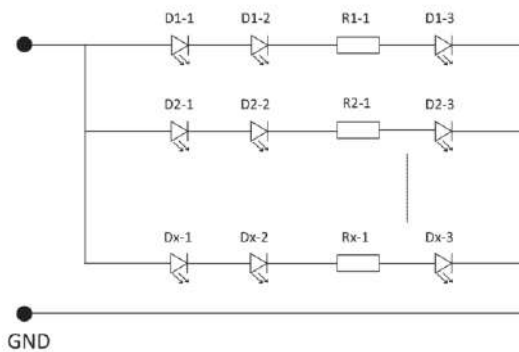
	<u>12V</u>	<u>24V</u>
Single Color	Every 25mm	Every 50mm
RGB/RGBW	Every 50mm	Every 100mm

Schematic Diagram:

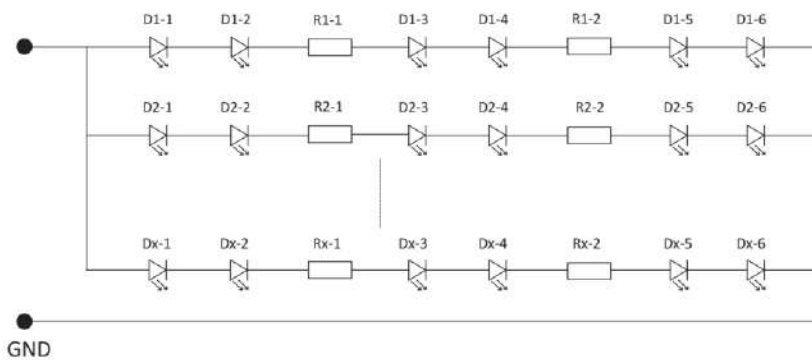
Single Color:

DC 12V:

DC12V+

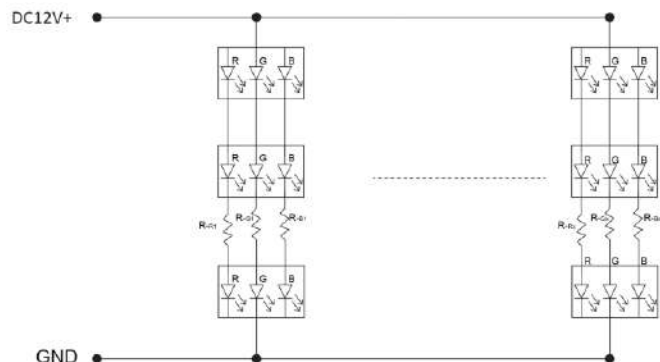


DC 24V:

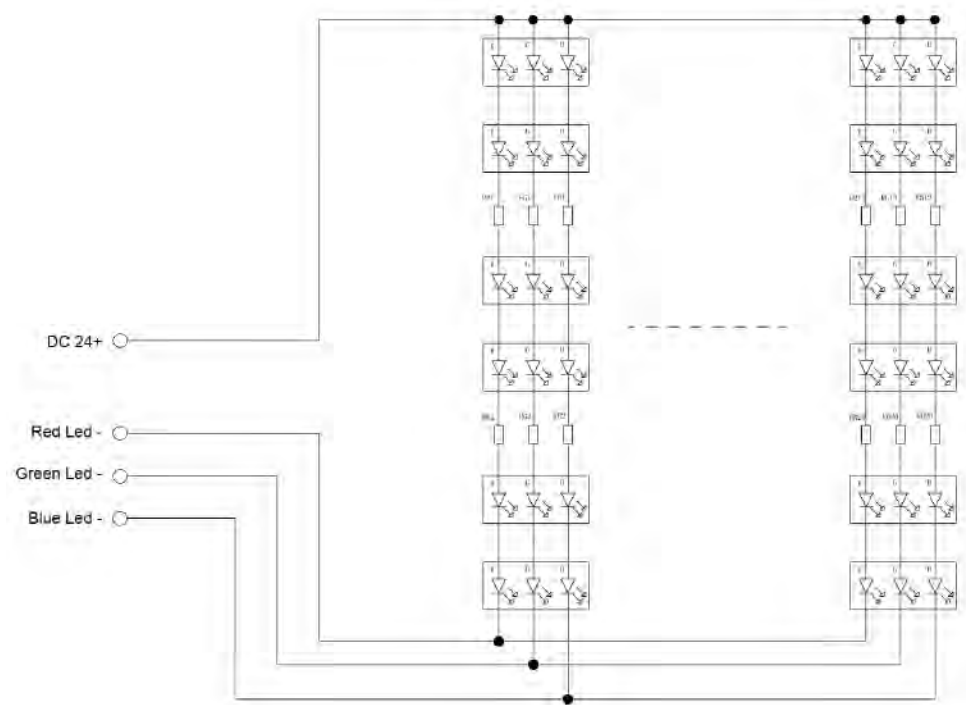


RGB Color:

DC 12V:

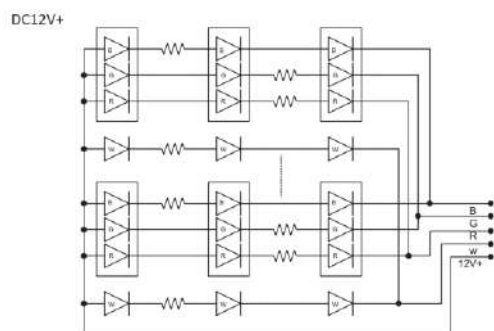


DC 24V:

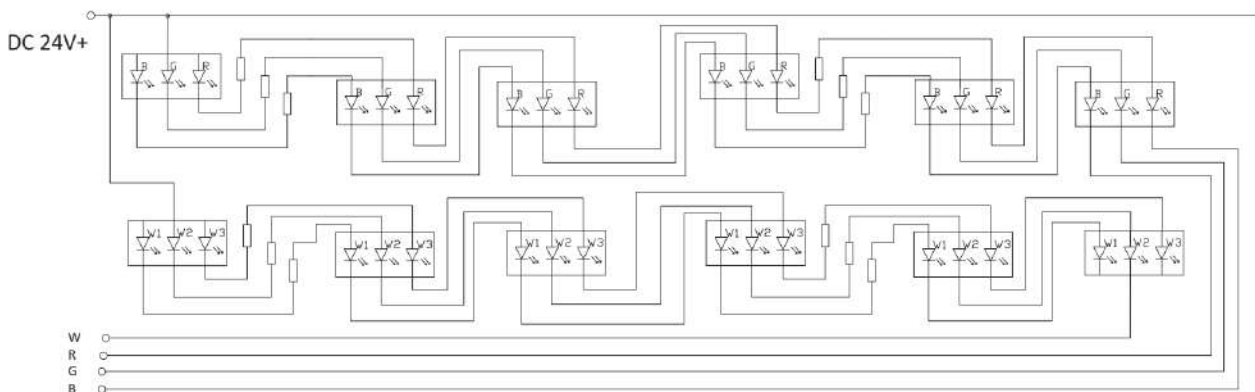


RGBW Color:

DC 12V:



DC 24V:



Characteristics:

Table 1. Configurations for AB-FD Flexible Light Series.

OPERATING VOLTAGE (V)	CURRENT (A/m)	POWER (W/m)	LENGTH ² m (inch)	LED COUNT/m
12	White/Green/Blue: 0.66	8	5 (197)	120
	Red/Amber: 0.83	10		
	RGB: 0.83	10		60
	RGBW: 1.18	14.2		
24	White/Green/Blue: 0.33	8	5 (197)	120
	Red/Amber: 0.41	10		
	RGB: 0.41	10		60
	RGBW: 0.59	14.2		

² Standard unit length: 5m or 10m/roll, for custom length, please contact aboc@americanbrightled.com.

Table 2. Product performance of AB-FD Flexible Light Series at T=25 degree C.

PART NUMBER	CCT/ WAVELENGTH	LUMINOUS FLUX ³ (lm/m)	LUMINOUS EFFICACY (lm/W)	CRI
AB-FD012KK-19712-XA1 ⁴ AB-FD024KK-19712-XA1	30: 3000K	720	90	>80
	40: 4000K			
	63: 6300K			
	RD: Red 620-630nm	250	25	/
	GR: Green 520-535nm	560	70	/
AB-FD01206-19712-XA2 AB-FD02406-19712-XA2	BL: Blue 465-475nm	168	21	/
	AM: Amber 600-610nm	190	19	/
	RD: Red 625-635nm	90	25	/
	GR: Green 520-535nm	248	18	/
	BL: Blue 465-475nm	56	58	/
AB-FD01208-19712-8Ax ⁵ AB-FD02408-19712-8Ax	RD: Red 620-630nm	81	/	/
	GR: Green 520-535nm	223	/	/
	BL: Blue 465-475nm	50.2	/	/
	27: 2700K	334	/	>80
	30: 3000K			
	40: 4000K			
	50: 5000K			
	65: 6500K			

³ Luminous flux ±10% is allowed.

⁴ KK - Color/CCT (30 – 3000K, 40 – 4000K, 63 – 6300K CCT, 06 – RGB, 08 – RGBW)

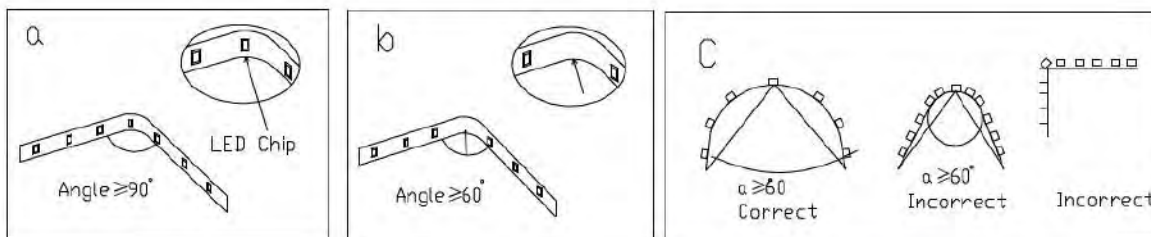
⁵ x – 1- 3000K CCT, 2 - 4000K CCT, for other color temperature, please contact aboc@americanbrightled.com.

AB-FD Flexible Light Series

Optional Mounting Accessories:

Please refer to spec "[Accessories For Flexible Light.](#)"

Installation Instructions:

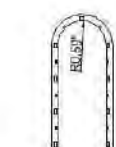


a: use an angle greater or equal to 90 degrees when there is an LED chip on the corner while placing, the strip in a concave position ($\text{Angle} \geq 90^\circ$)

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 ($\text{Angle} \geq 60^\circ$)

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 ($\text{Angle} \geq 60^\circ$) In the convex position the angle should not reach 90 degrees. See above diagram.

Maximum flexibility precaution:



NOTE: DO NOT BEND TO A RADIUS OF LESS THAN 0.59 INCH



NOTE: SHARP BENDING IS NOT ALLOWABLE



NOTE: DO NOT AXIAL BEND TO THE HEIGHT OF MORE THAN 0.312" WITHIN 0.78 INCH SEGMENT



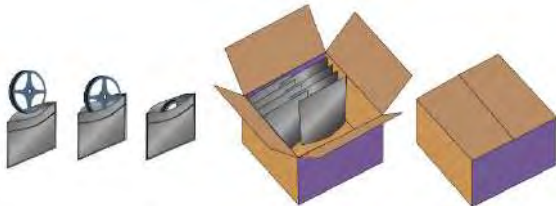
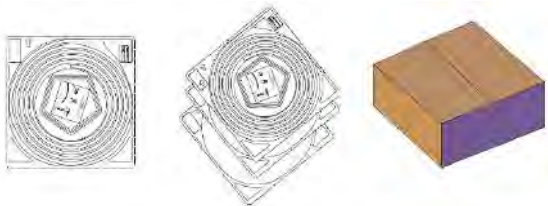
NOTE: DO NOT HORIZONTAL BEND TO A RADIUS OF LESS THAN 16.9 INCH



NOTE: DO NOT TWIST MORE THAN 90° OVER THE LENGTH OF ONE 24V SEGMENT/ TWO 12V SEGMENTS (4" TOTAL LENGTH)

Packaging:

Table 3. Packaging information

Model	QTY ⁶	Image
AB-FA series AB-FC series AB-FD series	1 roll/per ESD bag 10 bags/carton	
AB-FB series AB-FF series AB-FH series	1 roll/per tray 10 trays/carton	

⁶ Standard unit length: 5m or 10m/roll, 1 roll/bag. QTY/bag varies per different unit lengths.

AB-FD Flexible Light Series