

Flexglo™ F21A RGB Light (Silicone)



Certification Mark			
Test Standard/Directive	UL2108 Class 2	CE-EMC	IS 10322
Certificate Serial Number	20180801-E360029	SZEM1712012372LMV	R-41128376
Report Reference	E360029-20130322	SZEM171201237201	NO,20190425001



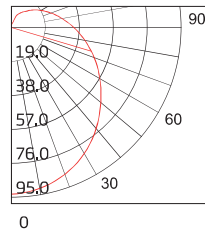
Ambient Working Temperature ≤12W -40 ~ 55°C / -40 ~ 131°F	Ambient Installation Temperature ≥ -40°C / -40°F	Storage Temperature -40 ~ 60°C / -40 ~ 140°F
Max. Mounting Surface Temperature 85°C / 185°F	Constant Voltage DC24V	

specified in the non-working state of light.

C-SFR-F21A-HB



C-SFR-F21A-HB-24CV-RGB-WM-60-12W-100

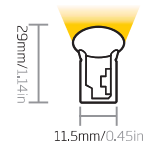


UNIT: cd
-C90/270

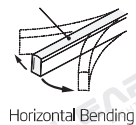
AVERAGE BEAM ANGLE (50%): 151.1°

Min. Bending Diameter
120mm/4.72in

Min. Cutting Length
100mm/3.94in
6LEDs



LIGHT SURFACE



Horizontal Bending

Bending-extreme
2529 times

Tensile-instantaneous
>60 kg.f

Twist-extreme
7221 times

Warning: Extreme Destructive Tests in laboratory only, and it's forbidden to operate in practice.

Note:

- The illuminated light length shall be an integral multiple of min. cutting length.
- The waterproof reliability of the lighting fixture depends on the IP rating of connector, and please make sure connector is properly assembled before installation. The highest IP rating we can achieve is IP68.

Item Code

C	SFR	F21A	HB	24CV	RGB	WM	60	12W	100
Company	Material	Product Series	Bending Direction	Voltage & Circuit Type	Color	Base & Lighting Surface	LEDs Qty/m	Power/m	Min. Cutting Length (mm)
Clear	SFR= Silicone Flex Ribbon	F21 A=RGB	HB= Horizontal Bending	DC24V & Constant Voltage	RGB	WM= White & Milky	60	12W	100

Feature

Flexgo™ F21A RGB Light (Silicone) is a color changing product with tri-chip SMD5050 RGB LEDs as light source, RGB color changing is achievable via a 3 channel PWM controller or any compatible DMX-512 controller. Thanks to the excellent weatherproof and UV-resistant performance of silicone material, it features a wide ambient working temperature range of -40-55 °C, especially suitable for harsh environment application.

Multiple connector options are available for different applications. Combined with the adoption of the DryWire™ technology,

*The IP68 Injection-moulded Connector is engineered for outdoor use, owing to its elegant appearance and strong adhesiveness acquired by the liquid silicone injection workmanship.

*The IP67 Field Assembly Connector, which is underpinned by the Insulfit™ technology that enables quick assembly in the field along with waterproof reliability (proper assembly required).

This product features a ultra long lifespan in outdoor application by leveraging other ClearTech™ such as the PinBoost™ technology enhancing physical reliability of light engine, the TwinFlex™ technology improving the conductivity and optimizing heat dissipation performance, the C-Mask™ technology making the light body self-cleaning and anti-UV and enabling consistent illumination.





Electrical Parameter

Category	C-SFR-F21A-HB
Voltage	24
Current (mA/m)	500.0
Power (W/m)	12
Circuit Type	CV
LED Type	5050
LEDs Qty/m	60
LEDs Qty/unit	6
Unit/m	10
Min. Cutting Length (mm)	100
Min. Cutting Length (in)	3,94

Optical Parameter

Item Code	Finished Product				LED
	Color	Wavelength	Lumen/m	Lumen/ft	Color Tolerance
C-SFR-F21A-HB-24CV-RGB-WM-60-12W-100	Red	618-624nm	60lm	18lm	< 3nm
	Green	522-528nm	140lm	43lm	< 3nm
	Blue	468-474nm	30lm	9lm	< 3nm
	R+G+B	R+G+B	230lm	70lm	N/A

Max. Running Length Input: DC24V





















						
Type	Sleeve Connector	Snap Connector	Socket Connector			
IP Rating	IP40	IP67	IP67			
Item Code	Single-end Feed	Double-end Feed	Single-end Feed	Double-end Feed	Single-end Feed	Double-end Feed
C-SFR-F21A-12W-Static full loading	10m/32.8ft	20m/65.6ft	10m/32.8ft	20m/65.6ft	10m/32.8ft	20m/65.6ft
C-SFR-F21A-12W-Dynamic operating	15m/49.2ft	30m/98.4ft	15m/49.2ft	30m/98.4ft	15m/49.2ft	30m/98.4ft
Dimension of Connector	Page F21 129		Page F21 135		Page F21 144	
Max.Packing Length	Page F21 202					
						
Type	Silicone Injection-moulded Connector					
IP Rating	IP68					
Item Code	Single-end Feed	Double-end Feed				
C-SFR-F21A-12W-Static full loading	10m/32.8ft	20m/65.6ft				
C-SFR-F21A-12W-Dynamic operating	15m/49.2ft	30m/98.4ft				
Dimension of Connector	Page F21 147					
Max.Packing Length	Page F21 202					

Note:

1. Above conclusion is based on voltage drop testing result of the light with 0,3m (0,98ft) cable only.
2. The maximum running length is based on the light in static full loading status exceptionally stated dynamic operating.
3. Above running length is only the light length excluding lengths of connectors. Please refer to the specific dimension of each connector.
4. The delivery length might be subject to the maximum packing length.

F21 Connector (Silicone)













Type/IP Rating	Bending Direction	Front Connector End	Front Connector Side from Left	Front Connector Side from Right	Front Connector Bottom	Seamless Middle Connector & Power Feed	Middle Connector & Power T-feed	Jumper	End Cap
Sleeve Connector IP40	HB		N/A	N/A	N/A	N/A			
		F21A-HB-SL/FC-01/02-E-0,3m/1m/3m/5m/10m/15m/20m 18AWG*4	N/A	N/A	N/A	N/A	F21A-HB-SL/MC-PTF-01/02-0,3m/1m/3m 18AWG*4	F21A-HB-SL/JU-01/02-0,3m/1m 18AWG*4	F21-SL/EC
Snap Connector IP67	HB					N/A			
		F21A-HB-SN/FC-01/02-E-0,3m/1m/3m/5m/10m/15m/20m 18AWG*4	F21A-HB-SN/FC-01/02-SL-0,3m/1m/3m/5m/10m/15m/20m 18AWG*4	F21A-HB-SN/FC-01/02-SR-0,3m/1m/3m/5m/10m/15m/20m 18AWG*4	F21A-HB-SN/FC-01/02-B-0,3m/1m/3m/5m/10m/15m/20m 18AWG*4	N/A	F21A-HB-SN/MC-PTF-01/02-0,3m/1m/3m 18AWG*4	F21A-HB-SN/JU-01/02-0,3m/1m 18AWG*4	F21-SN/EC-01/02
Socket Connector IP67	HB		N/A	N/A	N/A	N/A	N/A	N/A	
		F21A-HB-SO/FC-01/02-E-0,3m/1m/3m/5m 20AWG*1+22AWG*3	N/A	N/A	N/A	N/A	N/A	N/A	F21-SO/EC
Silicone Injection-moulded Connector IP68	HB					N/A			
		F21A-HB-SIM/FC-01/02-E-0,3m/1m/3m/5m/10m/15m/20m 20AWG*1+22AWG*3	F21A-HB-SIM/FC-02-SL-0,3m/1m/3m/5m/10m/15m/20m 20AWG*1+22AWG*3	F21A-HB-SIM/FC-01-SR-0,3m/1m/3m/5m/10m/15m/20m 20AWG*1+22AWG*3	F21A-HB-SIM/FC-01/02-B-0,3m/1m/3m/5m/10m/15m/20m 20AWG*1+22AWG*3	N/A	F21A-HB-SIM/MC-PTF-0,3m/1m/3m 20AWG*1+22AWG*3	F21A-HB-SIM/JU-0,3m/1m 20AWG*1+22AWG*3	F21-SIM/EC



F21 Mounting Profile

CLEAR LIGHTING

Picture	Name/Item Code	Installation Way
	<p>Aluminum Profile F21-A/PL-35/500/1000/2000mm</p>	
	<p>Flange Aluminum Profile F21-FA/PL-35/500/1000/2000mm</p>	
	<p>Serrated Aluminum Profile F21-SA/PL-20/500/1000/2000mm</p>	
	<p>Flange Serrated Aluminum Profile F21-FSA/PL-20/500/1000/2000mm</p>	
	<p>Bendable Serrated Aluminum Profile F21-BSA/PL-500/1000mm</p>	

CLEAR LIGHTING

CLEAR LIGHTING

CLEAR LIGHTING

CLEAR LIGHTING

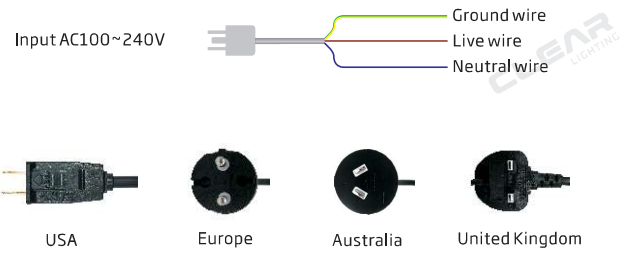
CLEAR LIGHTING

CLEAR LIGHTING

CLEAR LIGHTING

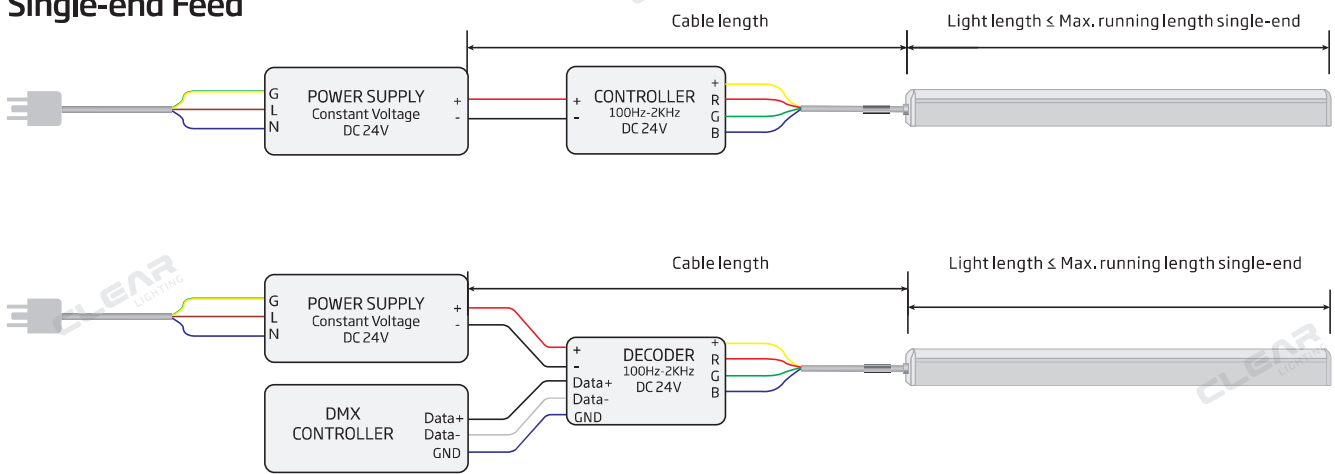
Flexglo™ F21A Wiring Diagram

1. Please use a constant voltage power supply with corresponding output voltage, and rated wattage of the power supply shall be 25% more than the actual power consumption of light to increase its life expectancy;
2. A compatible controller is required to achieve various light changing effects;
3. The rated power of controller/decoder shall be higher than the actual power consumption of light; its frequency range shall be 100~2000Hz, and 500Hz is recommended;
4. This wiring diagram is using the mains of AC230V with brown and blue wires as an example, and please connect with the corresponding live and neutral wires for other mains electricity;



5. Types of standard plugs are optional if power cord is purchased from CLEAR.

Single-end Feed



Light Length:

The length of the longest single light in parallel connection or sum of lights in series connection.

Cable Length:

The length of an electrical cable between power output end and light input end, and the cables for serial interconnection are inclusive.

How to Minimize Voltage Drop and Signal Transmission Attenuation

1. Please ensure the cable length is not more than the table "Max. Cable Length" according to light length and its wire gauge.
2. Please ensure the light length is less than the cable "Max. Running Length Single-end Feed".
3. Shielded Twisted Pair cable is required to be used to connect DMX master controller and decoder, and its length shall be less than 300m.

Max. Running Length Single-end Feed

Input: DC24V

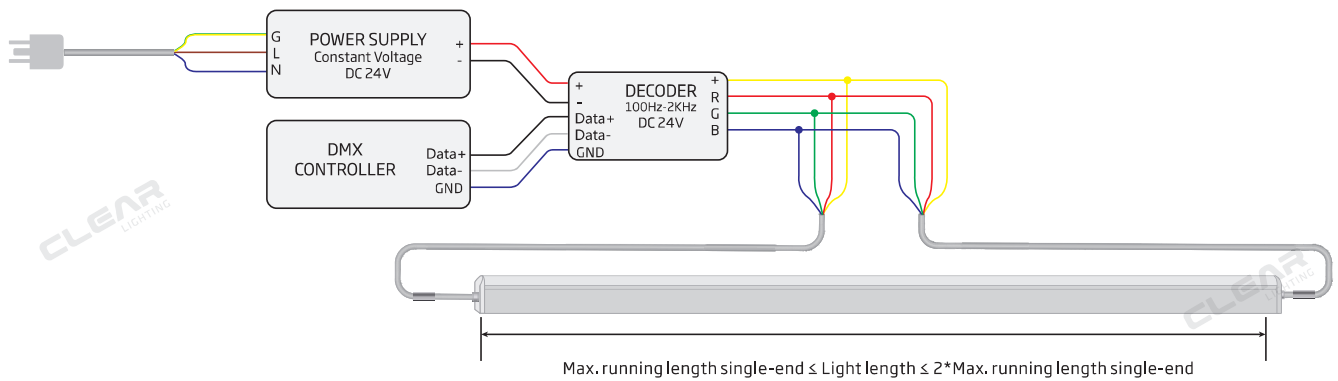
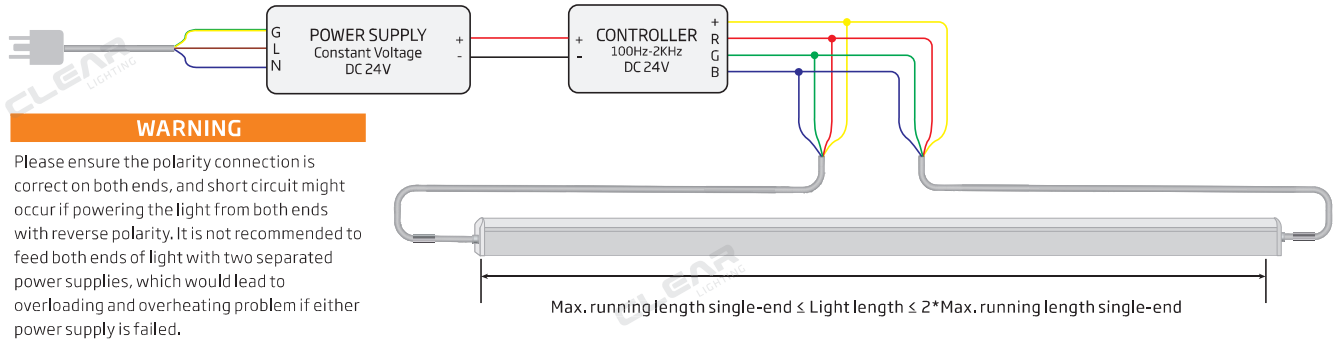
Connector Type	Sleeve Connector	Snap Connector	Socket Connector	Injection-moulded Connector	Dual Injection-moulded Connector
Wire Gauge	18AWG*4	18AWG*4	20AWG*1+22AWG*3	20AWG*1+22AWG*3	20AWG*1+22AWG*3
C-FR-F21A-12W-Static full loading	7m/22.96ft	7m/22.96ft	7m/22.96ft	7m/22.96ft	7m/22.96ft
C-FR-F21A-12W-Dynamic operating	10m/32.8ft	10m/32.8ft	10m/32.8ft	10m/32.8ft	10m/32.8ft
C-SFR-F21A-12W-Static full loading	10m/32.8ft	10m/32.8ft	10m/32.8ft	10m/32.8ft	/
C-SFR-F21A-12W-Dynamic operating	15m/49.2ft	15m/49.2ft	15m/49.2ft	15m/49.2ft	/

Note:

1. Above conclusion is based on voltage drop testing result of the light with 0.3m (0.98ft) cable only.
2. The maximum running length is based on the designated light in static full loading status exceptionally stated dynamic operating.
3. Above running length is only the light length excluding lengths of connectors.
4. The delivered length might be subject to the maximum packing length.

Double-end Feed

Please refer to the following wiring diagram with double-end feed to run length that is longer than max. running length for single-end feed but less than twice the value.



Light Length:

The length of the longest single light in parallel connection or sum of lights in series connection.

Cable Length:

The length of an electrical cable between power output end and light input end, and the cables for serial interconnection are inclusive.

How to Minimize Voltage Drop and Signal Transmission Attenuation

1. It is optimal to position the power supply in the middle of a single light or multiple lines in daisy chain to keep the equivalent cable length on both ends for double-end feed.
2. Please ensure the cable length is not more than the table "Max. Cable Length" according to the half of light length and its wire gauge.
3. Please ensure the light length is less than the table "Max. Running Length Double-end Feed".
4. Shielded Twisted Pair cable is required to be used to connect DMX master controller and decoder, and its length shall be less than 300m.

Max. Running Length Double-end Feed

Input: DC24V

Connector Type	Sleeve Connector	Snap Connector	Socket Connector	Injection-moulded Connector	Dual Injection-moulded Connector
Wire Gauge	18AWG*4	18AWG*4	20AWG*1+22AWG*3	20AWG*1+22AWG*3	20AWG*1+22AWG*3
C-FR-F21A-12W-Static full loading	14m/45.92ft	14m/45.92ft	14m/45.92ft	14m/45.92ft	14m/45.92ft
C-FR-F21A-12W-Dynamic operating	20m/65.6ft	20m/65.6ft	20m/65.6ft	20m/65.6ft	20m/65.6ft
C-SFR-F21A-12W-Static full loading	20m/65.6ft	20m/65.6ft	20m/65.6ft	20m/65.6ft	/
C-SFR-F21A-12W-Dynamic operating	30m/98.4ft	30m/98.4ft	30m/98.4ft	30m/98.4ft	/

Note:

1. Above conclusion is based on voltage drop testing result of the light with 0.3m (0.98ft) cable only.
2. The maximum running length is based on the designated light in static full loading status exceptionally stated dynamic operating.
3. Above running length is only the light length excluding lengths of connectors.
4. The delivered length might be subject to the maximum packing length.

F21A Max. Cable Length (PVC)

Input: DC24V

Item Code	Light Length (M)	Cable Length									
		0.32 mm ²		0.52 mm ²		0.81 mm ²		1.32 mm ²		2.07 mm ²	
		22AWG		20AWG		18AWG		16AWG		14AWG	
		m	ft	m	ft	m	ft	m	ft	m	ft
C-FR-F21A-CV-12W	1	62.8	206.0	102.0	334.8	158.9	521.5	259.0	849.8	406.2	1332.6
	2	30.1	98.7	48.9	160.4	76.2	249.9	124.1	407.2	194.6	638.5
	3	19.1	62.6	31.0	101.7	48.3	158.5	78.7	258.2	123.4	405.0
	4	13.4	44.1	21.8	71.6	34.0	111.5	55.4	181.8	86.9	285.0
	5	9.8	32.2	16.0	52.4	24.9	81.6	40.5	133.0	63.6	208.6
	6	7.4	24.1	12.0	39.2	18.6	61.1	30.4	99.6	47.6	156.2
	7			8.6	28.1	13.3	43.7	21.7	71.3	34.1	111.8
	8			5.9	19.3	9.2	30.1	14.9	49.0	23.4	76.8
	9			3.5	11.4	5.4	17.7	8.8	28.9	13.8	45.4
	10			1.5	4.8	2.3	7.5	3.7	12.2	5.8	19.2

F21A Max. Cable Length (Silicone)

Input: DC24V

Item Code	Light Length (M)	Cable Length									
		0.32 mm ²		0.52 mm ²		0.81 mm ²		1.32 mm ²		2.07 mm ²	
		22AWG		20AWG		18AWG		16AWG		14AWG	
		m	ft	m	ft	m	ft	m	ft	m	ft
C-SFR-F21A-CV-12W	1	111.6	366.2	102.0	334.8	158.9	521.5	259.0	849.8	406.2	1332.6
	2	56.4	185.0	51.6	169.1	80.3	263.5	130.9	429.4	205.2	673.3
	3	37.7	123.8	34.5	113.2	53.7	176.3	87.6	287.2	137.3	450.5
	4	27.0	88.7	24.7	81.0	38.5	126.2	62.7	205.7	98.3	322.6
	5	20.8	68.3	19.0	62.4	29.6	97.2	48.3	158.4	75.7	248.5
	6	16.7	54.7	15.3	50.0	23.8	77.9	38.7	127.0	60.7	199.2
	7			12.5	41.1	19.5	64.0	31.8	104.3	49.8	163.5
	8			10.5	34.4	16.3	53.6	26.6	87.3	41.7	136.9
	9			8.9	29.3	13.9	45.6	22.6	74.3	35.5	116.4
	10			7.7	25.2	12.0	39.2	19.5	63.9	30.6	100.2

Note:

1. Please check the wire gauge of your connector in the table "Max. Running Length".

E.g.,

Single-end feed, C-FR-F21A-12W, 5m light length when with 20AWG wire, max. cable length should refer to the corresponding value 16m for 5m light length;

Double-end feed, C-FR-F21A-12W, 10m light length when with 20AWG wire, max. cable length of each end should refer to the corresponding value 16m for half of light length 5m;

2. The above cable lengths are calculated based on 10% allowable voltage drop maximum.