

Outdoor IP65 Outline™ Series

Product Data Sheet



15 Year
Warranty



**TITLE
24**
REQUIREMENTS

Title 24 is regulated for lamps with color temperatures 4000k and below

Description

Less is more with our Outdoor (IP65) UltraBright™ Outline Series. These elegant, weatherproof lights fill the specific need for a lower-output strip with remarkable color accuracy that's guaranteed to make an unforgettable first impression. Not only does the IP65 silicone cover ensures complete protection against dust and can withstand powerful streams of water, but it also makes the strips very easy to clean. Longer run lengths also gives you liberated, uninterrupted design as you get creative with larger projects. From adorning your balcony and bar to outlining commercial windows and kitchens, the IP65-rated Outline Series promises the sophistication that is difficult to achieve in outdoor settings

Product Features

- High CRI of 95+
- High R9 (95) & R13 (98) values
- Up to 125 Lumens/ft (411/meter)
- Fully dimmable
- Highest quality components and premium packaged
- 2216 LEDs
- Single BIN LED selection to ensure color consistency (3-Step MacAdam)
- Thermally Resistant 3M VHB 9731 for long lasting bond
- 120° Beam Angle
- Efficiency up to 84 Lumens/W
- Only 1/2" (12mm) strip width
- Short LED pitch of 5/16" (8mm)
- 24V and 48V DC Input
- 24V can be cut every 2" (50mm)
- 48V can be cut every 5" (125mm)
- 37 LEDs / Foot (120/Meter)
- Thick double layer 4 oz copper PCB for excellent thermal management
- Operating Temperature -4°F to +104°F (-20°C to 40°C)
- Maximum Run Length in Series:
24V (25m / 82ft), 48V (40m / 131ft)
- IP65 Rated with non-yellowing and UV resistant silicone sleeve

Product Specific Specifications

Product. SKU	Color* (CCT)	Watts / foot (Meter)	Lumen / foot (Meter)	Luminous efficacy (Lumens / Watt)	CRI	Gamut Score Rg (Color Sat.)	Relative Fidelity Score (RF)	TLCI (Qa)	CQS
IP65-UB-OL-24K97C (special order only)	2400K	1.5 W/ft 4.8 W/m	98 lm/ft (320 lm/m)	65 lm/W	97	104	96	98	97
IP65-UB-OL-27K97C	2700K	1.5 W/ft 4.8 W/m	97 lm/ft (318 lm/m)	65 lm/W	97	102	96	99	97
IP65-UB-OL-30K97C	3000K	1.5 W/ft 4.8 W/m	100 lm/ft (328 lm/m)	67 lm/W	97	104	96	99	98
IP65-UB-OL-35K97C	3500K	1.5 W/ft 4.8 W/m	116 lm/ft (379 lm/m)	77 lm/W	98	103	96	99	98
IP65-UB-OL-40K95C	4000K	1.5 W/ft 4.8 W/m	111 lm/ft (363 lm/m)	74 lm/W	95	103	94	98	97
IP65-UB-OL-50K95C	5000K	1.5 W/ft 4.8 W/m	125 lm/ft (411 lm/m)	84 lm/W	95	101	94	99	98

*CCT may be +/-100K but always ordered from same bin and will present no noticeable differences perceived by the human eye.

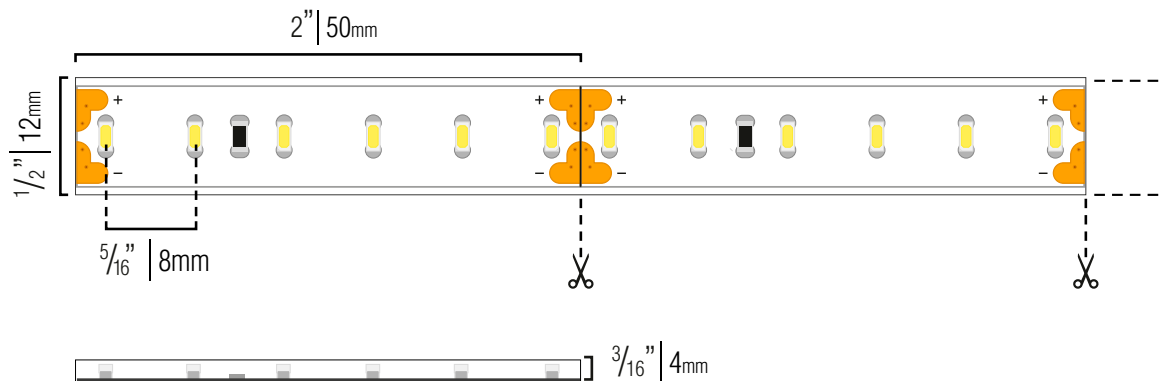
Ordering Code

IP Protection	Brand	Series	CCT	Voltage	Length
IP65 - Weatherproof	UB - UltraBright	OL - Outline Series	24K97C - 2400K/97+ CRI * 27K97C - 2700K/97+ CRI 30K97C - 3000K/97+ CRI 35K97C - 3500K/97+ CRI 40K95C - 4000K/95+ CRI 50K95C - 5000K/95+ CRI	24V - 48V -	16FT - 16ft Reel 32FT - 32ft Reel

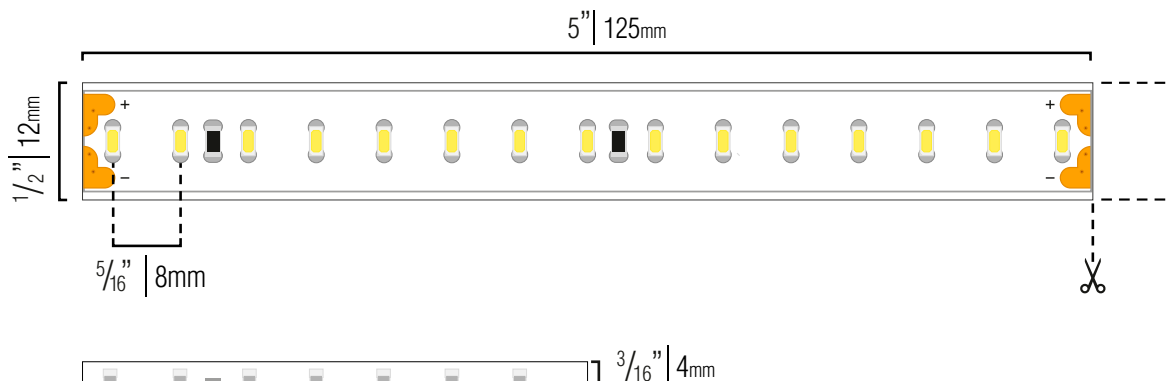
Note:

* Special Order only

Dimensions 24V

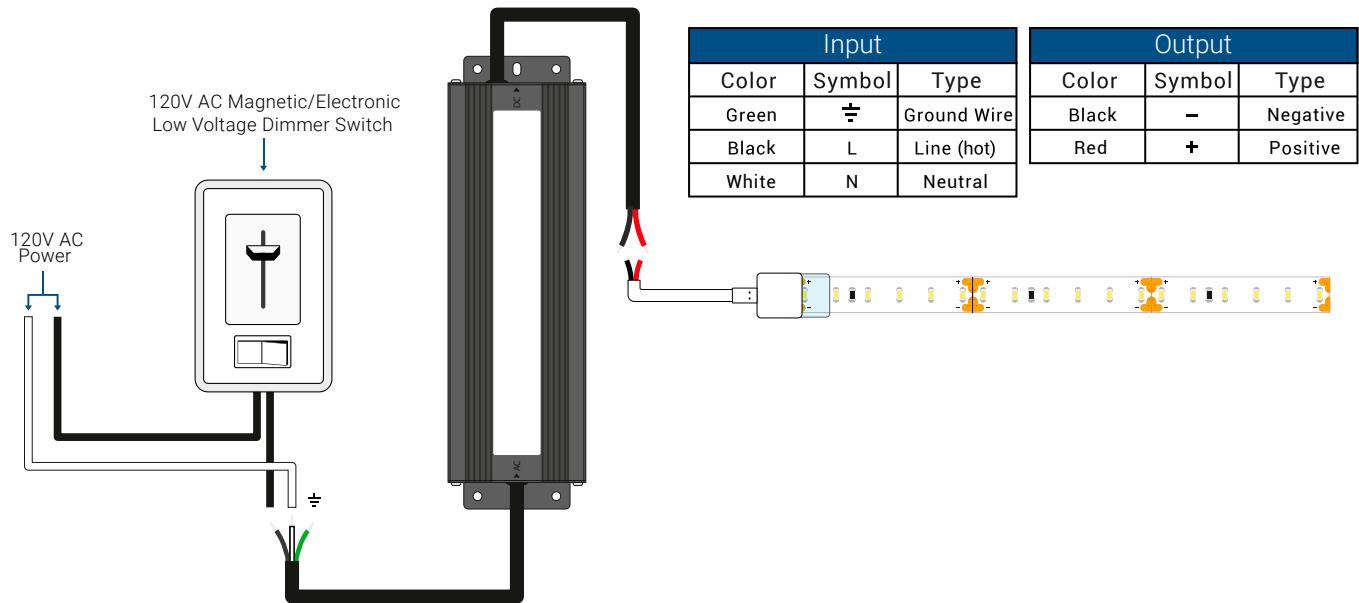


Dimensions 48V

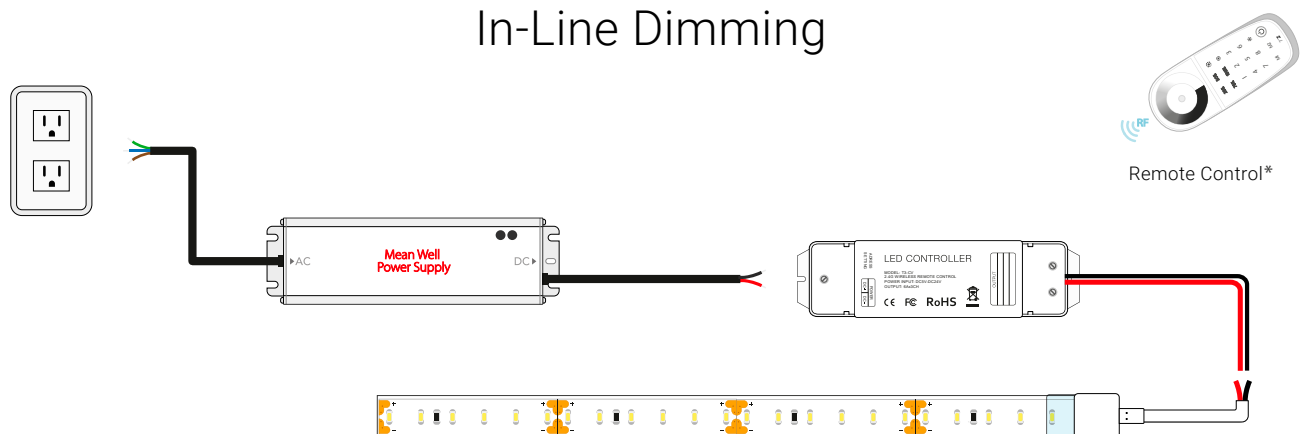


Dimming Options

Lutron Style Wall Dimmer



In-Line Dimming



*Remote Control (SKU: SC-MZ-CTRL) can be paired to 8 total receivers. Multiple remotes cannot be paired to a single receiver (max 1)

Included Accessories

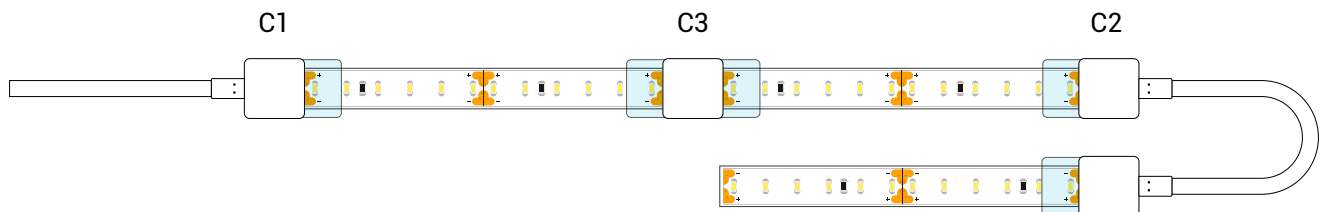
<ul style="list-style-type: none"> • Weatherproof C1 Connector (Female) • Weatherproof C1 Connector (Male) 	<ul style="list-style-type: none"> • Mounting Bracket <p>Width - 6 mm Length - 28 mm</p>	<ul style="list-style-type: none"> • End Cap <p>Width - 14 mm Height - 6 mm</p>	<ul style="list-style-type: none"> • End Cap (with 2 holes for lead wires) <p>Width - 14 mm Height - 6 mm</p>
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Strip Light Connectors

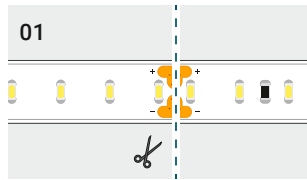
SKU	Description	Wire Gauge	Amperage** Limit	Diagram
IP65-GRIP-SC-C1-10-40	Outdoor IP65 Grip Connector with 40" wire	20 AWG	5 Amps	
IP65-GRIP-SC-C2-10-08	Outdoor IP65 Grip Jumper Connector with 8" wire	20 AWG		
IP65-GRIP-SC-C3-10-0	Outdoor IP65 Grip Jumper Connector			

* Calculate max length of LED strip to follow the solderless connector based on an amperage draw of 0.060 A/ft (0.20 A/m) at 24 volts, and of 0.03 A/ft (0.10 A/m) at 48 volts.

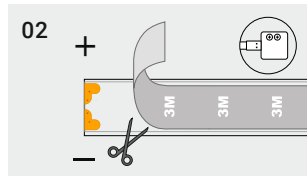
** Be sure no more than 5 amps is drawn after any solderless connector.



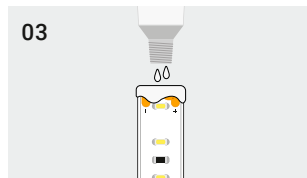
Solderless Connection Guide



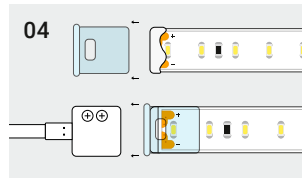
01 Cut the LED strip light and the silicone sleeve on the cutting point you want to install the connector.



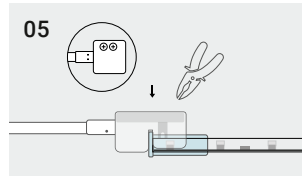
02 Check the polarity and remove 2" of the adhesive tape and its backer from the back of the LED Strip light.



03 Apply Silicone sealant liberally inside of the silicone sleeve until ensuring it is completely sealed.



04 Slide the transparent case of your Outdoor IP65 Grip connector into the sleeve, until making sure that the strip is making proper contact.

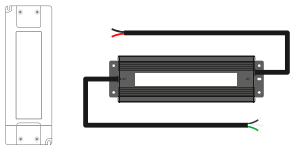
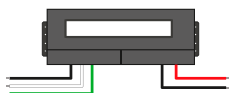




05 Grab the white plastic part of your connector and push the metal contacts through the window of the transparent case. Adjust it with pliers until you hear a click, and then let the sealant cure according to its own instructions.




Compatible Drivers (24V)

	Power Supply	LED Strip Length	SKU	Diagram
Non-Dimmable	Wall Mounted Power Supply / Desktop Power Supply	1-12 ft	24V-WMPS-1	
		13 - 32 ft	24V-DPS-2.5	
		33 - 51 ft	24V-DPS-4	
		52 - 64 ft	24V-DPS-5	
	Mean Well™ HLG	1 - 24 ft	HLG-40H-24A	
		25 - 36 ft	HLG-60H-24A	
		37 - 60 ft	HLG-100H-24A	
		61 - 72 ft	HLG-120H-24A	
		73 - 111 ft	HLG-185H-24A	
		112 - 144 ft	HLG-240H-24A	
	Mean Well™ LPV	1-12 ft	LPV-20-24	
		13 - 21 ft	LPV-35-24	
		22 - 36 ft	LPV-60-24	

Compatible Drivers (24V)

	Power Supply	LED Strip Length	SKU	Diagram
Dimmable	Zurik® EMLV	1 - 18 ft 19 - 36 ft 37 - 57 ft 58 - 72 ft 73 - 120 ft 121 - 180 ft	ZRK-EMLV2-30W-24VDC ZRK-EMLV2-60W-24VDC ZRK-EMLV2-96W-24VDC-J ZRK-EMLV2-120W-24VDC-J ZRK-EMLV2-200W-24VDC-J ZRK-EMLV2-300W-24VDC-J	
	Zurik® Universal Drivers	1 - 31 ft 32 - 51 ft 52 - 63 ft 64 - 110 ft 111 - 172 ft	ZRK-UNV-60W-24VDC ZRK-UNV-96W-24VDC ZRK-UNV-120W-24VDC ZRK-UNV-200W-24VDC ZRK-UNV-300W-24VDC	
	Lutron® Hi-Lume™ Premier 0.1% Constant Voltage Driver • Dimming Range: 0.1-100% • Description: Hi-Lume Premier 0.1% EcoSystem 24V constant voltage LED driver with Soft-on, Fade-to-Black dimming technology 	1 - 60 ft	L3D0-96W24V-U	

Compatible Drivers (48V)

	Power Supply	LED Strip Length	SKU	Diagram
Non-Dimmable	Mean Well™ HLG	1 - 60 ft 61 - 90 ft 91 - 192 ft 193 - 360 ft	HLG-100H-48A HLG-150H-48A HLG-320H-48A HLG-600H-48A	
	Mean Well™ LPV	1 - 36 ft	LPV-60-48	
Dimmable	Zurik® Universal Drivers	1 - 106 ft (up to 53 ft per channel) 107 - 163 ft (up to 81 ft per channel)	ZRK-UNV-C192W-48VDC ZRK-UNV-C288W-48VDC	

Compatible Aluminum Extrusions

KLUS GIZA Anodized Extrusion

(SKU: KL-B5556ANODA-1m)



Note: This extrusion only fits the IP65 Outline Series without cover

Covers

- KLUS - HS 22 Clear Cover (SKU: KL-17022-1m)
- KLUS LIGER 22 Frosted Cover (SKU: KL-17032-1m)

End Caps

- KLUS GIZA End Cap (SKU: KL-24007)

Mounting Accessories

- KLUS GP Surface Spring (SKU:KL-00293)
- KLUS Mounting Bracket (SKU: KL-24143)

KLUS LIPOD Anodized Extrusion

(SKU: KL-B5554ANODA-1m)



Covers

- KLUS LIGER 22 Frosted Cover (SKU: KL-17032-1m)

End Caps

- KLUS LIPOD-MET End Cap (SKU: KL-24051)

Mounting Accessories

- KLUS Mounting Bracket (SKU: KL-24143)

KLUS KOPRO Anodized Extrusion

(SKU: KL-B6367ANODA-1m)



Covers

- KLUS KOPRO L Cover (SKU: KL-17092-1m)

End Caps

- KLUS KOPRO L End Cap (SKU: KL-24116)

Mounting Accessories

- KLUS GP Surface Spring (SKU: KL-00293)

KLUS SILER Anodized Extrusion

(SKU: KL-B9325ANODA-1m)



Covers

- KLUS SILER Frosted Cover (SKU: KL-17039-1m)

End Caps

- KLUS SILER End Cap (SKU: KL-24236)

Mounting Accessories

- KLUS 45-STN Mounting Bracket (SKU: KL-24144)

Safety And Disclosures

1. Installation must be in accordance with local and national electrical code regulations.
2. To ensure safety and correct installation, our strips are intended to be installed by a qualified, licensed electrician.
3. Only install with a Class 2 DC Constant Voltage LED driver to meet UL requirements.
4. Do not install in environment where excessive heat may exist.
5. LED strip lights must be handled with care. Excessive handling, bending, and pressure may damage the product, voiding the warranty.
6. Do not install indoor LED tape light products in outdoor / wet location environments. Only use copper wiring. Use wires rated for at least 176°F (80°C) and certified for use with external connection of electrical equipment.
7. Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length.
8. Make sure the appropriate gauge wire is installed between driver, LEDs, and any dimmers. When choosing wire, calculate voltage drop, maximum amperage rating, and the location ratings on the wire. Improper wire selection and installation could overheat wires, and cause fire.
9. Do not modify product beyond instructions or warranty will be void.
10. We reserve the right to modify and improve the design of our fixtures without prior notice. Although we try our best to order the same colors every time, due to changes in technology and phosphors over time, we cannot guarantee to match existing installed fixtures for subsequent orders or replacements in regards to product appearance, CCT, or lumen output.

Warranty Information

Limited Warranty

This product has a 15 year limited warranty from the date of shipment. This warranty only includes the main product outlined in this specification sheet and does not include the additional accessories that are used as a reference. Complete warranty details for fixtures and additional accessories are available at <https://www.flexfireleds.com/warranties/> within the Policies section. For warranty related questions please contact product support team at (support@flexfireleds.com).

Consumer's Acknowledgment

Flexfire LEDs, Inc. stands behind its products when they are used properly and according to our specifications. When you purchase our products, you are agreeing to the terms and conditions outlined in our warranty section. We try our best to make recommendations, but the burden of proper installation, design, and maintenance relies on the purchaser.

This limited warranty does not include product failures that are the result of:

Not using a voltage regulated power supply to connect the LED product or controls; Connecting LED products to the wrong output voltage; Improper connection of power supplies, LED products, or controls; Connecting LED products or controls directly to any AC power source if they are stated for DC only input; Connecting power supplies backwards to an AC power source; Products used in an inappropriate location or in environmental conditions (temperature, humidity, moisture, etc.) outside the normal specified range; Water damage to products not specifically sold as waterproof products; Electrical power surges and spikes; Damage from hail, flooding, tornado, fire, wind, earthquake, lightning, electrical storm, or any other natural disasters or "force majeure" incidences; Damage caused by a vehicle or other accident; Damage caused when transporting the item; Damage to any products that were modified by the user, used for purposes other than as intended or directed, or connected to LED systems or components not purchased from Flexfire LEDs; Products that have been subjected to misuse, mishandling, misapplication or accident. Products used in connection with any components, devices or systems other than those explicitly approved as compatible with Company's products and listed on Company's website. Excessive wear and tear and/or physical or accidental abuse, loss, or theft. Improper repairs or warranty services performed by someone other than Flexfire LEDs will void this warranty.