

## ZURIK® EMLV 12V & 24V 300W LED DRIVER

### Low Voltage LED Driver

#### INTRODUCTION

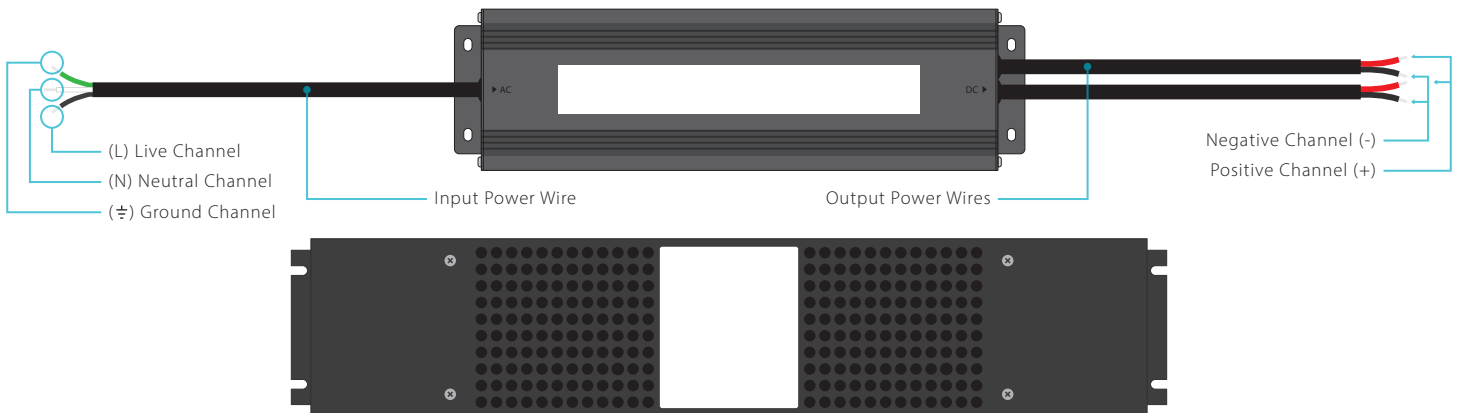
The Zurik® EMLV Dimmable Driver is the most versatile and efficient dimmable electronic driver for single color output LED strips. This driver has a high power factor of 0.99, a universal input and perfect compatibility with a wide range of dimmers for flicker free lighting. Its high power efficiency, wide voltage input, and quiet operation make the EMLV the professional's choice when it comes to flawless dimming.

#### SAFETY AND WARNINGS

- Install in accordance with the National Electric Code (NEC) Article 450, and local regulations.
- This product should be installed and serviced by a qualified electrician.
- Install in a well ventilated area free from explosive gases and vapors.
- Do not reverse the line voltage polarity upon installation. This will damage the driver.
- Risk of electric shock: When used outdoors, install only on a circuit protected by a Class A GFCI.
- Risk of fire: Special rated wire required for installations inside walls and building structures.
- Consult a qualified electrician.
- Only use with compatible dimmable LED fixtures.
- Dimmer switches have minimum load requirements. Review the specifications of the compatible dimmer.
- Modifying or disassembling this product beyond these instructions will void the product warranty.

#### DRIVER

\* The 24V version comes with one Outlet Power Wire instead of two



#### Additional Features

- Constant voltage output
- Easy installation
- Cooling by free air convection
- Compatible with most forward phase, magnetic low voltage, reverse phase, and electronic low voltage dimmers
- Flicker-free dimming
- Suitable for LED lighting and sign applications among other uses
- Comes with junction box: H: 17 13/16" (453mm) W: 3 3/8" (86mm) D: 2 5/16" (59mm)

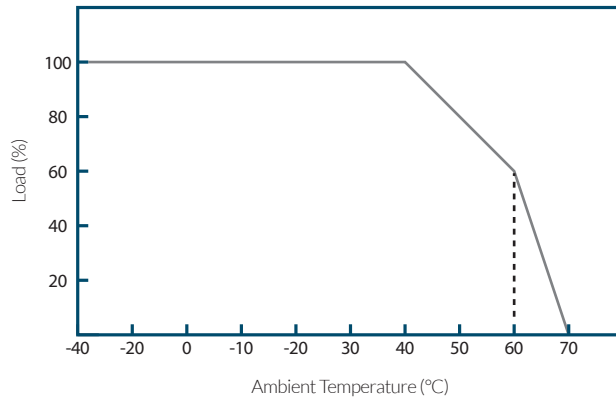
## Details

<b>SKU:</b>	ZRK-EMLV2-300W-XXDC-J	<b>Working Humidity:</b>	20 ~ 90%RH. Non condensing
<b>Ingress Protection:</b>	IP66 (indoor and outdoor)	<b>Storage Temp. and Humidity:</b>	-40°F ~ 176°F (-40°C ~ 80°C), 10 ~ 95%RH
<b>Input Voltage:</b>	110 - 277 VAC	<b>Temp. Coefficient:</b>	±0.03% /°C [32°F ~ 122°F (0 ~ 50°C)]
<b>Output Voltage:</b>	12VDC or 24VDC	<b>Vibration:</b>	10 ~ 500Hz, 2G 10min./ 1 cycle, period for 60min. Each along X,Y,Z axes
<b>Rated Current:</b>	12V: 25A 24V: 12.5A	<b>Certifications:</b>	UL (E500166), conforms to UL8750, certified to CSA STD.C22.2 No. 250.13
<b>Rated Power:</b>	300W	<b>Withstand Voltage:</b>	I/P-O/P:1880VAC
<b>Frequency Range:</b>	47 ~ 63Hz	<b>Isolation Resistance:</b>	I/P-O/P:100MΩ/500VDC/25°C/70%RH
<b>Power Factor:</b>	0.99 (fully loaded)	<b>EMC Emission:</b>	FCC Part 15B
<b>Efficiency (Typ.):</b>	12V: 86% 24V: 88%	<b>Weight:</b>	3.74lb (1.7kg) without junction box
<b>AC Current (Max.):</b>	3.4A @ 110VAC	<b>Dimensions:</b>	H: 10 7/8" (276mm) W: 3 1/8" (78mm) D: 1 7/8" (47mm)
<b>Leakage Current:</b>	<0.50mA	<b>PWM Frequency:</b>	400Hz
<b>Short Circuit:</b>	Shuts down output voltage, recovers after faulty condition is removed	<b>Warranty:</b>	7 years
<b>Overload Protection:</b>	≤120%		
<b>Overheat Protection:</b>	212°F ± 18°F (100°C ± 10°C) Shuts down output voltage, recovers after faulty condition is removed  -40°F ~ 140°F (-40°C ~ 60°C)		

## Notes

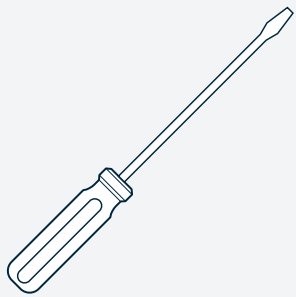
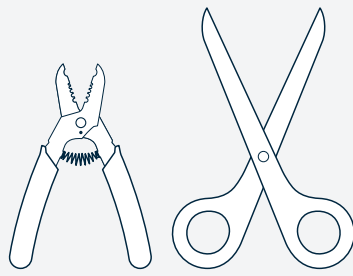
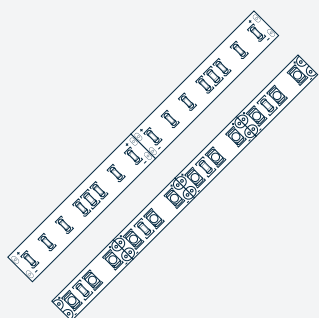
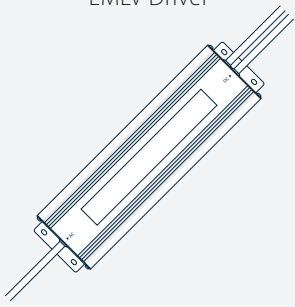
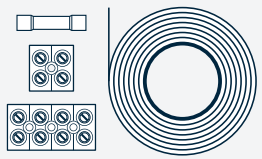
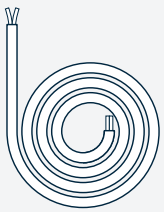
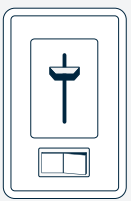
- All parameters if not specially mentioned are measured at 120VAC input, rated load and ambient temperature of 25°C.
- To extend the life of the driver keep the load below 90%.
- Load on the driver should be within 10%-100%.
- Loading on the AC dimmer should not be below 40% in order to extend the life of the dimmer.

## DERATING CURVE



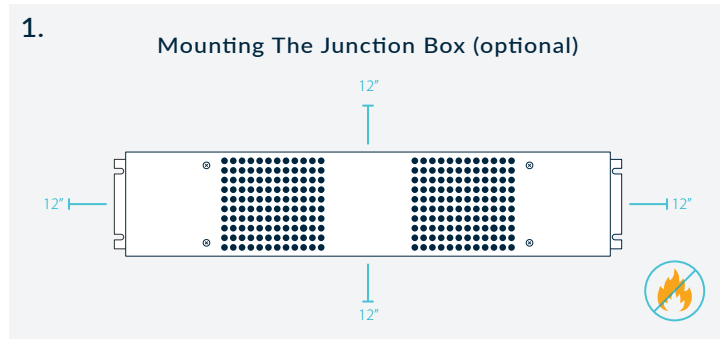
To extend the power supply's life, refer to the Derating Curve above and derate according to the ambient temperature

## YOU'LL NEED

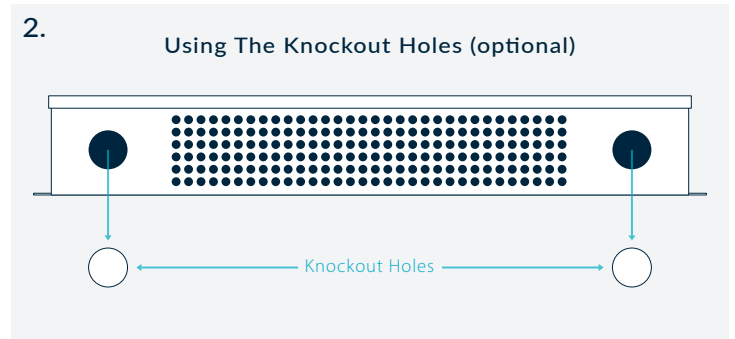
<p>Small flat-head screwdriver (4mm)</p> 	<p>Wire strippers or scissors</p> 	<p>Single Color LED strip</p> 	
<p>EMLV Driver</p> 	<p>Wire connectors (terminal block, electrical tape, crimp connector, etc)</p> 	<p>2-wire stranded low voltage wire</p> 	<p>AC dimmer (optional)</p> 

## INSTALLATION

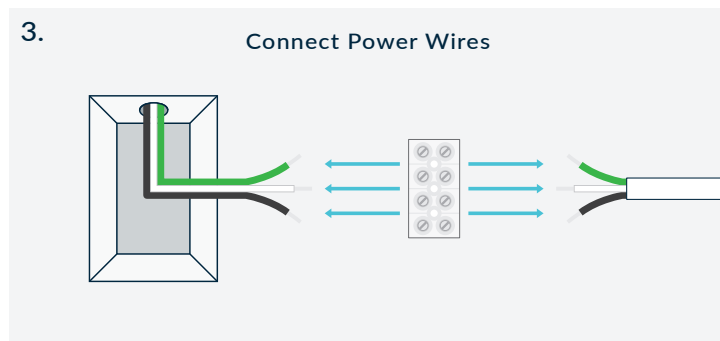
Always pre-test your LED setup prior to permanent installation. This will ensure all components work correctly. Be sure to check the wattage pull of the LED strip you've purchased so the driver isn't overloaded (Max. 270W). Turn off the main AC breaker for the line you'll be using before installing your EMLV driver. If you experience any issues at all with your test set up, please be sure to contact us at After Sales Support.



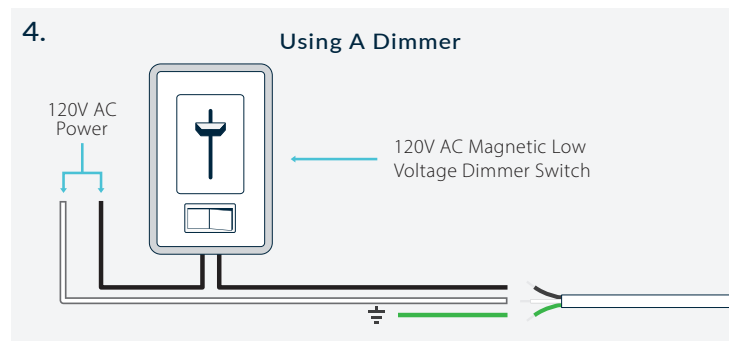
It can be mounted in any orientation, the chosen location must be able to support the weight of the power supply with 12" of clearance for proper ventilation. Never mount it next to objects radiating heat.



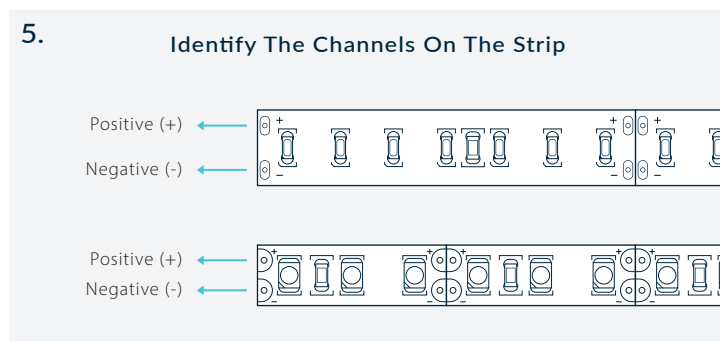
Remove wiring knockouts as needed and install 3/8" romex connectors or bushings to reduce strain on wires. One set of knockout holes is reserved for input voltage while the second set is reserved for output voltage.



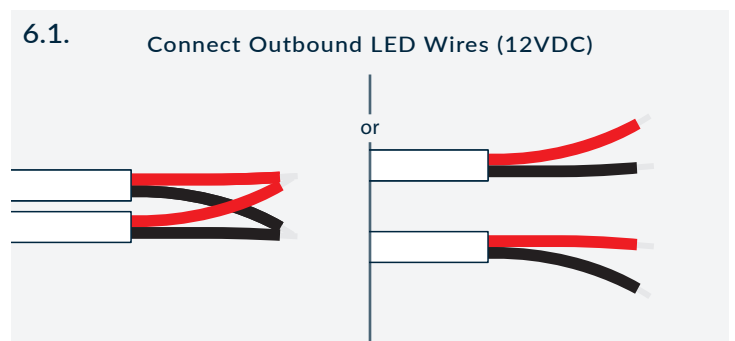
Connect the AC line ground (G) to the green wire from the Power Input Wire. Do the same with the AC neutral wire to the white wire on the driver and the AC live wire to the black wire. you can secure these connections with a terminal block.



When using a 3-pole dimmer as a single pole make sure to cap the additional line and connect the rest of the wiring as recommended by the dimmer instructions. Find our list of compatible dimmers below.

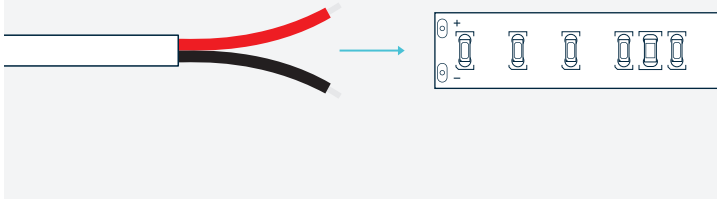


Look at your LED strips carefully and identify the positive (+) and negative (-) channels.



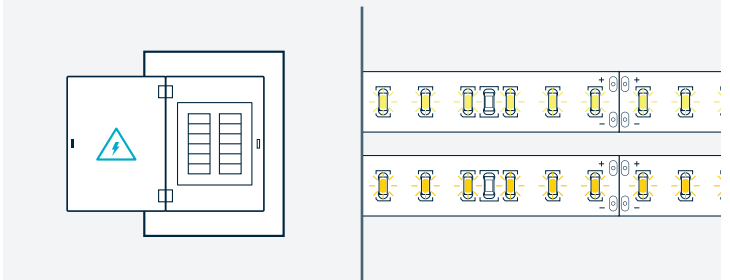
Connect the driver's Output Power negative (-) wire to the - channel on the LED strip. Connect the positive (+) wire to the + channel.

**6.2 Connect Outbound LED Wires (24VDC)**



Look at your LED strips carefully and identify the positive (+) and negative (-) channels.

**7. Turn Power On**



Turn the main breaker for the AC line back on to power your EMLV driver. The LED strip should turn on.

**LUTRON COMPATIBLE DIMMERS**

Model	Model Number (Dimmer)	Wattage	Input Voltage	Dimming Range	Forward Phase or Reverse Phase
Ariadni / Toggler	TG-10PR-WH	1000W	100-130V	0-100%	Forward Phase
Ariadni / Toggler	TG-600PR-WH	600W	100-130V	0-100%	Forward Phase
Ariadni / Toggler	TGCL-153PH-WH	150W	100-130V	0-100%	Forward Phase
Ariadni / Toggler	TGCL-153PR-WH	150W	100-130V	0-100%	Forward Phase
Caseta	PD-10NXD-WH	800W	100-130V	10-100%	Forward Phase
Caseta	PD-5NE-WH	250W	100-130V	18-100%	Forward Phase
Caseta	PD-6WCL	150W	100-130V	20-100%	Forward Phase
Diva	DV-600PR-WH	600W	100-130V	0-100%	Forward Phase
Diva	DVCL-153PR-WH	150W	100-130V	0-100%	Forward Phase
Diva	DVWCL-153PH-LA	150W	100-130V	0-100%	Forward Phase
Maestro	MACL-153MH-LA	150W	100-130V	20-100%	Forward Phase
Maestro	MRF2-6CL-GR	150W	100-130V	15-100%	Forward Phase
Maestro	MRF2-6ELV-120	600W	100-130V	0-100%	Reverse Phase
Maestro	MRF2-6ND-120-AL	600W	100-130V	0-100%	Forward Phase
Maestro	MSCELV-600M	600W	100-130V	0-100%	Reverse Phase
Maestro IR Remote Ctrl	MIR-600M	600W	100-130V	2-100%	Forward Phase
Nova T	NTF-10-277	1000W	277V	13-100%	Forward Phase

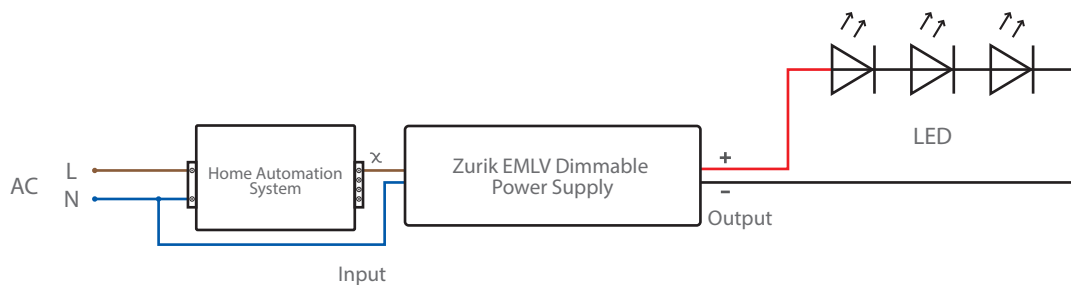
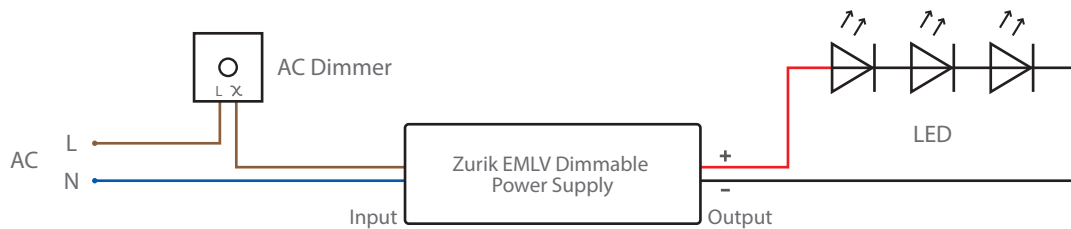
Model	Model Number (Dimmer)	Wattage	Input Voltage	Dimming Range	Forward Phase or Reverse Phase
Nova T	NTLV-600-277-WH	450W	277V	1-100%	Forward Phase
Skylark	S-600PR-WH	600W	100-130V	0-100%	Forward Phase
Skylark	SCL-153PR-WH	150W	100-130V	0-100%	Forward Phase
Skylark	SELV-300P	300W	100-130V	15-100%	Reverse Phase
Skylark	SF-12P-277	6Amp	277V	13-100%	Forward Phase
Skylark Contour	CT-103PR-WH	1000W	100-130V	2-100%	Forward Phase
Skylark Contour	CT-600PR-WH	600W	100-130V	0-100%	Forward Phase
Skylark Contour	CTCL-153PDH-LA	150W	100-130V	0-100%	Forward Phase

**OTHERS COMPATIBLE DIMMERS**

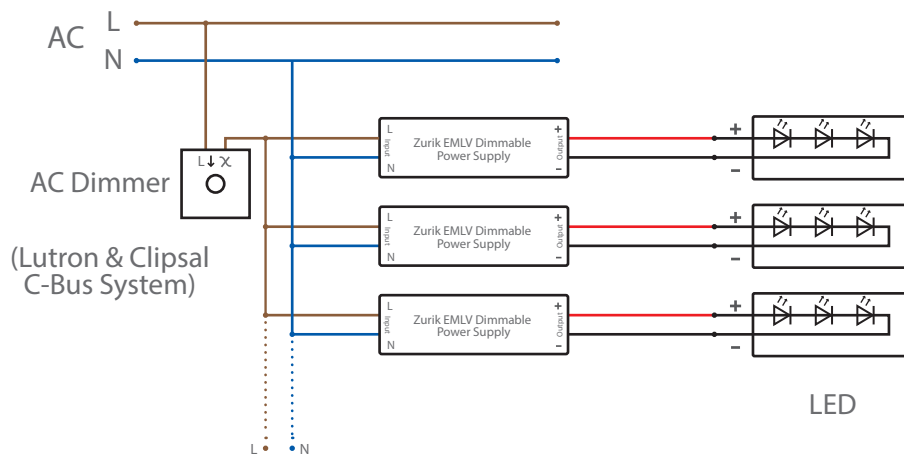
Brand	Model Number (Dimmer)	Wattage	Input Voltage	Dimming Range	Forward Phase or Reverse Phase
Crestron	CNLW-DELVEX-P-W-S	500W	100-130V	11-100%	Reverse Phase
Legrand	RHCL453PNICCV6	-	100-130V	6-100%	Forward Phase
	WSCL450TCCCV4	450W	100-130V	11-100%	Forward Phase
	LSCL453PLACCV4	450W	100-130V	11-100%	Forward Phase
Leviton	VPI06-1LZ	600W	100-130V	15-100%	Forward Phase
	TTI06-1LZ	600W	100-130V	1-100%	Forward Phase
	IPL06	150W	100-130V	15-100%	Forward Phase
	DZ6HD	600W	100-130V	17-100%	Forward Phase
	6674	150W	100-130V	16-100%	Forward Phase
	6672	150W	100-130V	20-100%	Forward Phase
	TBL03	150W	100-130V	15-100%	Forward Phase
	6602	600W	100-130V	0-100%	Forward Phase
	6683	600W	100-130V	10-100%	Forward Phase

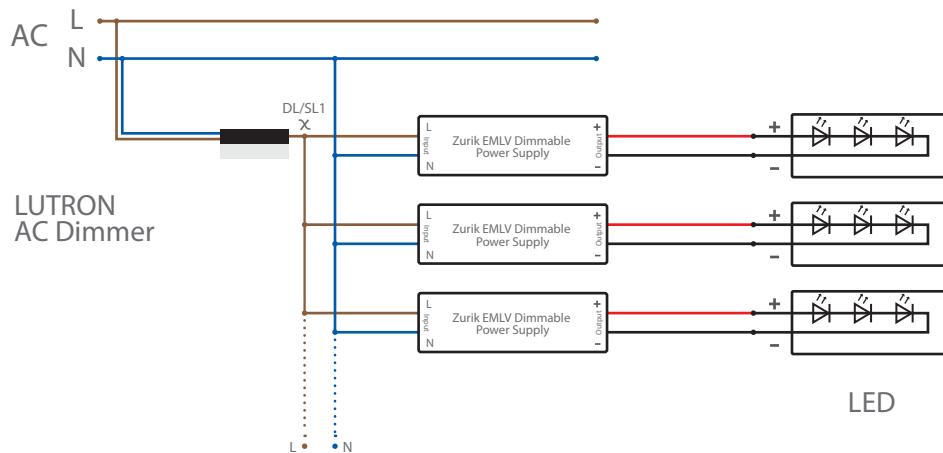
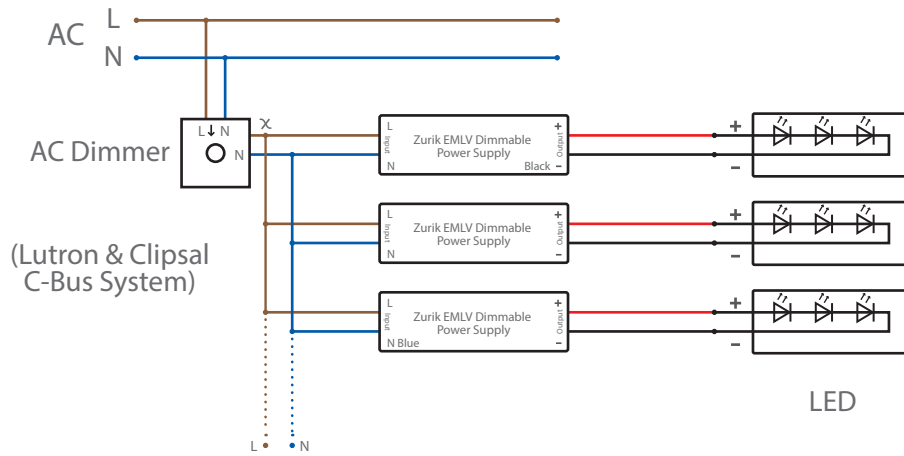
## WIRING DIAGRAMS

- Using a single driver



- Using multiple drivers





## TROUBLESHOOTING

### - If the driver is humming, lights are not turning on or are flickering:

- Check that this driver is not overloaded or overheated. The automatic breaker will trip and recover once the external cause has been corrected.
- Make sure the polarity of the AC line wires match the polarity of the channels on the Power Input Terminal.
- If the driver is powered, check the polarity on the Power Output Terminal. Make sure you have matched the markings on the LED strip to the channels on the driver.
- Check that your dimmer is on the compatible dimmer list.
- Make sure all the connections (solderless connectors, solder joints, terminal blocks, and spliced wires) are secure and making correct contact.
- Make sure the power requirements are being met, 100-277VAC input and 12-24VDC output (depending on the driver), check these with a multimeter.
- If the driver isn't providing the adequate voltage ensure proper size gauge wire is installed by factoring voltage drop and amperage rating. If the voltage at the end of the wire is 10.5V or less for a 12V unit and less than 21V for a 24V unit, we recommend installing a heavier gauge wire between the driver and the LED load.
- Check that the wire connections are accurate by referring to the wiring diagrams provided.
- Check that your installation has not tripped the circuit breaker at the main service panel of the building. If this occurred reset the breaker. If it trips again, it is possible that there is an electrical short/defective component or a connection issue on the AC side of the driver.



## WARRANTY INFORMATION

### Limited Warranty:

This product has a 7 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](mailto: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.