

DRIV-MG-24V-96W


LED Driver, Class 2 Magnetic Dimmable, 24V, 96W

Project Name:
Fixture Type:

DESCRIPTION

The MG series LED drivers feature flicker free, forward phase magnetic 1% dimming. They are compatible with our tape lights, and suitable for indoor/outdoor application.

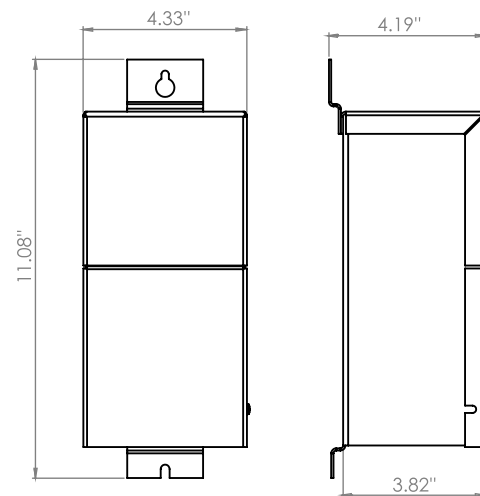
SPECIFICATIONS

- Voltage: 24V
- Watts: 96W
- Input: 120-277V 60Hz
- Output: 24VDC 4.0A MAX. 96VA
- Dimensions: 11.08" L X 4.33" W X 4.19" H
- Dimming: 1% magnetic low voltage dimming
- Leads max. operation Temperature: 105°C
- Overload protection: NEC Class II 4A breaker protection
- Reset: Red light on when overloaded. Press restore button after loading back to normal.
- Construction: Steel enclosure constructed of 0.055 matte white finished metal. Two 1/2" knockouts allow for 120VAC-277VAC input power supply and 24VDC output.
- UL Listed for US and Canada
UL File number - E494504 
- 5 Year Warranty

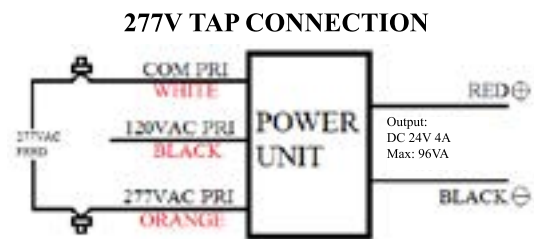
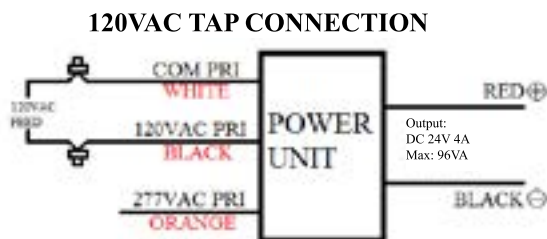
Please see PreciseLED.com for warranty and installation information.



DIMENSIONS



WIRING DIAGRAM



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■ COMPATIBLE DIMMERS

Make	Model	Description	Capacity
LUTRON Ariadni	AYLV-600P	Single-pole	600VA(450W)
	AYLV-603P	3-way	600VA(450W)
LUTRON DIVA CL	DVCL – 153P	3-way/Single-pole	150W
	DVLV-600P	Single-pole	600VA(450W)
	DVSCLV-600P	Single-pole	600VA(450W)
	DVLV-603P	3-way	600VA(450W)
LUTRON DIVA CL	DVSCLV-603P	3-way	600VA(450W)
	DVLV-10P	Single-pole	1000VA(800W)
	DVSCLV-10P	Single-pole	1000VA(800W)
	DVLV-103P	3-way	1000VA(800W)
	DVSCLV-103P	3-way	1000VA(800W)
LUTRON MAESTRO	MACL – 153M	Multi location/3-way/ Single-pole	150W
LUTRON Nova	NLV-603P	3-way/Single-pole	600VA(450W)
	NLV-1503P	3-way/Single-pole	1500VA(1200W)
	NLV-1003P	3-way/Single-pole	1000VA(800W)
	NLV-600	Single-pole	600VA(450W)
	NLV-1000	Single-pole	1000VA(800W)
	NLV-1500	Single-pole	1500VA(1200W)
LUTRON Skylark	SLV-600P	Single-pole	600VA(450W)
	SLV603P	3-way	600VA(450W)
	SFTU-5A3P	3-way/Single-pole	5A
LUTRON Skylark Contour	CTCL-153P	3-way/Single-pole	150W
LUTRON VAREO	V-600	Multi location/Sin- gle-pole	600W
	V-1000	Multi location/Sin- gle-pole	1000W

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■ DRIVER SELECTION INSTRUCTIONS

There are two different concepts that you need to understand when choosing a driver for your tape light project:

1) Driver calculation

2) Maximum Tape Light/Wire Length Calculation

Driver Calculation:

To calculate the driver you need, you need to make a mathematical calculation based on the tape light's wattage. We also need to calculate the fact that most of our drivers run at >80% efficiency.

To calculate the amount of watts required for your project, use the following formula:

$$\text{Total wattage} = \frac{\text{Watts per foot} \cdot \text{Length(foot)}}{\text{Efficiency of the driver}}$$

So, for example, if you are using Hi-Beam Tape Light, which is 4.4W/ft (as stated in table 1), and you have a 10 foot run, the total wattage will be:

$$\text{Total wattage} = \frac{4.4 \text{ W/ft} \cdot 10 \text{ ft}}{0.80} = 55 \text{ Watt}$$

So the minimum wattage driver you can use is 55W. Because we do not sell 55W drivers, you can round up to the closest capacity we do carry, which, in this case, is 60W. Note: All our low voltage tape light and drivers work at 24VDC.

Maximum Tape Light/Wire Length Calculation:

There is a voltage drop across tape light, which results in flickering, loss of light and change in color. You can use the same driver to power multiple run lengths of tape light, as long as each one connects back to the driver doesn't exceed the maximum continuous run length stated in table 1.

Tape Light Type	Watts Per Foot	Max one Run "foot"
Lo-Beam	1.46	52.6
Lo-Beam Wet	1.46	52.6
Beam	2.93	26.24
Beam Wet	2.93	26.24
Hi-Beam	4.4	17.5
Hi-Beam Wet	4.4	17.5
Hi-Beam RGB	4.4	17.5
Hi-Beam Line Voltage	2.93	26.25
Beam Double	5.85	13.12
Beam Double Wet	5.85	13.12
Hi-Beam Double	8.8	8.75
Hi-Beam Double Wet	8.8	8.75
Ultra-High Beam	8.78	8.75

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However, there is a maximum length of wire between the driver and the tape light that you can use due to the voltage drop across the wire. To calculate the maximum length of wire to use, use the following wire resistance chart and equations or the voltage drop chart at each tape light's page on our website under downloads section. Please note that the maximum length of the wire depend on the length of the tape light that you will use

Wire Gauge	12AWG	14AWG	16AWG	18AWG
Resistance per ft.	0.001588	0.002525	0.00402	0.00639

$$\text{Current (Amps)} = \frac{\text{Power (Watt)}}{\text{Voltage (Volt)}}$$

$$\text{Voltage drop} = \text{Resistance per foot} * \text{Length of wire (feet)} * \text{Current}$$

Voltage drop across the wire should be less than 3% to avoid flickering, loss of light and change in color (which mean it should be less than 0.72 Volts as all of our tape light works with 24 VDC)

For example, if we are using Hi-Beam Tape Light , which is 4.4W/ft, and you have a 10 foot run of the tape light, and want to use 20 feet of 16AWG you use the following equation:

$$\text{Current} = \frac{4.4 * 10}{24} = 1.83$$

$$\text{Voltage drop} = 0.00402 * 20 * 1.83 = 0.147 \text{ Volt}$$

The voltage drop is less than 0.72 volt So this configuration is suitable.