

SAFETY & WARNINGS

1. Install in accordance with national and local electrical code regulations.
2. This product is intended to be installed and serviced by a qualified, licensed electrician.
3. Do not modify or disassemble this product beyond instructions or the warranty will be void.
4. Do not install within 5 feet of a swimming pool.
5. Only install with a Listed Class 2 DC LED driver.
6. To avoid Voltage Drop, ensure wire gauge used with LED Strip Light is sufficient. (See Voltage Drop Chart)
7. Do not exceed maximum run recommended for Strip Light.
8. Diode LED Strip Light is designed to be cut at designated cut points only. Cutting anywhere other than the cut points will result in damage to the Strip Light.
9. Failure to follow safety warnings, and installation instructions will void the warranty for this product.

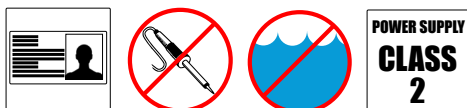
QUICK SPECS

Input Voltage	24VDC
Power Consumption	8.3W/ft.
Maximum Run	10 feet
Environment	Outdoor / Wet Location / IP67

Included Models ¹	DI-24V-NO9- ^{**}
Ambient Temperature ²	-4° ~ 122°F (-20° ~ 50°C)

Note ¹ ^{**} Indicates CCT, model, length.

Note ² Do not install product in an environment outside the listed ambient temperature.



OPTICS BY DIODE LED® Flexible Strip Light

INSTALLATION GUIDE

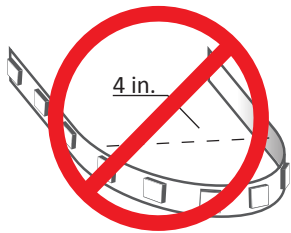


WARNING!

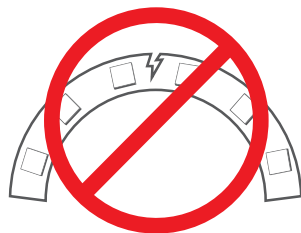
DO NOT CONNECT DIRECTLY TO HIGH VOLTAGE POWER!

Read all warnings and installation instructions thoroughly.

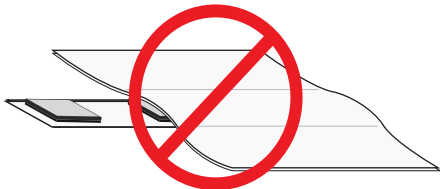
HANDLE PRODUCT WITH CARE!



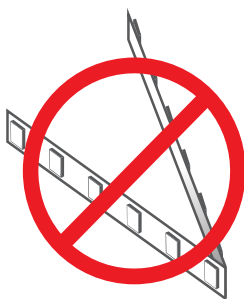
DO NOT BEND LED STRIP LIGHT TO A DIAMETER LESS THAN 4 INCHES.



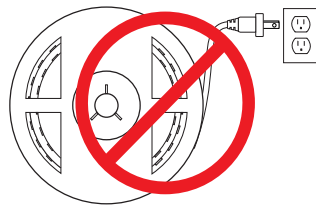
DO NOT BEND LED STRIP LIGHT ON A HORIZONTAL PLANE.



DO NOT COVER STRIP LIGHT WITH ANY MATERIALS.



DO NOT FOLD, CREASE, OR TWIST LED STRIP LIGHT.



DO NOT POWER STRIP LIGHT WHILE ATTACHED TO SPOOL OR TIGHTLY COILED.

INSTALLATION

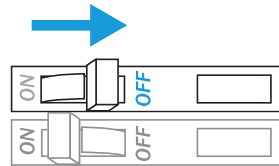
Prior to installation, verify all components (LED Strip, Driver, Control, & Accessories) are compatible. Configure and pre-test your LED system prior to installation to ensure all components are operating correctly.

1 TURN POWER OFF AT CIRCUIT BREAKER



SHOCK HAZARD! May result in serious injury or death.

Turn power OFF at circuit breaker prior to installation.

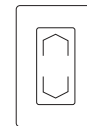


2 DETERMINE LOCATION TO INSTALL COMPONENTS

Refer to SYSTEM DIAGRAMS.



1) Class 2 Driver



2) Control



3) Strip Light

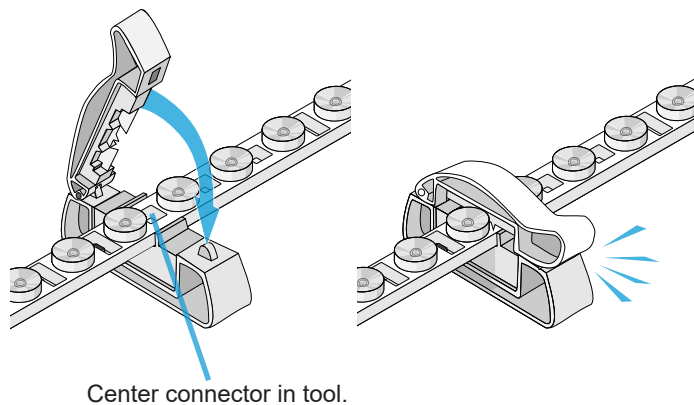
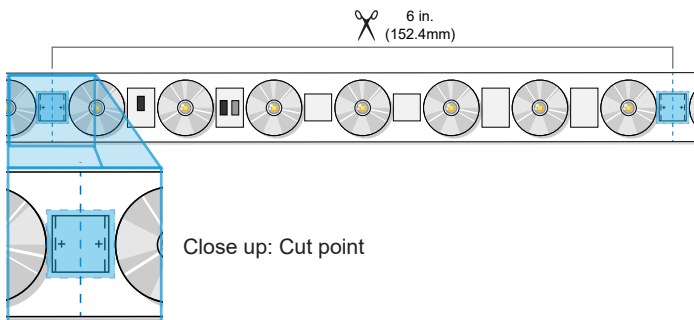
WIRE GAUGE & VOLTAGE DROP

Ensure applicable wire is installed between driver, fixture, and any controls in between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.)

INSTALLATION (CONT.)

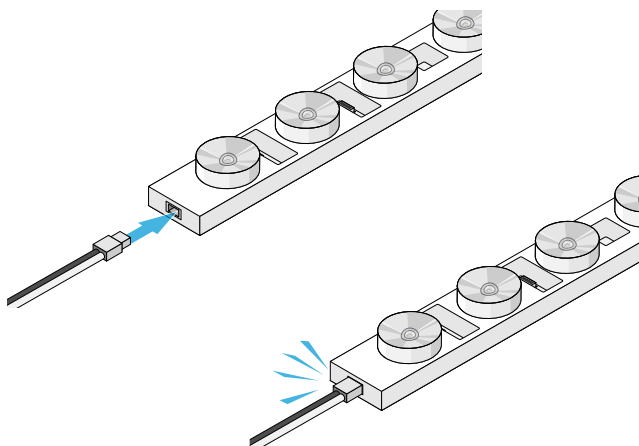
3 CUT OPTICS TO DESIRED LENGTH

Using cutting tool, cut strip at connector cut point.



4 CONNECT OPTICS

Insert Splice Connector into connector end.



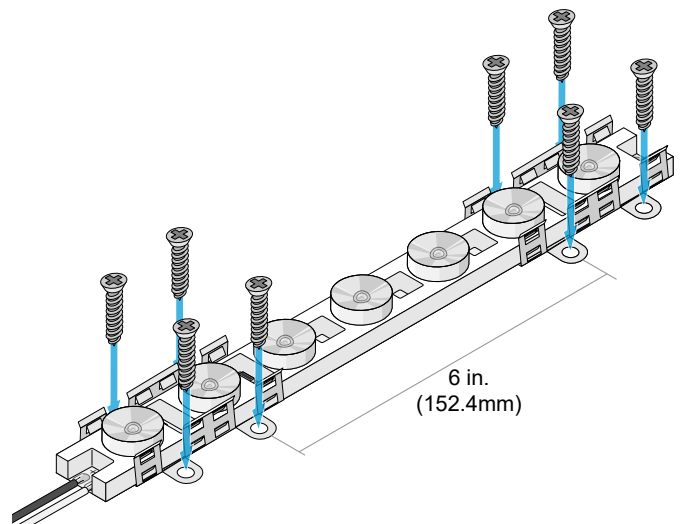
5 TEST CONNECTION



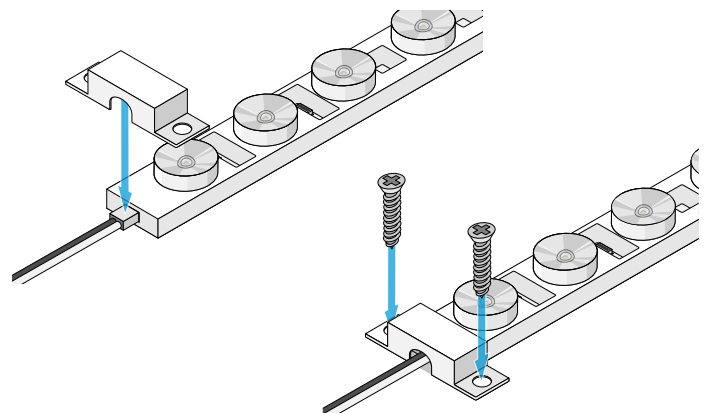
Prior to mounting, attach to Class 2 LED Driver, turn on power and test connection to ensure system is operating properly. Turn off power again before mounting.

6 MOUNT OPTICS

6.1 Space mounting clips 6 inches apart, insert Optics and fasten to surface using screws.

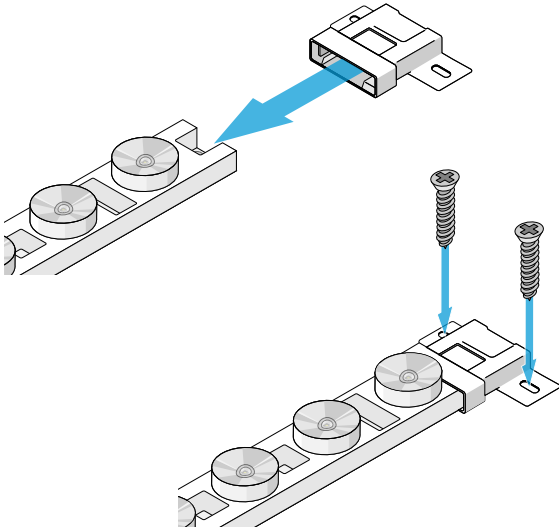


6.2 Fasten Strain Relief over wire connection.

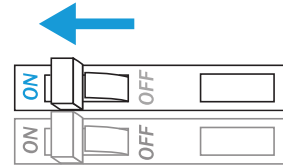


INSTALLATION (CONT.)

6.3 Apply silicone insert and fasten Termination Cap over end of run.



8 TURN POWER ON AT CIRCUIT BREAKER

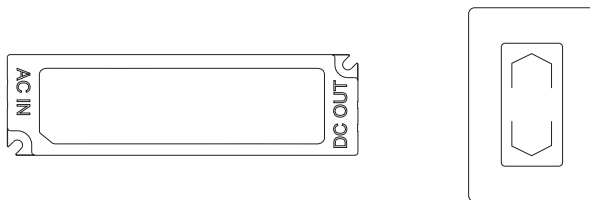


SYSTEM WORKING IMPROPERLY?

Turn power OFF at circuit breaker and verify all connections. Review SYSTEM DIAGRAMS and TROUBLESHOOTING or call Diode LED Technical Support at 877.817.6028.

7 ATTACH DRIVER AND LIGHTING CONTROL

ONLY USE COPPER WIRING. See **SYSTEM DIAGRAM.** Verify a compatible driver and control are installed.



REVIEW FULL SYSTEM and ensure all polarities are correct and connections are secure.

TROUBLESHOOTING

Symptom	Common Cause
Strip Light does not illuminate	<ul style="list-style-type: none"> • Circuit breaker is OFF or tripped. • Incorrect wiring. Polarity of Low Voltage V+ and V- are reversed. Check connection at every connection point to ensure polarity is not reversed. • Incorrect voltage pairing of LED driver and fixture. 12V driver models will not power a fixture with a higher voltage rating.
Strip Light Overheats	<ul style="list-style-type: none"> • Incorrect voltage pairing of LED driver and fixture. Ensure 12V strip light models are not paired with a driver with higher voltage. • Incorrect ambient temperature. Ensure strip light is installed in environment $-4^{\circ} \sim 122^{\circ}\text{F}$ ($-20^{\circ} \sim 50^{\circ}\text{C}$).
Fixture flickers randomly, may shut off	<ul style="list-style-type: none"> • Connection is not secure. Check connection at Splice Cable.
Shift in brightness and/or color	<ul style="list-style-type: none"> • Review strip Light maximum series run limit. Exceeding will cause voltage drop, decreasing brightness and/or color shift. • Review Voltage Drop Chart. Incorrect wire gauge may cause voltage drop and noticeable shift in brightness and/or color.
Optics turns on/off repeatedly	<ul style="list-style-type: none"> • Driver is overloaded or overheated. An overloaded/overheated driver will trip the internal auto-reset (of driver) repeatedly, turning the system on/off.

VOLTAGE DROP CHARTS

For best performance and lumen output, ensure proper wire gauge is installed to compensate for voltage drop of low voltage circuits.

Voltage Drop Chart Guide

- 1 Determine load size. Let's assume load is 55 W. Round up to nearest load.
- 2 Determine distance from driver to load. Let's assume the distance is 20 ft.
- 3 It's recommended to install 18 AWG to eliminate excess voltage drop.

24V Voltage Drop & Wire Length Distance Chart

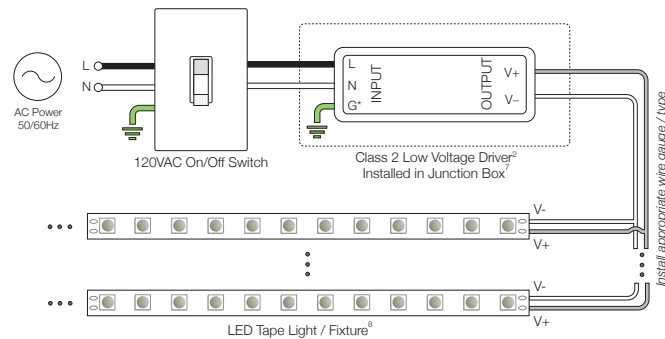
Wire Gauge	10 W .42 A	20 W .83 A	30 W 1.3 A	40 W 1.7 A	50 W 2.1 A	60 W 2.5 A	70 W 2.9 A	80 W 3.3 A	90W 3.75 A	100 W 4.2 A
20 AWG	85 ft.	43 ft.	27 ft.	21 ft.	17 ft.	14 ft.	12 ft.	11 ft.	9 ft.	8 ft.
18 AWG	134 ft.	68 ft.	45 ft.	33 ft.	27 ft.	22 ft.	19 ft.	17 ft.	15 ft.	14 ft.
16 AWG	215 ft.	109 ft.	72 ft.	54 ft.	43 ft.	36 ft.	31 ft.	27 ft.	24 ft.	22 ft.
14 AWG	345 ft.	174 ft.	115 ft.	86 ft.	69 ft.	57 ft.	49 ft.	43 ft.	39 ft.	36 ft.
12 AWG	539 ft.	272 ft.	181 ft.	135 ft.	108 ft.	90 ft.	77 ft.	68 ft.	61 ft.	56 ft.
10 AWG	784 ft.	397 ft.	263 ft.	197 ft.	158 ft.	131 ft.	112 ft.	98 ft.	97 ft.	82 ft.

SYSTEM DIAGRAMS

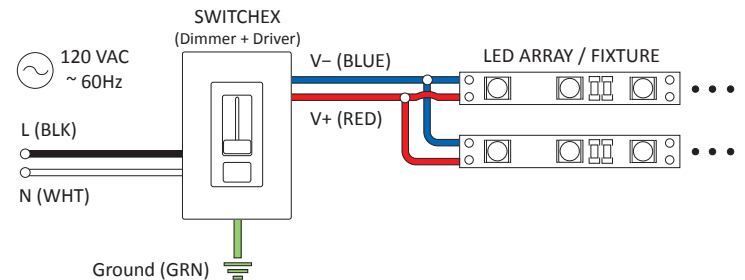
The following diagrams are provided as example system designs. For information regarding larger systems or systems not pictured below, please see our web page or contact technical support. Always review each component installation guide for detailed and up-to-date wiring instructions. Install in accordance with national and local electrical codes.

SINGLE COLOR CONTROL SYSTEMS

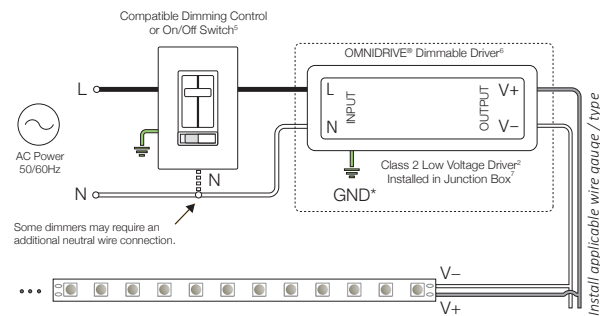
Traditional ON/OFF Switch System



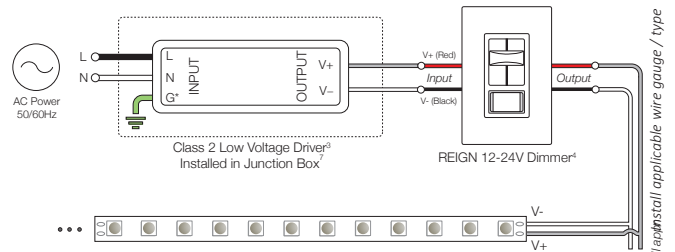
SWITCHEX® Dimmer/Driver System



OMNIDRIVE® Electronic Dimmable Driver System



REIGN® 24V Dimmer System



1. Driver may not require a fault ground connection. Refer to driver specifications for additional information.
2. Install a compatible Class 2 constant voltage driver. Refer to each driver specification sheet for full power ratings & load deratings.
3. Install a Class 2 constant voltage driver compatible with a low voltage PWM controller/dimmer switch. Refer to each driver specification sheet for full power ratings & load deratings.
4. Determine the number of low voltage outputs of the driver when installing multiple PWM controllers/dimmer switches. No more than one PWM controller/dimmer switch can be attached to a single output of the driver.
5. Install a compatible dimming control or switch. See the 'Electronic Dimmable Driver / Dimmer Compatibility List' for compatible dimming controls. See the dimming control manufacturer installation guide for complete wiring instructions.
6. Ensure to load the driver at least 60% of the labeled load for proper dimming performance (required for dimmable installations only).
7. Refer to driver or controller specifications for a compatible junction box.
8. See fixture specifications for maximum series run limits.



Toll Free: 877.817.6028 | Fax: 415.592.1596 | www.DiodeLED.com | info@DiodeLED.com
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