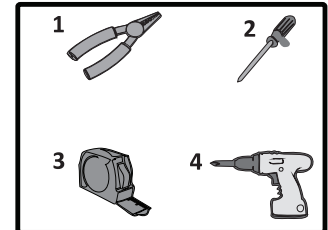
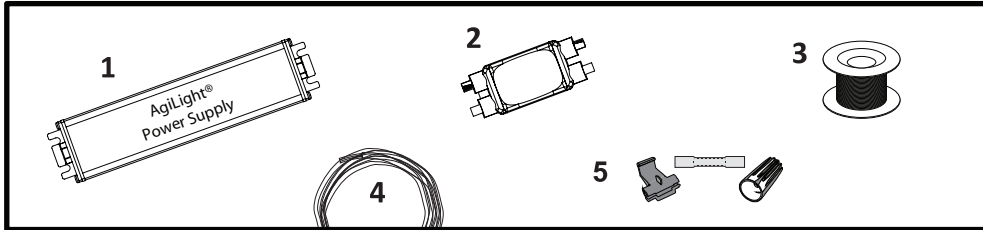




**Read Instructions Completely Before Installation. Altering The Product In Any Way Voids The Warranty.**



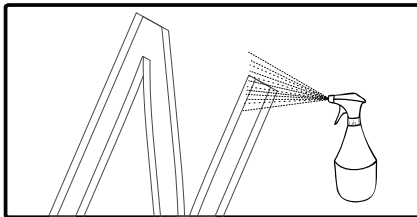
**Components:**

1. AgiLight® Class II power supply
2. AgiLight® SignRayz® ULTRA MINI LED modules
3. Minimum 24 AWG (0.82mm) wire- (UL Listed)  
\*Under certain conditions, a heavier gauge wire may be necessary
4. PLTC Cable- (UL Listed)
5. Wire connectors, wire nuts, IDC, or butt splice connectors (UL Listed)

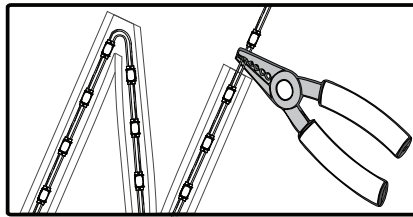
**Tools:**

1. Wire Strippers
2. Screw Driver
3. Tape Measure
4. Drill w/ (1/4" bit)

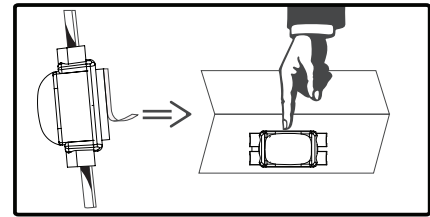
**LED Module Installation**



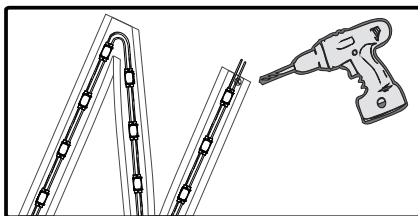
1. Clean inside of the sign with denatured alcohol. Allow alcohol to dry before proceeding.



2. Place LED modules in the sign according to AgiLight® layout or Population Density Guide. Cut product accordingly.  
\*Product may be cut in between modules

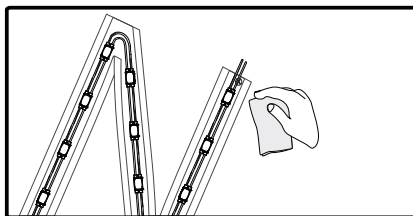


3. To adhere the LED module to the sign's back panel, remove liner from tape and firmly press the module in place. Repeat process for the rest of the layout.



4. Drill a hole near the beginning of the string of LED modules and fit with an insulator for feeding power supply wire to the modules.

\*Access hole should be approximately 1/4 inch (6.4mm) in diameter, minimum.



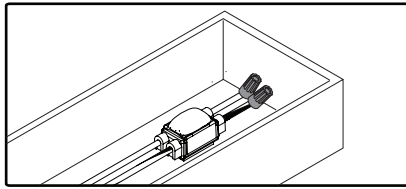
5. Remove debris and clean the inside of channel.



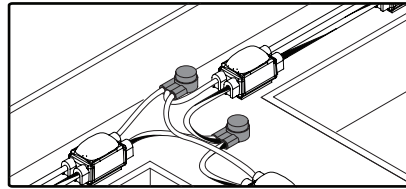
**WARNING - READ BEFORE WIRING**

1. Must use General LED's Class 2 power supply rated for 12 Volts DC or less; proper wire gauge to connect to LED modules.
2. Check polarity for DC standard, **BLACK (-) to BLACK STRIPE (-)** and **RED (+) to WHITE (+)**.
3. UL 48 Standard requires spacing between power supplies be at least 1 inch (25.4mm) from end to end, and 4 inches (101.6mm) from side to side.
4. Do not overload power supply and do not use products in submersed applications.
5. Grounding and bonding of the LED power supply must be done in accordance with National Electric Code (NEC) Article 600.
6. Follow all National Electric Codes (NEC) and local codes.

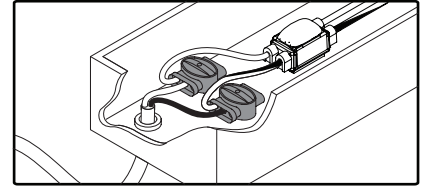
## Wiring Instructions



1. Use appropriate wire connectors to cover the ends of exposed wires not being used as a connection point.

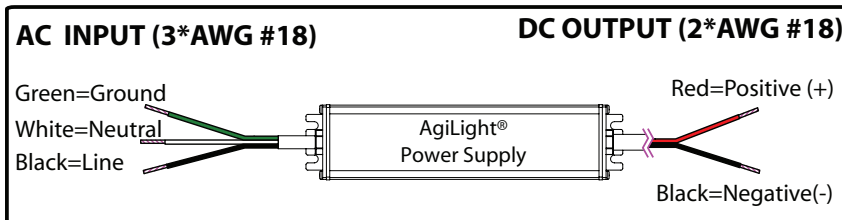


2. To connect (splice) wires, use an in-line (IDC) connector, butt connector or a twist-on wire connector.



3. Connect the power supply to the product via the access hole in the sign's back.

## Power Supply Wiring Instructions



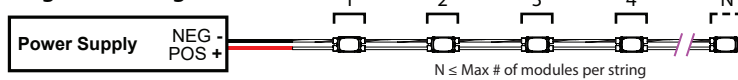
**Note:**

- \*Have a licensed electrician make connections to primary (AC) input.
- \*Per NEC 2008 Articles 725.121 through 725.130, secondary class 2 cables do not require conduit when installing.
- \*Seal all wall penetrations with silicone to avoid intrusion of water.

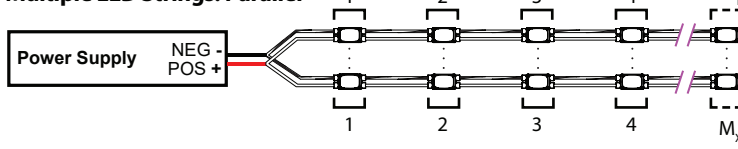


## Wiring Diagram for: SignRayz® ULTRA MINI LED modules

### Single LED String:



### Multiple LED Strings: Parallel



$M_x \leq$  Max # of modules per string,  $M_1 + M_2 + \dots + M_x \leq$  total # of modules per power supply

## Power Supply Load Chart

Model	Modules 60W	
	Single String	Parallel Strings Total
LS-UMIN-xxK-L4-50A	150	230
LS-UMIN-xxK-L4-35A	180	230
LS-UMIN-TRD-L4-50A	200	460
LS-UMIN-GRN-L4-50A	200	460
LS-UMIN-BLU-L4-50A	200	460
LS-UMIN-TRD-L4-35A	245	460
LS-UMIN-GRN-L4-35A	245	460
LS-UMIN-BLU-L4-35A	245	460

## LED Module to Power Supply Wire Size

Wire Size		Maximum Distance*	
Gauge (AWG)	Metric (mm <sup>2</sup> )	Feet	Meters
26	0.13	3	0.9
24	0.21	4	1.2
22	0.33	7	2.1
20	0.52	11	3.4
18	0.82	18	5.5
16	1.31	29	8.8
14	2.08	45	13.7
12	3.31	71	21.6
10	5.26	120	36.6

\* Distance from 60 watt power supply to load at full capacity.

## Troubleshooting

Problem	Possible Cause
All LED modules are OFF or some of the LED modules are not illuminated.	<ol style="list-style-type: none"> <li>1. Power supply may not be loaded properly with LED modules.</li> <li>2. Wrong Power Supply. Must be 12VDC constant voltage.</li> <li>3. Bad or loose connections.</li> </ol>
Entire section does not light or lights intermittently.	<ol style="list-style-type: none"> <li>1. Bad, loose, or improper connections.</li> <li>2. Power supplies are spaced too close together; overheating.</li> </ol> <p>*Note: Spacings between LED power supplies shall be at least 1 inch (25.4mm) from end to end, and 4 inches (101.6mm) from side to side.</p>
LED modules flicker or appear dim.	<ol style="list-style-type: none"> <li>1. Power supply may not be properly loaded with LED modules.</li> <li>2. Power supply may be damaged or defective.</li> <li>3. Power supply may not be wired correctly. Check AC input wiring (Green to Ground, Black to Black, and White to White).</li> </ol>