



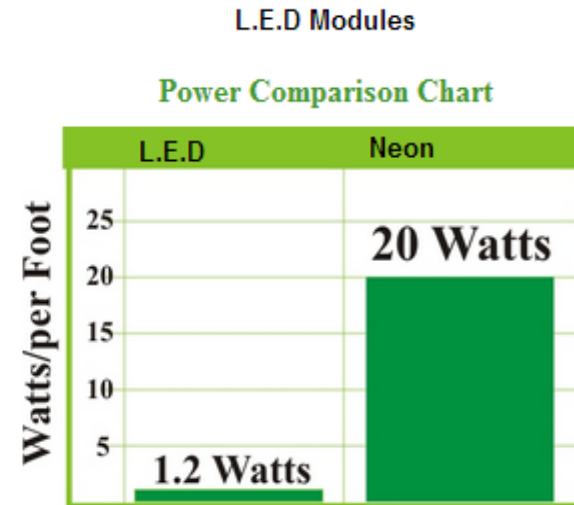
SNOWDRAGON INDUSTRIAL CO.,LTD

Websites: www.snowdragonledhk.com www.snowdragonledproduct.com

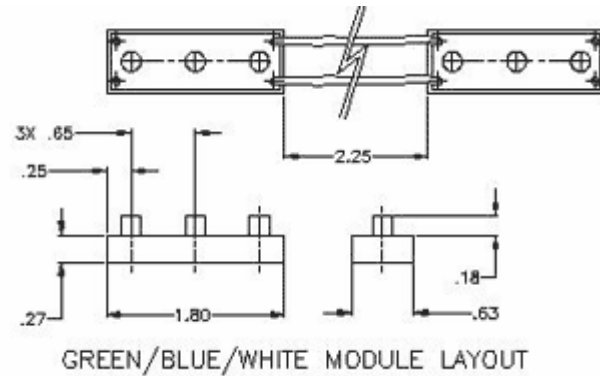
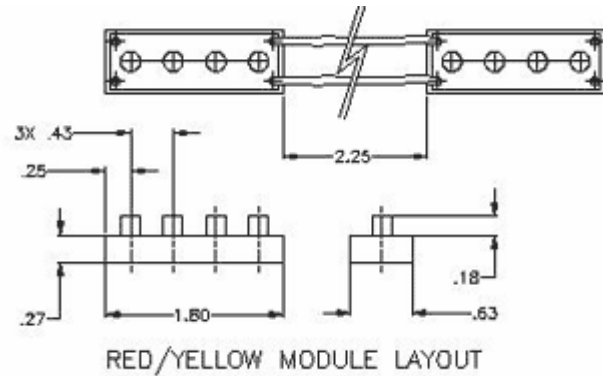
LED Modules are a low voltage, long life alternative to neon and florescent lighting for channel letters and lightboxes. The light source for the LED Module is the Light Emitting Diode (LED) instead of traditional neon or florescent tubes. LED technology allows the LED Modules to provide excellent color and brightness in a safe, low voltage circuit (12 Volts DC). LED Modules are a robust, easily installed product designed for a long life of safe, maintenance free operation.

ENERGY SAVINGS CHART L.E.D VS NEON

Power Consumption Calculation for Lighting Sources		
Lighting Source	Neon	LED Module
Power Usage per foot	20 watts	1.2 watts
Nominal Installation	100	100
x Power Consumption	20 watts	1.2 watts
= Total	2,000 watts	120 watts
x 12 hours/day	24,000 watts	1,440 watts
x 365 days	8,760,000	525,600 watts
/1000 = annual kilowatt hour	8,760	525.6
x cost per kilowatt hour	\$0.15	\$0.15
Total Annual Energy Cost	\$1314	\$78.84



Installation Guide



1 LED Module Layout. All modules operate on 12VDC and can be run by the same power supply.

Tools Required

1. Wire stripper/cutter
2. Measuring Tape
3. Drill
4. Screw Drivers

Standard Hardware and Supplies

1. Plastic mounting clip
2. Splice connector, Molex IDC (Insulation Displacement Connector) Type
3. 4" or 8" nylon zip ties
4. Other items to be supplied, 3M VHB tape and bulk wire

Populating the Channel Letter

Populating a channel letter with LED Modules is as easy as peeling the liner off the mounting tape and firmly pressing the light modules in the desired locations.

NOTE:

Bonding surface should be clean and dry.

To determine where the LED Modules should be placed and how many to use, (Results may vary based upon desired light intensity and letter construction).

1. LED Modules are designed to be placed in rows: LED Modules should have approximately 2.5 inch spacing between modules within the row. This will result in 3 modules per foot.
2. LED Modules are designed to cover a stroke width of 4 inch in a channel letter (letter depth of 4 to 8 inches). Letters with a 4 inch stroke width or smaller should have one row of LED Modules. Letters with a stroke width larger than 4 inches should have multiple rows of LED Modules placed according to the following schedule;
 - a. 4 to 6 inch stroke= 2 rows
 - b. 6 to 8 inch stroke= 3 rows
 - c. 8 to 10 inch stroke= 4 rows
 - d. Actual number of rows/modules may vary depending upon the application.

The above schedule is offered only as a guideline.

3. When all modules are in place, the secondary output from the power supply can be connected. Multiple letters in a sign must be connected to the power supply in parallel. Use UL listed Insulation Displacement Connectors to make this connection and to cap off the open ends of the row.

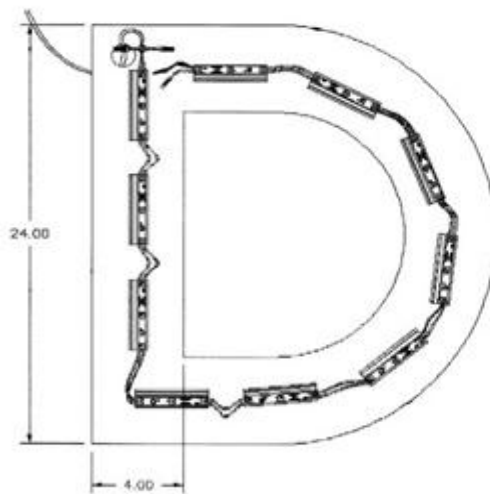


Fig. 3 Example of 24° Channel letter with 4" stroke populated with one stroke of LED Modules.

If extra wire is needed between units, use UL listed 20 AWG or larger

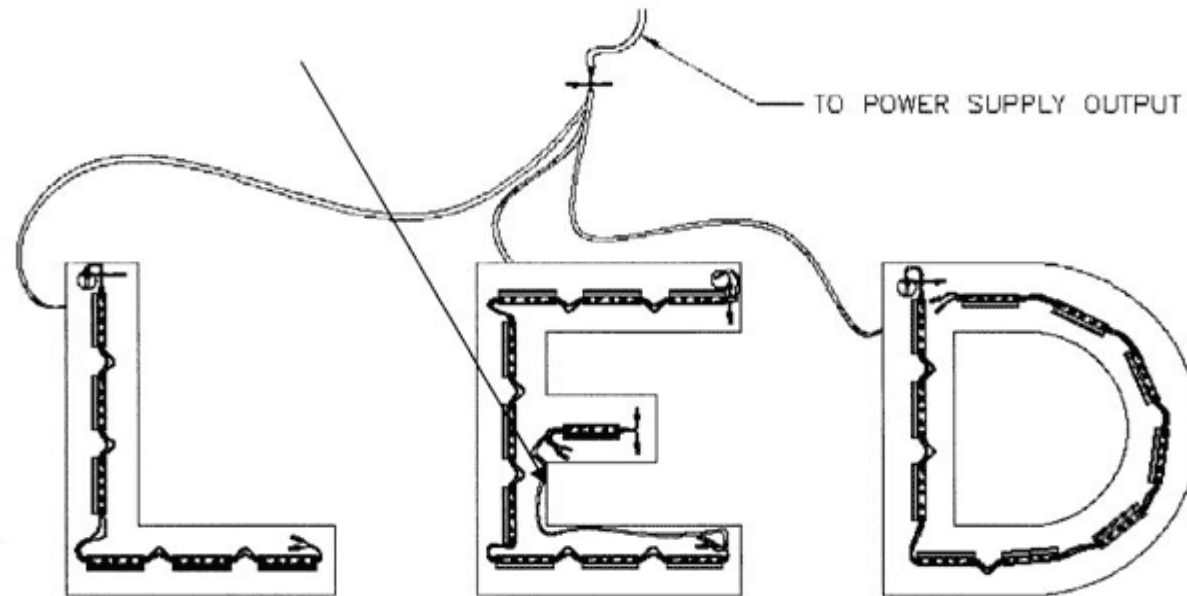


Fig. 4 Sample Sign Layout and Connections

NOTE:

All LED Modules operate on 12VDC. All color modules can be connected to the same power supply. Colors can be mixed on the same power supply. Different colors can be connected to the same power supply and mixed on the same power supply output.