

Installation Instructions for LSA-25WH & LSA-25WW



For Wet, Damp and Dry locations

Equipment Needed

- Wire stripper
- Manual screwdriver, rivet gun or powered screwdriver and bit
- Tape measure

Components Needed

- Cleaning cloth
- Non-petroleum-based cleaner
- Non-water-based silicone
- IDC or butt splice connectors that accept 20 AWG wire
- Wire nuts that accept 18-20 AWG wire
- UL recognized 18 AWG supply wire
- #6 pan head sheet metal screws or 1/8" rivets
- Universal Douglas LED strip
- Universal Douglas 2 Volt, Class 2 Power Supply

WARNING

To avoid electric shock or fire: Disconnect power at service panel prior to installation, troubleshooting or maintenance. Always follow NEC and local wiring requirements. Properly ground power supply and fixture. Do not connect output of power supplies in series or parallel.

All LED module wire connections are white to white and red to red. Power supply to LED module connections are red to red and black to white. Operating temperature -40°C to 70°C

Step 1

Layout the design and test on a sample letter. For layout support use chart 1 below or contact Universal Douglas Technical Support at 1-800-225-5278.

Step 2

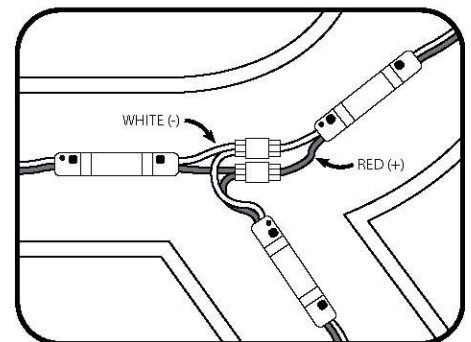
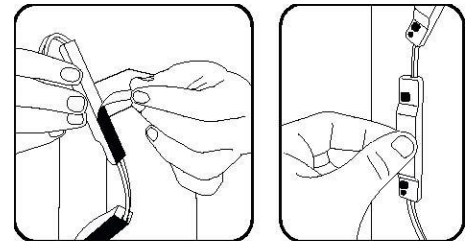
Clean letters with a non-petroleum-based product and let dry. Arrange LED strips inside the letter.

Step 3

Peel off the tape backing and place the LED modules into the desired location. Use an area on the LED module other than the LED to apply pressure. Secure module as needed with #6 pan head sheet metal screws or 1/8" rivets.

Step 4

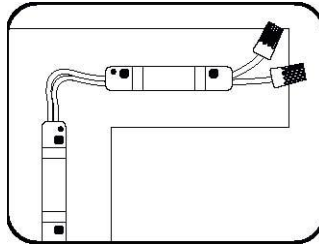
Make connections between LED strips using IDC connectors, butt splices or wire nuts. Wires can be cut or connected between any LED module. Modules can be arranged in series or parallel.



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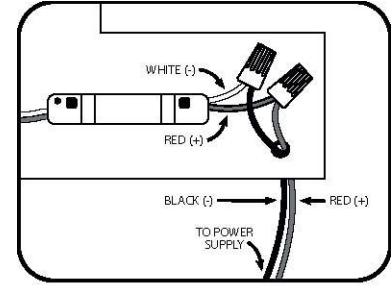
Step 5

Cover open wire ends using wire nuts and non-water-based silicone to prevent the connections from touching the sign.



Step 6

Drill access holes where required for the power supply wires. Connect the red wire from the power supply to the red wire on the LED strip. Connect the black wire from the power supply to the white wire on the LED strip.



Trouble Shooting

No light output	Make sure power at breaker is on. Make sure connections are correct between line and power supply, between power supply and LED strip. Check output of the power supply using a volt meter. The output should be 12V DC.
Sections of LED strip have no light	Check connections and polarity between power supply and LED strip, connectors and polarity between LED strips
One LED Module has no light	If all other LED modules are working except one, replace this one module. The modules are in parallel and will not cause other modules to fail if one fails.
Not enough light	Make sure the number of modules used does not exceed the recommendation (chart 1) for the power supply. Verify the recommended rows of LED modules for each letter. Fasten any loose modules.
Shadows	Tape any wires down that are above the LED modules. Fasten any loose modules. If a self-contained power supply is used make sure modules are at least 2" away.

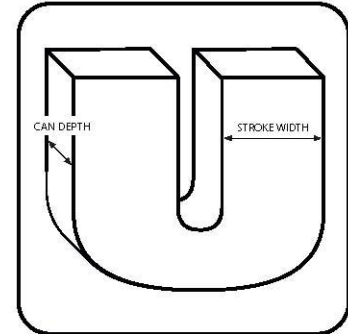


Chart 1

Recommended Rows of LED Strips for Different Stroke Lengths (for channel can depth of 5" or deeper)

Catalog Number	Description	Stroke Width	# of Strokes	Power Supply	# of Feet / Power Supply	Modules / Power Supply
LSA-25WH	White	<5"	1	L12V60UNV-A	50	100
		5"-8"	2	L12V60UNV-Q	50	100
		>8"	3			
LSA-25WW	Warm White	<5"	1	L12V60UNV-A	50	100
		5"-8"	2	L12V60UNV-Q	50	100
		>8"	3			

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For Technical Engineering Services (TES),
application support and warranty information, call
1-800-225-5278



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Chart 2

Mounting Distance from Power Supply to LED Chain

AWG	Feet	Meters
18	30	9.1
16	50	15.2
14	80	24.3
12	120	36.5

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