



Manufacturer of the First FAA Sign in 1955

## Installing: Lumacurve LED Upgrade kits Size 4 Distance Remaining Signs

Section D: "Installation & Modification"

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### Installing Lumacurve Distance Remaining Size 4 LED Upgrade kits

The purpose of this guide is to help contractors and airfield personnel install Lumacurve LED Upgrade Lighting Kits into existing Lumacurve Size 4 Distance Remaining signs. Work through the steps below and if you have any problems, don't hesitate to call us for technical support at 800-258-1997.

We recommend reading through the entire instructions first and familiarizing yourself with the procedures before beginning the installation.

**NOTE: Using Non-OEM after-market parts will void FAA Certification and void manufacturer warranties.**

**WARNING:** The sign must be de-energized before working on Lumacurve airfield guidance signs, unless otherwise instructed. Failure to do so may result in personal injury or damage to internal sign components.

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**Recommended tools:** *(Additional tools may be needed to remove existing lighting system.)*

Small Standard Screwdriver

#2 Phillips Screwdriver

3/8" Socket Wrench or NutDriver

Round file

Power Drill

Drill Bits: 13/64", 1/4", 5/32", 1/8"

9/16" Socket or Wrench

Pop Rivet Tool 1/8"

5/16" Nutdrivers

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#### 1. Removing of existing lighting system

- a) Remove one face panel, exposing "power" leg to your left. Be careful to not strip fiberglass frame components.
- b) Completely remove existing lighting system.

#### 2. Installing the Line Filter (image)

- a) Position the filter mounting plate on the lower two U-bolt threaded ends as shown in figure #1
- b) Secure using two 3/8" hex nuts
- c) Install power cord leads through cable clamp, then connect to terminal strip, shown in figure #2

#### 3. Installing the Distance Marker LED Light Bars

- d) Install the light bars with lead wires into position first on the power side of sign.
- e) Install the non-power side light bar.
- f) Install lamp socket wiring in terminal strip as shown in figure #2
- g) Light bars need to be 3" from flat edge of the end panel.

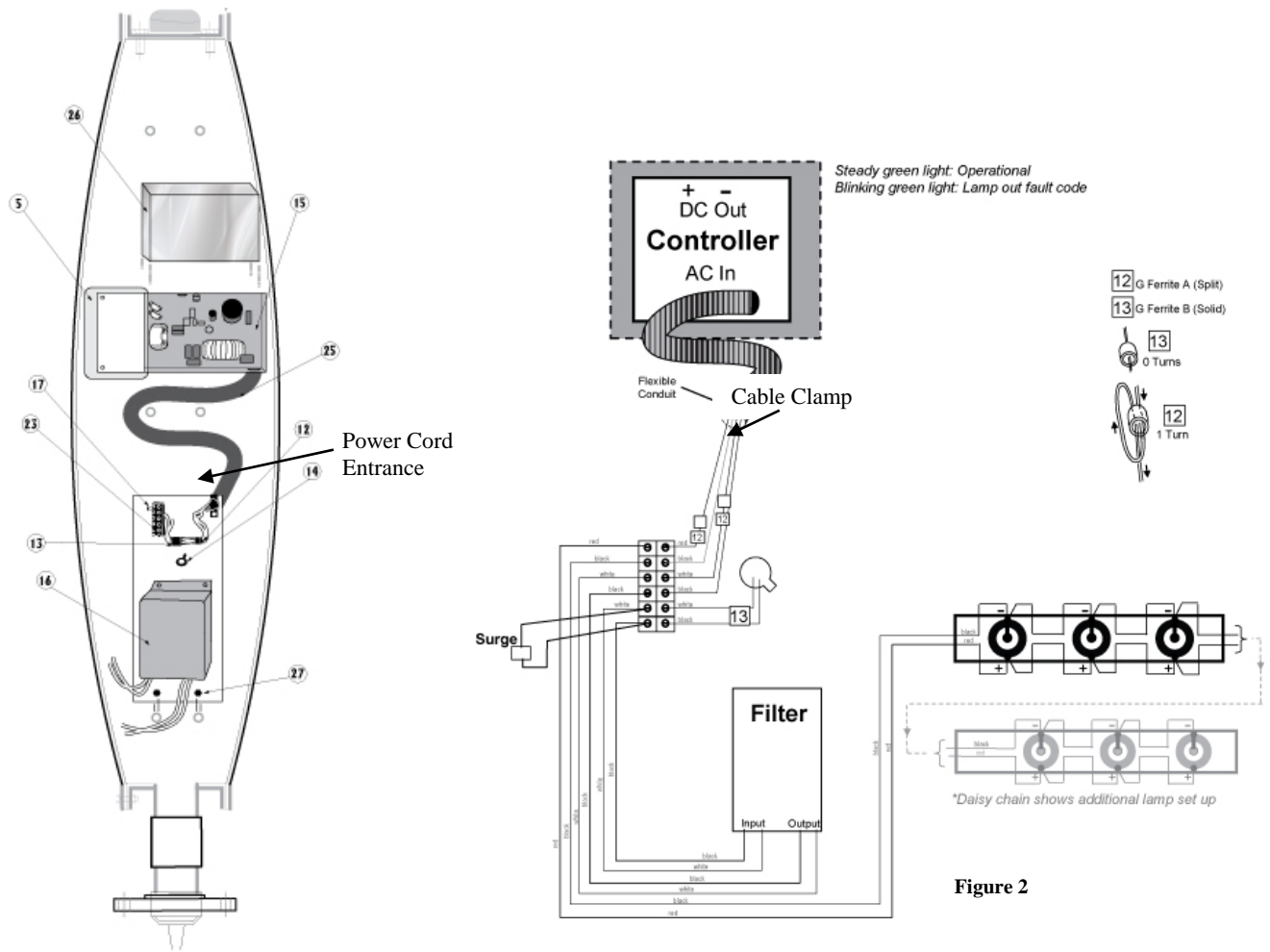


Figure 1

Figure 2

#### 4. Installing the Controller

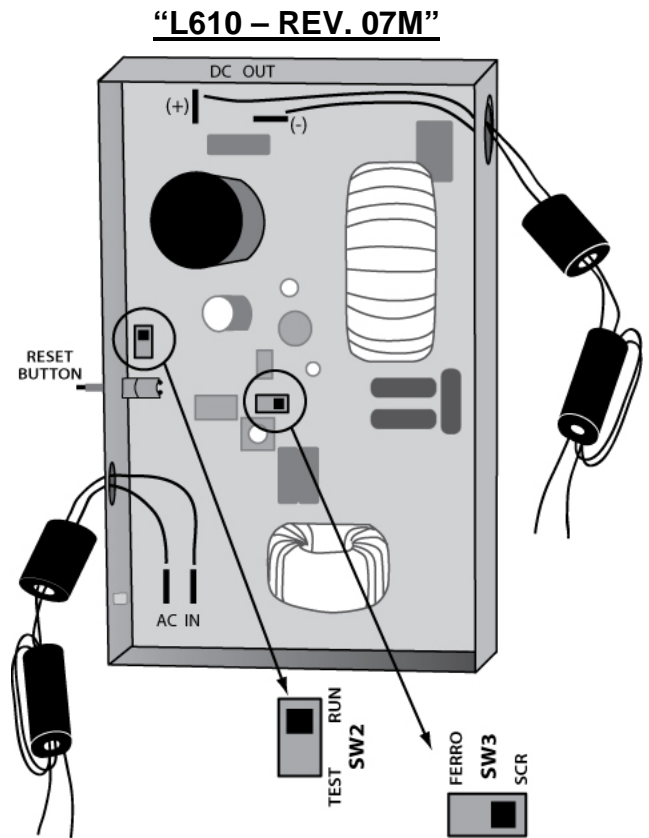
- Remove Power side access door.
- Carefully install new access door (with controller and controller plate.)
- Secure wire harness end furthest from controller to filter mounting plate at top right with #8 x 5/8" screw
- Install controller leads in terminal strip as shown in in figure #2

#### 5. Making Electrical Connections

- Identify the controllers input leads. Install these black and white leads into the terminal strip opposite of the power cord leads. These leads are in parallel with surge protector as shown in figure #2.
- Identify the AC input leads from the filter shown in figure #3. Connect these black and white wires to the filter plate terminal strip as shown in figure #2.
- Identify the DC output leads (Figure #3). Connect these red and black wires opposite the lamp socket red and black wires on the filter plate terminal strip as shown in figure #2.

## 6. Using the switches on the revised L610 – REV.07M Controller

- Switch **SW2** (Run & Test) is used to isolate controller programming functions when troubleshooting (1 out all out).
- Switch **SW3** (Ferro & SCR) is used to set controller functions with constant current regulators (CCR's)



## 7. Installing the Shielding Screen

On each side of the controller are screws and fender washers (*Figure #3*). These hold the shielding screen in place. If the fender washers are tight to the side of the controller, loosen them slightly to slip the edge of the screen between the fender washer and the controller case. The shielding screen is shaped to precisely fit the controller. Once the screen is in place, tighten the screw & fender washers to secure screen.

## 8. Installing the OEM Electrical Upgrade Nameplate

Each Lumacurve LED Upgrade kit comes with an OEM upgrade nameplate (*Photo #4*) & (2) 1/8" pop-rivets. It is essential that the correct nameplate be installed after the electrical installation is completed. This is critical information for the future maintenance of the sign. The nameplate should be mounted adjacent to the original factory nameplate.



Photo 4

## 9. Checking system & restoring the sign to service

All the electrical components should now be mounted and wired properly.

- a) Insert all lamps into the sockets.

*Warning: the use of non-OEM replacement lamps may damage electrical components and cause premature lamp failure. Only OEM Lumacurve lamps will maintain FAA photometric requirement and factory warranties.*

- b) Check that the properly sized isolation transformer is being used. *See chart.*

- c) Signs powered by SCR regulators (solid state) must have jumper in place on the controller. *(see step #6)*

- d) Power up sign and check that all lamps are functioning properly.

*Note: If sign is not functioning, revisit above steps once again to ensure the sign is wired properly. If there are still problems, contact us for technical support at 800-258-1997.*

- e) Reinstall the legend panel.

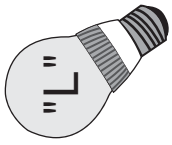
Use the chart below to identify the proper size isolation transformer:

Sign Size & Module Length    Lamps		LED Lighting Systems									
		FAA Style 2 (4.8A-6.6A)			FAA Style 3 (2.8A-6.6A)			FAA Style 5 (5.5A)			
		4W LED			4W LED			4W LED			
		Isol Xfmr	Max VA	Pwr Factr	Isol Xfmr	Max VA	Pwr Factr	Isol Xfmr	Max VA	Pwr Factr	
Size 1,	1-mod	2	45W	47	0.93	45W	47	0.93	45W	37	0.94
	2-mod	4	100W	59	0.88	100W	58	0.88	100W	47	0.91
	3-mod	6	100W	66	0.90	100W	66	0.90	10W	54	0.93
	4-mod	8	100W	73	0.92	100W	72	0.92	100W	61	0.94
Size 2,	1-mod	3	100W	57	0.87	100W	56	0.87	100W	44	0.89
	2-mod	6	100W	66	0.90	100W	66	0.90	100W	54	0.93
	3-mod	9	100W	76	0.92	100W	76	0.92	100W	64	0.94
	4-mod	12	100W	86	0.94	100W	86	0.94	100W	75	0.96
Size 3,	1-mod	3	100W	57	0.87	100W	56	0.87	100W	44	0.89
	2-mod	6	100W	66	0.90	100W	66	0.90	100W	54	0.93
	3-mod	9	100W	76	0.92	100W	76	0.92	100W	64	0.94
	4-mod	12	100W	86	0.94	100W	86	0.94	100W	75	0.96
Size 5,	1-mod	3	100W	57	0.87	100W	56	0.87	100W	44	0.89
Size 4,	1-mod	6	100W	66	0.90	100W	66	0.90	100W	54	0.93

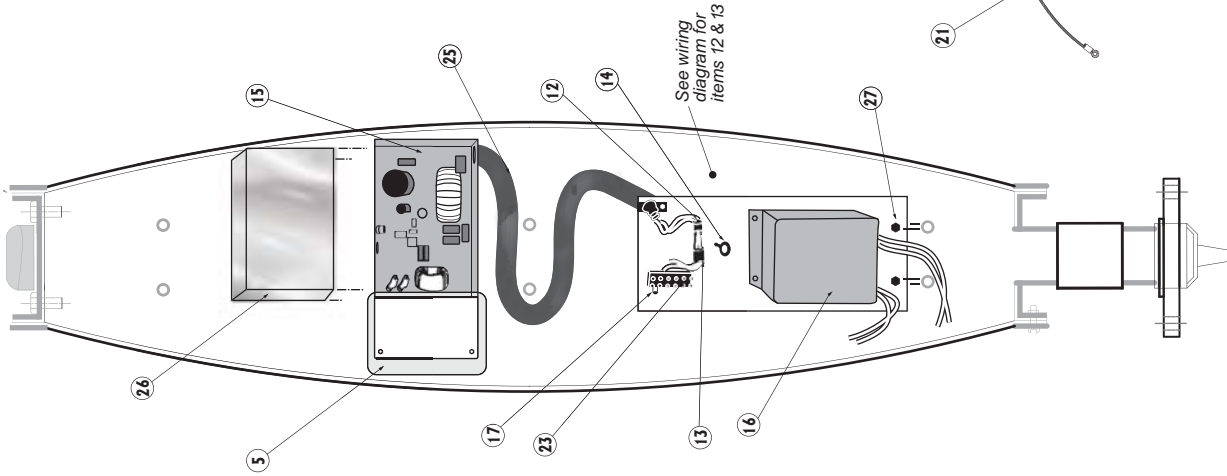
# LUMACURVE PARTS LIST

## Size 4 Distance Remaining Sign

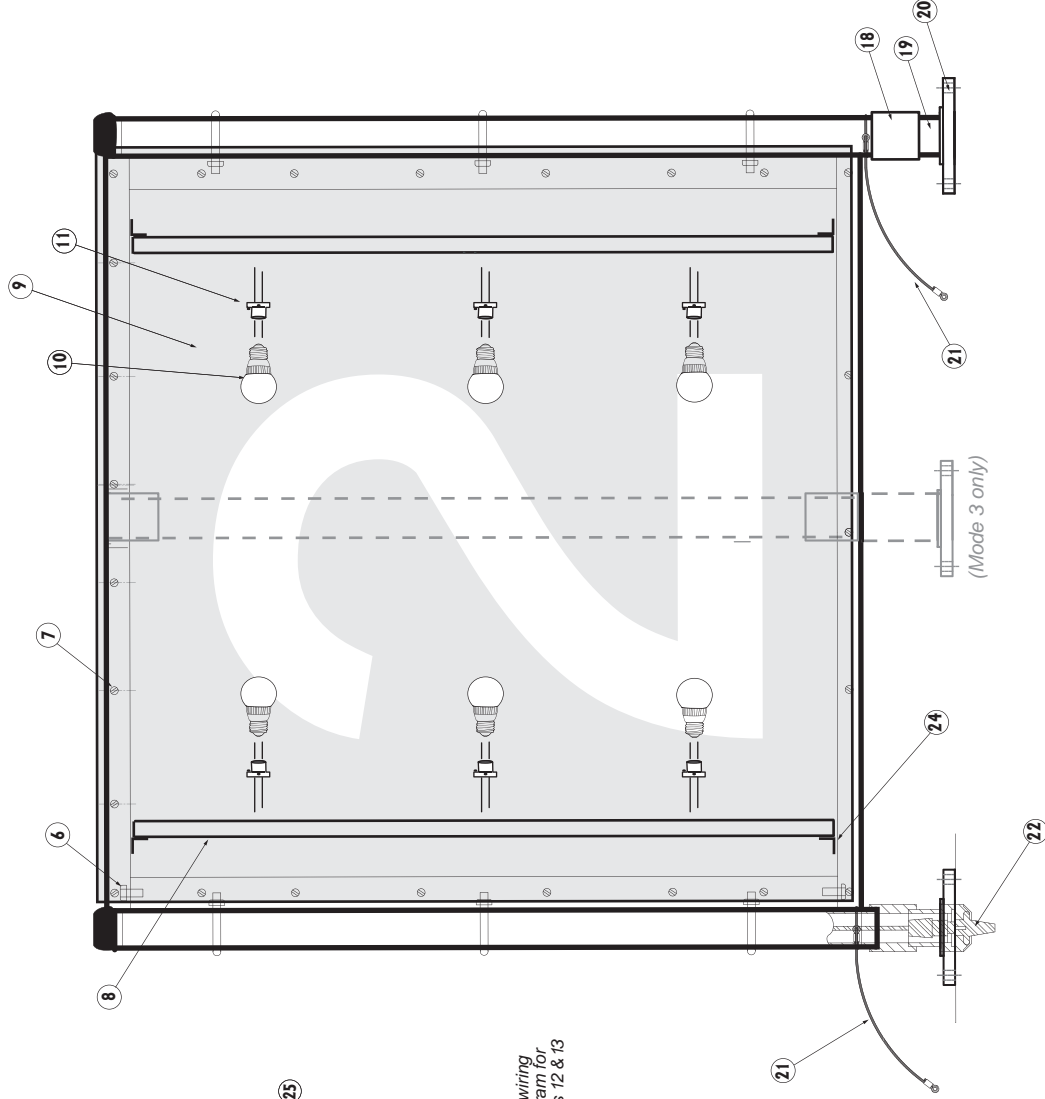
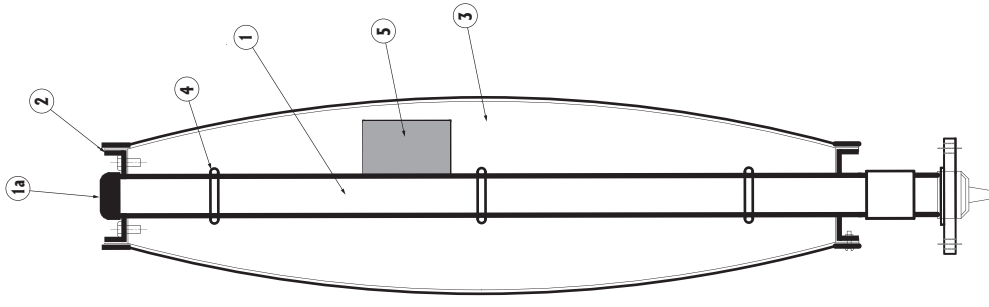
### LED Lighting System



Inside Electrical View



Outside View



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 www.lumacurve.com



# LUMACURVE PARTS LIST

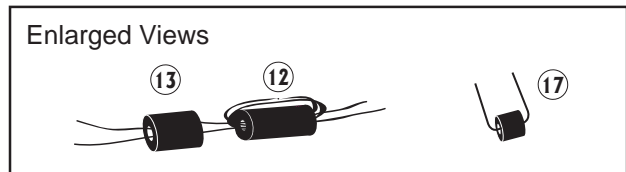
## Size 4 Distance Remaining Sign

### LED Lighting System

**Certified to current FAA Advisory Circular 150/5345-44**  
 Specification for Runway and Taxiway Signs  
*View our Certificate of Conformance*

#### LED Lighting System

	<i>Item</i>	<i>Description</i>
1a.	DCLT-1A	Leg Cap
*1.	D-1	Leg
2.	D-2	Top/Bottom Channel
3.	DTG-2	End Panel
*4.	D-4AB	U-Bolts w/ nuts & washers
5.	D-4ABC	Access Door (handle on power side)
6.	210/220/230/232	1/4" Hardware
7.	394	1/4" x 3/4" Hex Head
8.	D-8P	Light Bar
9.	D-15	48" x 48" legend panel
10.	LED Lamp	4W LED Lamp
11.	500	Lampholder
12.	G Ferrite A	Ferrite Core Split
13.	G Ferrite B	Ferrite Core Not Split
14.	480	Cable Clamp
15.	L610	LED PCB Controller, DC (1-12 lamps)
16.	G Low Pass Filter	ALD Low Pass Filter
17.	E416	Surge Protector
18.	2" Al Coupling	2" Pipe Coupling
*19.	140A	Frangible Coupling-2600 ft/lbs
*20.	15-HD	5" x 8" Galv. Floor Flange
21.	CLT-19	Tether
22.	430	Cord & Plug
23.	420	Terminal Strip (6 block)
24.	PS Bracket	Angle Brackets
25.	3/8" Conduit	Flexible Conduit
26.	G EMI Shield Screen	Controller Screen
27.	360	3/8" Hardware



*\*Mode 3 parts may be different or not listed.  
 Please call for more information.*

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