



Manufacturer of the First FAA Sign in 1955



## Parts & Electrical Information for Taxiway & Runway Signs LED Lighting Systems

### Certified to current FAA Advisory Circular 150/5345-44J

Specification for Runway and Taxiway Signs

*View our Certificate of Conformance*

### LUMACURVE LED System

The LUMACURVE LED system maintains constant sign brightness in accordance with FAA A/C 150-5345-44 with appreciably higher efficiency relative to traditional lighting systems, and is available in new signs or in kit form for retrofit. This system delivers a constant voltage to the 4W LED lamps at all CCR current steps. This system works equally well for high intensity (Style 3, 2.8A-6.6A), medium intensity (Style 2, 4.8A-6.6A) and Style 5 (5.5A fixed) dedicated sign circuits without internal modification\*. The lamps authorized for use in this system are Standard Signs, Inc. 4W LED lamps with medium screw base. They are available directly from Standard Signs, Inc.

### IMPORTANT!

The LUMACURVE LED lighting system is designed exclusively for FAA styles 2, 3 & 5 operation on a series circuit together with and without non-sign fixtures, such as edge lights, where the sign brightness control components are necessary to maintain constant sign brightness regardless of CCR step.

### INSTALLATION:

System lamp voltage is factory set but we recommend that one sign per CCR be spot checked with a DC voltmeter after installation. Lamp voltage is read across the lamp socket leads. If voltage varies from recommended settings (170V DC for Sizes 1, 2, 3, and 5), call and ask for technical support: 800-258-1997.

### LAMP REPLACEMENT:

When a lamp fails, the controller will sense that there is a lamp out and will turn off the remaining lamps. This feature is required per current FAA specifications. With the sign energized, press and hold the lamp reset button located on the side of the controller. After approximately 7-8 seconds, the lamps will re-energize revealing the failed lamp. Replace the failed lamp. This completes the lamp replacement process.

### WARNING:

The use of non-OEM replacement lamps may damage electrical components as well as cause premature lamp failure. Only OEM Lumacurve 4W LED lamps will maintain FAA certifications and factory warranties.

### DIELECTRIC GREASE:

These LED lamps are powered by a DC source and are susceptible to corrosion from moisture. We recommend the use of dielectric grease on the lamp base to prevent corrosion.

\*Isolation transformer wattage requirements may vary for each application.

### STANDARD SIGNS, INC.

9115 Freeway Drive, Macedonia, OH 44056

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[www.lumacurve.com](http://www.lumacurve.com)

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## Parts & Electrical Information for Taxiway & Runway Signs LED Lighting Systems

### Jumper position Based on Regulator Type

The L-828 Constant current regulator maintains constant amperage to the airfield circuit. There are two types of L-828 regulators. The first is an SCR type (silicone rectifier) L-828 regulator, commonly known as a solid state (electronics based) regulator. The second is a ferro-resonant type L-828 regulator that uses transformer technology.

For SCR type L-828 regulators, a jumper (photo #1) must be installed on the LED controller (as shown in figure #3 or figure #5). For ferro-resonant type L-828 regulators controller (as shown in figure #2 or figure #4).

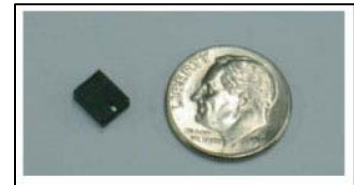


Photo #1

#### Instructions for installing the Jumper:

- Identify the type of L-828 Constant Current Regulator powering this sign. ("SCR" solid state or "Ferro-Resonant" type)
- Remove shield screen by loosening the fender washers.
- Locate the small black jumper. The jumper is factory installed. (figure #2 or figure #4).
- When using SCR regulator, remove jumper for ferro-resonant regulator application and reinstall over both pins as shown in photo (figure #3 or figure #5).
- Reinstall shield screen.

#### "L610 – REV. 05 or older"

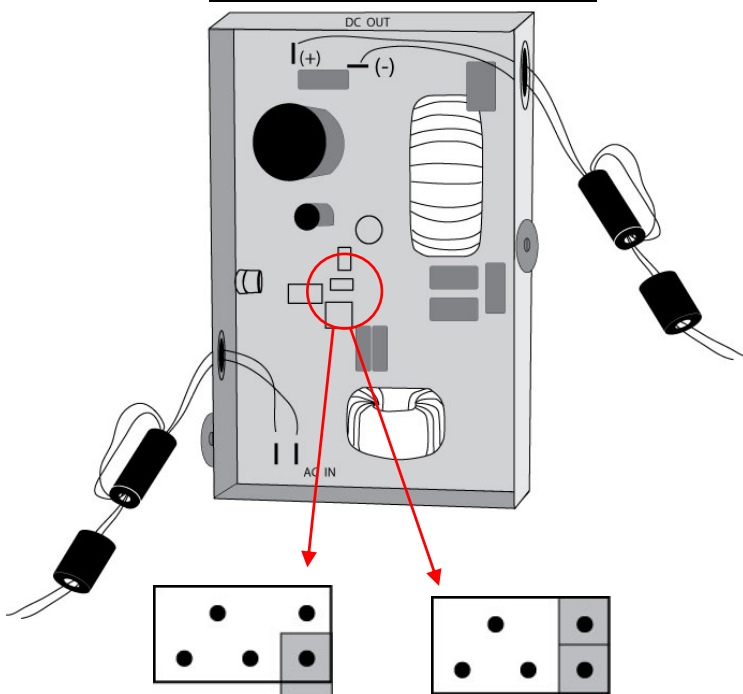


Figure #2

Jumper position for a ferro-resonant regulator

Figure #3

Jumper position for SCR regulator

#### "L610 – REV. 06"

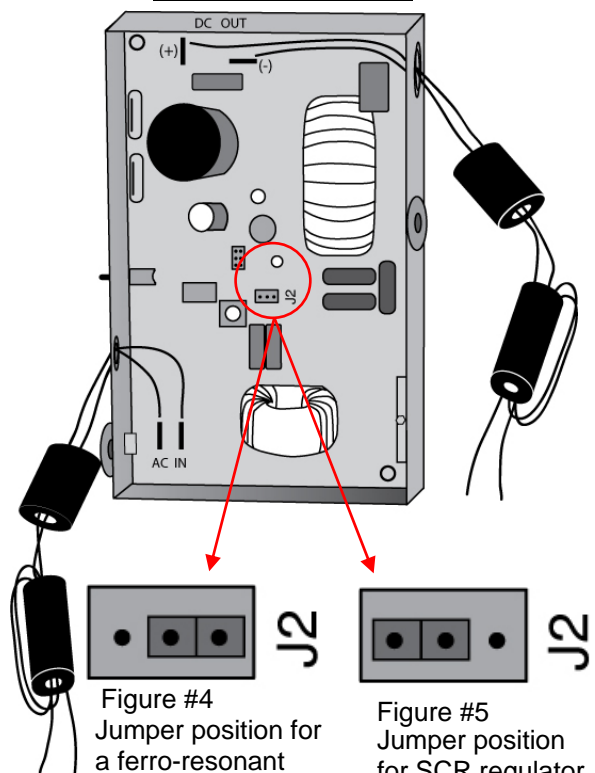


Figure #4

Jumper position for a ferro-resonant regulator.

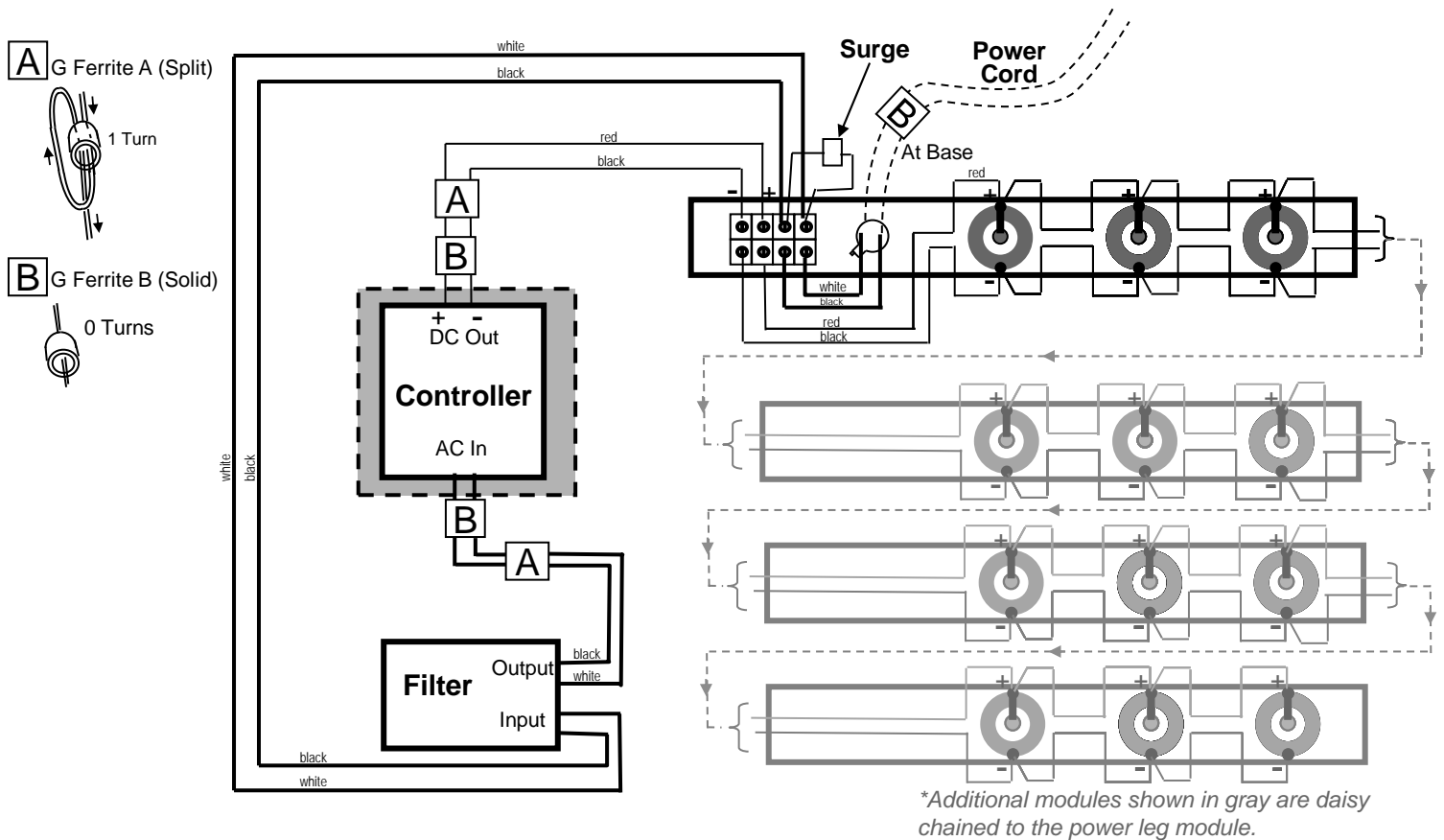
Figure #5

Jumper position for SCR regulator

### STANDARD SIGNS, INC.

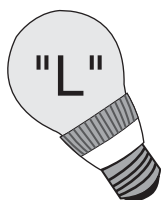
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## Wiring Diagram, LED Lighting System



## LED VA Loads, Power Factors and Isolation Transformers

		LED Lighting Systems											
		FAA Style 2 (4.8A-6.6A)				FAA Style 3 (2.8A-6.6A)				FAA Style 5 (5.5A)			
Sign Size &		4W LED				4W LED				4W LED			
Module	Length	Lamps	Isol	Xfmr	Max VA	Pwr Factr	Isol	Xfmr	Max VA	Pwr Factr	Isol	Max VA	Pwr Factr
Size 1, 1-mod	2		45W	44	0.92		45W	43	0.93		45W	34	0.92
	2-mod	4	45W/65W*	51	0.94		45W/65W*	50	0.94		45W	40	0.95
	3-mod	6	45W/65W*	57	0.95		100W	63	0.92		45W	47	0.96
	4-mod	8	100W	69	0.94		100W	69	0.94		100W	56	0.96
Size 2, 1-mod	3		45W	47	0.93		45W	47	0.92		45W	37	0.95
	2-mod	6	45W/65W*	57	0.95		100W	63	0.92		45W	47	0.96
	3-mod	9	100W	72	0.94		100W	72	0.94		100W	59	0.96
	4-mod	12	100W	80	0.96		100W	80	0.96		100W	68	0.97
Size 3, 1-mod	3		45W	47	0.93		45W	47	0.92		45W	37	0.95
	2-mod	6	45W/65W*	57	0.95		100W	63	0.92		45W	47	0.96
	3-mod	9	100W	72	0.94		100W	72	0.94		100W	59	0.96
	4-mod	12	100W	80	0.96		100W	80	0.96		100W	68	0.97
Size 5, 1-mod		3	45W	47	0.93		45W	47	0.92		45W	37	0.95
Size 4, 1-mod		6	45W/65W*	57	0.95		100W	63	0.92		45W	47	0.96



# LUMACURVE PARTS LIST

## LED Lighting Systems

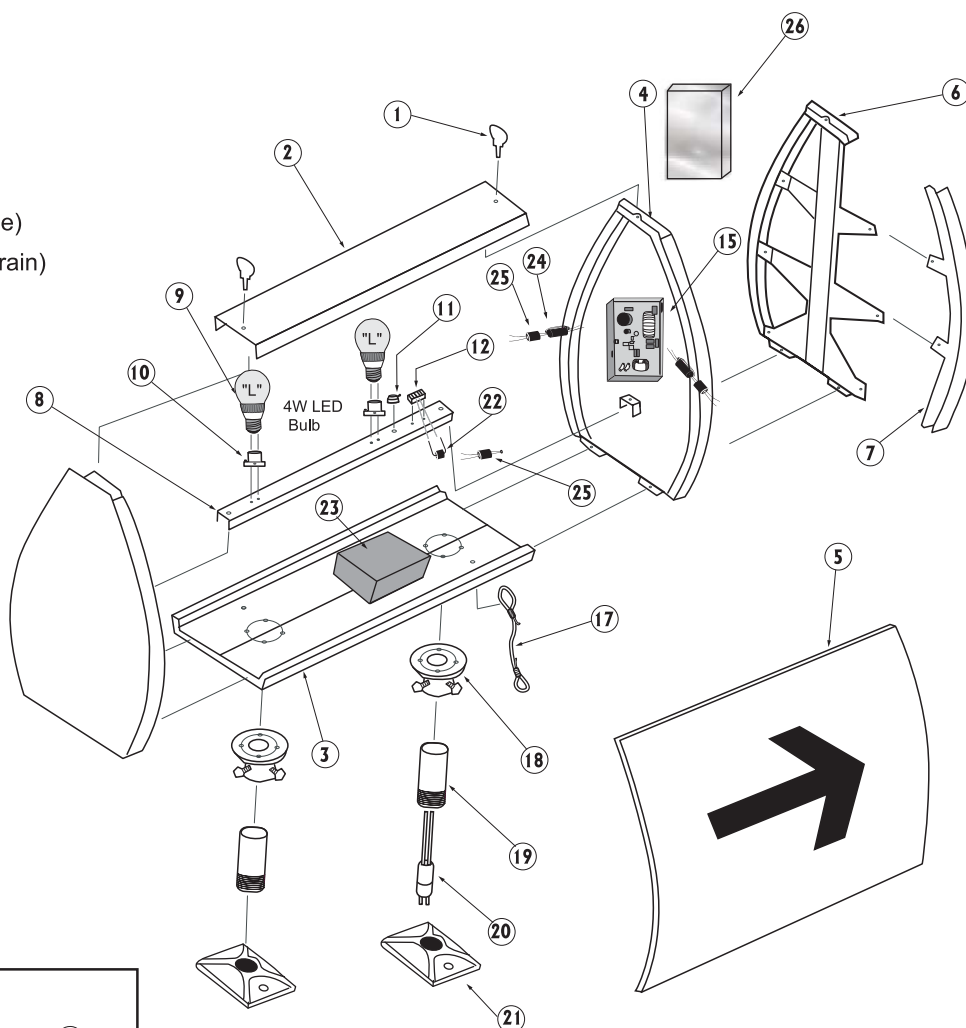
(4W LED screw base type lamp)

**Certified to current FAA Advisory Circular 150/5345-44**

Specification for Runway and Taxiway Signs

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Item	Description
1. 340/345	Turn Fasteners
2. *CLT-2	Cover
3. *CLT-3	Base
4. *CLT-4	End Panel
5. *CLT-5	Legend Panel <sup>1</sup>
6. *CLT-6	Multi-Module Insert (Tree)
7. *7-A	Face Insert Channel <sup>1</sup> (Train)
8. *8-A	Light Bar
9. L lamp 4W	4W LED Lamp
10. 500	Medium Screw Socket
11. 480	Cable Clamp
12. 420	Terminal Strip (section)
15. L610	LED PCB Controller
17. CLT-19	Tether
18. 130	Slipfitter
19. *140	6" Frangible Coupling
20. 430	Cord & Plug
21. 15	Floor Flange
22. E416	Surge Protector
23. Filter	ALD Low Pass Filter
24. Ferrite A	Ferrite Core Split
25. Ferrite B	Ferrite Core Not Split
26. G EMI Shield	Controller Screen Screen



### Enlarged Views



**Experience our exclusive "Wait-Less" service!**

**Call by 10AM, complete signs & parts ship same day!**

**No extra charge! Call 800.258.1997**

**To help in placing your order:**

\*Prefix part number with one of the following sign sizes: "S" (small/ size 1), "M" (medium/ size 2), "L" (large/ size 3 & 5)

<sup>1</sup> Specify one of the following sign types: L-858Y ("Y"ellow), L-858R ("R"ed), L-858L ("L"ocation), or Blank/ Black