

L-828/ L-829 Constant Current Regulator

Ferroresonant



COMPLIANCES

FAA AC 150/5345-10 (Current edition)

ETL Certified

Meets "Buy American" requirements

ICAO Annex 14



PRODUCT APPLICATION

The Navigate Series® L-828/ L-829 Constant Current Regulator is used to provide power to airfield lighting systems. It provides a selectable AC constant current to change the airfield lighting intensity according to existing visibility conditions.

THEORY OF OPERATION

The CCR regulates the output current using a Ferroresonant transformer. The Ferroresonant transformer allows for a low distortion sinusoidal output that is not easily affected by input line transients or disturbances. This style of transformer will also naturally regulate the output current without any controls at all, albeit a higher current than what is desired. With an auxiliary control winding, energy can be removed from the output, thus lowering the output current to the desired regulated value. A resonant tank circuit is formed between another set of transformer windings and an external capacitor bank. This tank circuit helps to maintain a sinusoid of a desired frequency as well as facilitate the transfer of energy away from the output.

A microcontroller module (DCMU) receives system feedback and provides closed-loop control of the transformer output through the Firing Card (FC) and a Solid-State Relay (SSR) via the control coil of the transformer. Output voltage is sensed through a transformer sense winding, while input and output current are sensed through chassis-mounted current sense transformers.

POWER & CONTROL EQUIPMENT - 4.11

FEATURES

- Enclosure has provisions for floor mounting, and the 7.5kW types and below are stackable to save space. Castors are available separately.
- Tested to 6,600 feet altitude per the FAA standard.
- Digital precision control of waveform, high-speed response, and local data storage.
- Digital Display may monitor output power, input voltage, input current, output voltage, VA, load VA changes, power factor, efficiency, number of failed lamps, programmable warning and alarm levels, accumulated operating time, as well as field circuit insulation resistance to earth ground (automatic megger as an option).
- Membrane keys with tactile response give maintenance workers immediate feedback and ease of menu navigation.
- Ferroresonant design provides a stable output current that is not affected by flashing loads.
- All CCRs are user configurable, including selection of 1 to 5 brightness steps, output current adjustment, selection of monitoring features, operational parameters and alarm setpoints.
- Diagnostic Data & User settings are accessible via RS-232 PC connection.

CONTROL CONFIGURATIONS

System may be operated locally (via keypad) or remotely (from tower control system). Output is configurable for 1, 3, or 5 brightness steps.

Remote control is configurable for 24VDC/48VDC or 120VAC. Control power may be supplied internally from CCR or externally from control system.

ENVIRONMENTAL CHARACTERISTICS

- Operating Temperature: -40 °C to +55 °C
- Elevation: Up to 6,600 feet (2,000 meters)
- Humidity: Up to 95%

ELECTRICAL REQUIREMENTS

Power Input 50/60Hz, 208/240/480VAC

ORDERING INFORMATION

CCR Order Number:

L-82X-X-X-X-X-X-X-X-X-X-X

Type:

L-828
L-829

kW Output:

1 = 4kW
2 = 7.5kW
3 = 10kW
4 = 15kW
5 = 20kW
6 = 30kW
7 = 1kW
8 = 2kW
9 = 5kW

Input Voltage Options:

1 = 208V
2 = 240V
3 = 480V

S1 Cutout Options:

1 = None
3 = S1 Internal

Frequency:

1 = 60Hz

Megger Options:

1 = Megger
2 = No Megger

DCMU Voltage Options:

1 = Configurable

Circuit Breaker Options:

1 = No Circuit Breaker
2 = 208V Circuit Breaker
3 = 240V Circuit Breaker
4 = 480V Circuit Breaker

Caster Options:

1 = Casters
2 = No Casters

Brightness Options:

1 = 1-Step
3 = 3-Step
5 = 5-Step

Current Sense

Transformer Options:

0 = No Transformer
1 = With Transformer

RENEWAL PARTS

Description

Capacitor, 50uF, 600VAC
Interlock Switch
Fuse, 1A
Fuse, 3A, 600V
Firing Card
S1 Cutout Kit
S1 Cutout
DCMU, 120/24V
DCMU, 120V
MOV, 820V, 10kA
MOV, 205V, 6kA
Snubber
MOV, 23VRSMS, 1kA
Megger Card Kit
Megger Resistor Assy Kit
5.25" Plastic Housing Kit
Lightning Arrestors 5.10 KV Kit
480V-120VAC Transformer Kit
120V-12VAC Transformer Kit
PowerTransformer Kit
Contactor, 25A, 600V Kit
Contactor, 40A, 600V Kit
Contactor, 60/75A, 600V Kit
Contactor, 90A, 600V Kit
Contactor, 185A, 600V Kit
Contactor, 225A, 600V Kit
Display Kit
SSR Kit
Circuit Breaker, 15A, 600V Kit
Circuit Breaker, 25A, 600V Kit
Circuit Breaker, 30A, 600V Kit
Circuit Breaker, 50A, 600V Kit
Circuit Breaker, 60A, 600V Kit
Circuit Breaker, 70A, 600V Kit
Circuit Breaker, 90A, 600V Kit
Circuit Breaker, 110A, 600V Kit
Circuit Breaker, 125A, 600V Kit
Circuit Breaker, 160A, 600V Kit
Circuit Breaker, 185A, 600V Kit

Part Number

A1-02-0176-002
A1-12-0126-001
A1-21-0033-004
A1-21-0039-003
A3-06-1502-001
A3-06-3177-001
A3-06-3177-002
A3-06-3178-001
A3-06-3178-002
A3-06-3181-001
A3-06-3181-002
A3-06-3181-003
A3-06-3181-004
K1-02-0033-001
K1-02-0033-002
K1-02-0033-003
K1-02-0034-002
K1-02-0038-001
K1-02-0038-002
K1-02-0038-003
K1-02-0039-001
K1-02-0039-002
K1-02-0039-003
K1-02-0039-004
K1-02-0039-005
K1-02-0039-006
K1-02-0040-001
K1-02-0044-001
K1-02-0046-001
K1-02-0046-002
K1-02-0046-003
K1-02-0046-004
K1-02-0046-005
K1-02-0046-006
K1-02-0046-007
K1-02-0046-008
K1-02-0046-009
K1-02-0046-010
K1-02-0046-011

WEIGHT AND DIMENSIONS

Size(kW) Dimensions in Inches

Weight in lbs. (kg)

1	40x24x24	285 (129)
2	40x24x24	320 (145)
4	40x24x24	345 (156)
5	40x24x24	395 (179)
7.5	40x24x24	465 (211)
10	40x24x24	565 (256)
15	40x30x36	965 (438)
20	40x30x36	1065 (483)
30	40x30x36	1350 (612)

L-880(L) & L-881(L) LED PAPI System

Precision Approach Path Indicator



COMPLIANCES

L-880 and L-881, Style A & B
 FAA AC 150/5345-28 (current edition)
 Certified to FAA AC 150/5345-28 and EB67D
 Meets "Buy American" requirements.

PRODUCT APPLICATION

The PAPI system is used to provide visual approach path guidance to pilots of landing aircraft. The PAPI system consists of either four (L-880) or two (L-881) identical Lamp Housing Assemblies (LHAs) placed on the left of the runway aimed outward into the approach zone on a line parallel to the runway. The front face of each LHA is perpendicular to the runway centerline. The boxes are positioned and aimed to produce the signal guidance to the landing aircraft.

FEATURES

- Low Power Consumption - The LED PAPI is a low power consumption energy efficient system. Each Style A Lamp Housing Assembly draws a nominal 120W.
- Tool-Less Maintenance - Most routine service components can be maintained without the use of hand tools.
- Style B designed to operate on all steps of a 3-step or 5-Step CCR and on a 6.6A CCR using the same size isolation transformer.
- Includes digital tilt switch.
- Style A designed to operate from 90 - 305 VAC, 50/60 Hz
- Allows for LED Lamp replacement without removing and realign unit.

APPROACH LIGHTS & NAVIGATIONAL AIDS - 3.0

ORDERING INFORMATION

PAPI Order Number:

L-880 -L -X -X -X

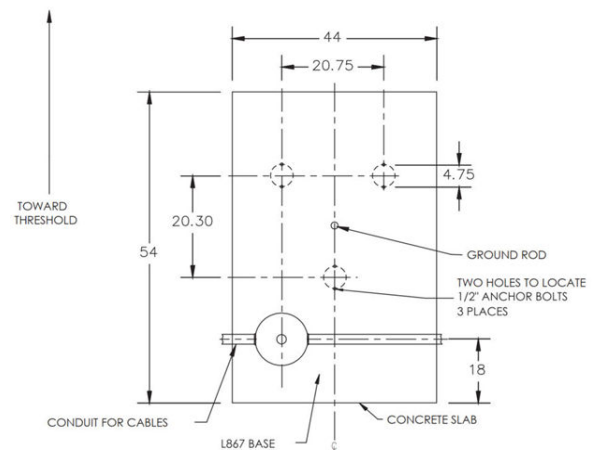
0 = 4 LHAs (4-box)
 1 = 2 LHAs (2-box)

A = Voltage
 B = Current

1 = Class I
 2 = Class II

0 = No Baffle
 1 = Baffle

INSTALLATION FOOTPRINT



WEIGHT & DIMENSIONS

- Weight: 20 kg
- Dimensions: 25in (635mm) H x 40in (1,016mm) L x 25in (635mm) D
- Exploded view: see next page

POWER REQUIREMENTS

Style B – Constant Current	# of Lamps Per LHA	Series Circuit	Max. VA Load	Required Transformer Per LHA	Transformer Part #
L-880 (4 LHAs)	3	6.6 A, 60 Hz	110	150W	L830-18
	3	6.6 A, 50 Hz	110	150W	L831-18
	3	20 A/6.6 A, 60 Hz	110	150W	L830-19
L-881 (2 LHAs)	3	6.6 A, 60 Hz	110	150W	L830-18
	3	6.6 A, 60 Hz	110	150W	L831-18
	3	20 A/6.6 A, 60 Hz	110	150W	L830-19

Style A (Voltage)	
Input Voltage	90 - 305 VAC, 50/60 Hz
L-880 (4 BOX)	480 VA max
L-881 (2 BOX)	240 VA max

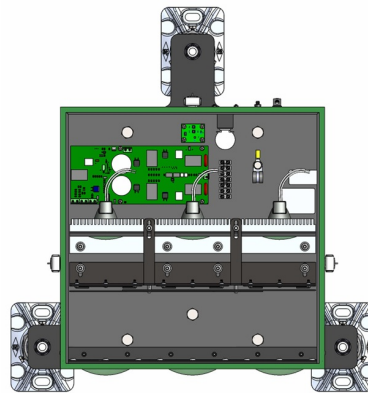
RENEWAL PARTS

Description	Part Number
Cover Assembly, 3-Bulb	A3-06-3126-001
Replacement Lens Kit	K1-02-0057-001
Lens Holder	A1-17-1088-001
Draw Latch, Padlockable	A1-05-0524-001
Leg Assembly	K2-01-0081-001
Frame	A1-17-1089-001
PWA Tilt Sensor	A3-07-1115-001
Sensor Board Insulator	A1-26-0094-001
Power Cable Clamp Kit	K2-01-0082-001
MOV - Style B	A1-01-0129-008
Aiming Instrument Set (includes clinometer & alignment tool)	K2-01-0088-001
LED Lamp	A1-14-0100-001
PWA - Style B	A3-07-1186-001
PWA - Style A	A3-07-1189-001
7 Position Terminal Block	D5940013-007
Lamp Holder	A1-17-1200-001
Filter Holder	A1-17-1202-001
Lamp Holder Cover	A1-17-1201-001
Baffle Kit, PAPI	A3-06-4011-001
Photocell	A1-06-0001-001
Circuit Breaker	A1-12-0109-019
Photocell ext Tube	A1-17-1205-001
Photocell Mount	A1-05-0638-001

ACCESSORIES

Description	Part Number
L-867 Base Can, 24"	AC2124-2Q2-00301
L-823 Connector Kit (.32-.43)	11174-01
Heat Shrink Tubing Kit	A2-20-0089-001
L-867B Base Plate	AP1932
L-867B Cover Plate, 3/8"	AK100006
Gasket	10530287
Frangible Coupling, 2" Floor	A1-17-1134-001
Flange	A1-17-1076-001

EXPLODED VIEW



L-861, L-861E & L-861SE LED Medium Intensity Runway Light



COMPLIANCES

L-861(L), L-861E(L), L-861SE(L)
FAA AC 150/5345-46 (current edition)
FAA Engineering Brief 67D

ETL Certified



U.S. PATENT No. 9,206,961

Meets "Buy American" requirements.

ICAO: Annex 14, Vol. 1, para. 5.3.17

PRODUCT APPLICATION

The Navigate Series® L-861 LED elevated light fixtures are used to delineate the edges of airport runways and displaced thresholds.

The Navigate Series® L-861E LED elevated light fixtures are used to delineate airport runway thresholds/ends and displaced thresholds.

The Navigate Series® L-861SE LED elevated light fixtures are used to delineate the edges of airport runway thresholds/ends.

FEATURES

- Die cast aluminum body.
- Total Harmonic Distortion (THD) less than 1.1%.
- Less than 25VA at the highest step for the standard runway fixture.
- Fixture MTBF is greater than 50,000 hours.
- Complies with intensity requirements for 3-step and 5-step circuit.
- No Arctic Kit is ever needed on the standard runway fixture.
- Requires only a 20/25W isolation transformer for the standard runway fixture and SE type, and a 10/15W for the E type.

ELEVATED LIGHTS - 1.2

ORDERING INFORMATION

L-861 LED Order Number:

861 L X(X) XX

Runway Edge Light

Fixture Type:

861 = L-861

L = LED

Color:

W = Omnidirectional White

Y = Omnidirectional Yellow

WY = Bidirectional White/Yellow

WR = Bidirectional White/Red

YR = Bidirectional Yellow/Red

GY = Bidirectional Green/Yellow

WB = Unidirectional White*

YB = Unidirectional Yellow*

Fixture Height:

14 = 14 inches overall height (standard)

24 = 24 inches overall height

30 = 30 inches overall height

* Not FAA Certifiable

L-861E/SE LED Order Number:

861X(X) L XX XX X

Runway Threshold/End
Displaced Threshold Light

Fixture Type:

861E = L-861E

861SE = L-861SE

L = LED

Color:

GB = Unidirectional Green

RG = Bidirectional Red/Green

RR = Bidirectional Red/Red (E type only)

Fixture Height:

14 = 14 inches overall height (standard)

24 = 24 inches overall height

30 = 30 inches overall height

0 = Without Arctic Kit

1 = With Arctic Kit

RENEWAL PARTS

Description

Part Number

Globe

White	A1-32-0014-001
Yellow	A1-32-0014-004
White/Red	A1-32-0014-006
Green/Yellow	A1-32-0014-007
White/Yellow	A1-32-0014-008
Yellow/Red	A1-32-0014-009
Green/Red (E and SE only)	A1-32-0014-010
Green/Blank (E and SE only)	A1-32-0014-011
Red/Red (861E only)	A1-32-0014-002

Light Engine Assembly Options

861, White	A3-06-3106-001
861, Green/Yellow	A3-06-3106-002
861E, Red/Green	A3-06-3114-001
861E, Red/Green, Arctic version	A3-06-3114-004
861E, Red/Red	A3-06-3114-002
861E, Red/Red, Arctic version	A3-06-3114-005
861E, Green/Blank	A3-06-3114-003
861E, Green/Blank, Arctic version	A3-06-3114-006
861SE, Red/Green	A3-06-3115-001
861SE, Red/Green, Arctic version	A3-06-3115-003
861SE, Green/Blank	A3-06-3115-002
861SE, Green/Blank, Arctic version	A3-06-3115-004

Band Clamp	A1-17-1027-003
O-Ring, 3 3/4 ID, 0.013 Thick	AS568A-154
Silicone Heater Ring (for Arctic version)	A1-01-0163-001
Fast Receptor Connector, 14-16 AWG, .187 x.032	A1-03-0260-001
Fixture Base	A1-17-1067-001
Strain Relief Bushing	D5975012-013

EMT

For 14-inch overall height	A1-17-1034-03
For 24-inch overall height	A1-17-1034-08
For 30-inch overall height	A1-17-1034-21
1.5-inch Frangible Coupling Kit	K1-02-0051-001

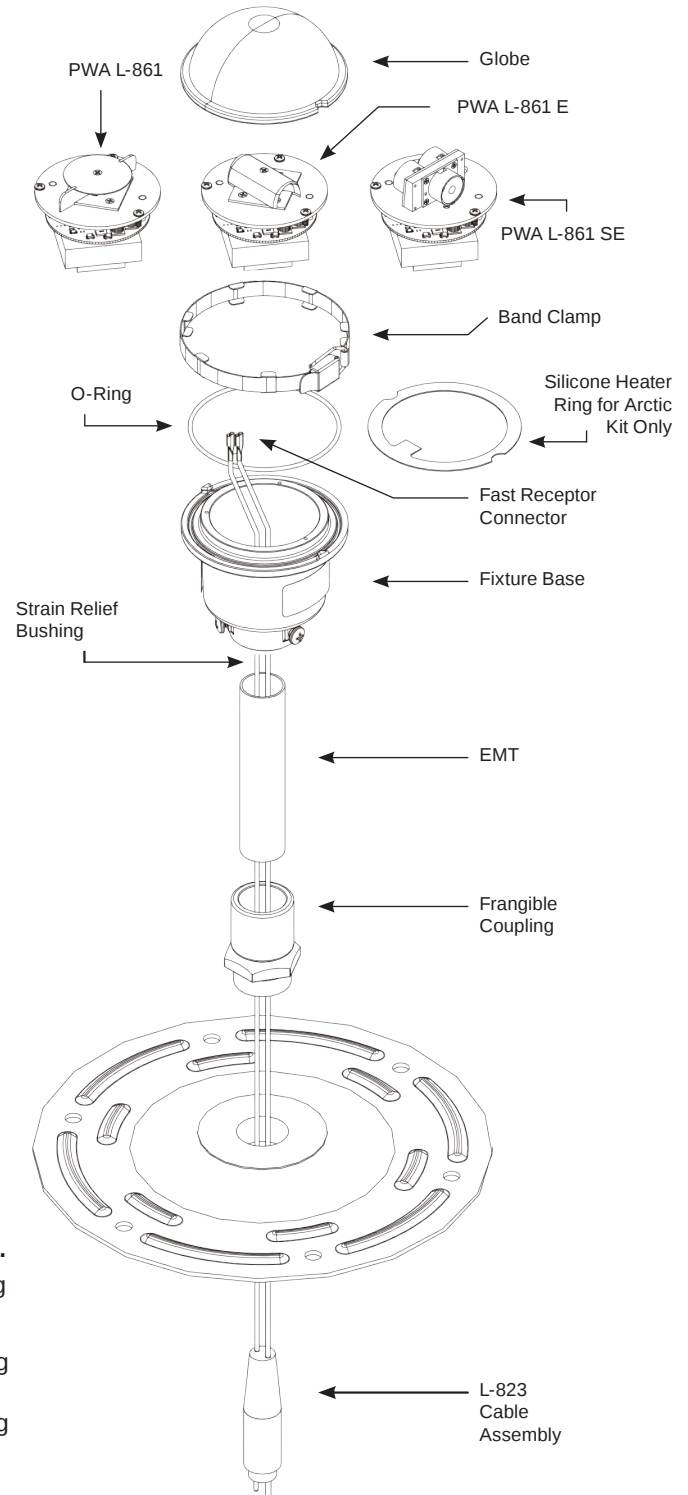
L-823 Cable Assembly

For 14-inch overall height	A2-17-0017-003
For 24-inch overall height	A2-17-0017-002
For 30-inch overall height	A2-17-0017-001

ACCESSORIES

Description	Part Number	Approx. Wt.
L-867 Base Can	AC2124-2Q2-00301	52 lb/23.6 kg
Stake Mount 1.5" hub	AW2205	12 lb/5.4 kg
L-823 Primary Connector Kit (8 AWG, .320"/.430")	11174-01	.335 lb/.15 kg
L-823 Complete Kit (8 AWG, .320"/.430")	11805-01	.335 lb/.15 kg
Heat Shrink Tubing Kit	A2-20-0089-001	.5 lb/.23 kg
Base Plate	AP1935	8 lb/3.6 kg
2" to 1.5" Baseplate Reducer	10701994	.5 lb/.23 kg
L-861 Leveling Tool	T3-01-0063-001	

EXPLODED VIEW



L-861 TRANSFORMER REQUIREMENTS

L-861 Type	Series Circuit	Fixture Load	Required Transformer	Part Number
Uni &	6.6A, 60Hz	23.5VA	L-830-17 (20/25W)	11729
Bidirectional	6.6A, 50Hz	23.5VA	L-831-17 (20/25W)	11733
No Arctic Kit	20 A/6.6A, 60Hz	23.5VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	23.5VA	L-831-2 (30/45W)	11723

L-861E TRANSFORMER REQUIREMENTS

L-861E Type	Series Circuit	Fixture Load	Required Transformer	Part Number
Unidirectional	6.6A, 60Hz	11.55VA	L-830-16 (10/15W)	11717
No Arctic Kit	6.6A, 50Hz	11.55VA	L-831-16 (10/15W)	11732
	20A/6.6A, 60Hz	11.55VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	11.55VA	L-831-2 (30/45W)	11723
Bidirectional	6.6A, 60Hz	14.0VA	L-830-16 (10/15W)	11717
No Arctic Kit	6.6A, 50Hz	14.0VA	L-831-16 (10/15W)	11732
	20A/6.6A, 60Hz	14.0VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	14.0VA	L-831-2 (30/45W)	11723
Unidirectional	6.6A, 60Hz	26.1VA	L-830-1 (30/45W)	11680
With Arctic Kit	6.6A, 50Hz	26.1VA	L-831-1 (30/45W)	11710
	20A/6.6A, 60Hz	26.1VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	26.1VA	L-831-2 (30/45W)	11723
Bidirectional	6.6 A, 60Hz	26.4VA	L-830-1 (30/45W)	11680
With Arctic Kit	6.6 A, 50Hz	26.4VA	L-831-1 (30/45W)	11710
	20 A/6.6A, 60Hz	26.4VA	L-830-2 (30/45W)	11681
	20 A/6.6A, 50Hz	26.4VA	L-831-2 (30/45W)	11723

L-861SE TRANSFORMER REQUIREMENTS

L-861SE Type	Series Circuit	Fixture Load	Required Transformer	Part Number
Unidirectional	6.6A, 60Hz	16.3VA	L-830-17 (20/25W)	11729
No Arctic Kit	6.6A, 50Hz	16.3VA	L-831-17 (20/25W)	11733
	20A/6.6A, 60Hz	16.3VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	16.3VA	L-831-2 (30/45W)	11723
Bidirectional	6.6A, 60Hz	19.12VA	L-830-17 (20/25W)	11729
No Arctic Kit	6.6A, 50Hz	19.12VA	L-831-17 (20/25W)	11733
	20A/6.6A, 60Hz	19.12VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	19.12VA	L-831-2 (30/45W)	11723
Unidirectional	6.6A, 60Hz	26.9VA	L-830-1 (30/45W)	11680
With Arctic Kit	6.6A, 50Hz	26.9VA	L-831-1 (30/45W)	11710
	20A/6.6A, 60Hz	26.9VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	26.9VA	L-831-2 (30/45W)	11723
Bidirectional	6.6A, 60Hz	29.3VA	L-830-1 (30/45W)	11680
With Arctic Kit	6.6A, 50Hz	29.3VA	L-831-1 (30/45W)	11710
	20A/6.6A, 60Hz	29.3VA	L-830-2 (30/45W)	11681
	20A/6.6A, 50Hz	29.3VA	L-831-2 (30/45W)	11723

L-850 A/B/C/D/E/T LED

*Style-3 Runway Centerline,
Touchdown Zone, Threshold/End,
Approach & Intersection Light*



IN-PAVEMENT LIGHTS - 2.4
L-850 A/B/C/D/E/T LED

PRODUCT APPLICATION

The Navigate Series® L-850 A/B/C/D/E/T LED fixtures are Style 3 runway lights, defined as follows:

Type	Application	Direction / Color
L-850A	Runway Centerline, Land and Hold Short Operations (LAHSO)	Bidirectional: White-White, White-Red Unidirectional: White, Red
L-850B	Runway Touchdown Zone; Medium Intensity Approach Lighting System	Unidirectional: White
L-850C	Runway Edge, Displaced Threshold	Bidirectional: White-White, White- Yellow, White-Red, Yellow-Red, Yellow-Green
L-850D	Runway Threshold/end	Bidirectional: Green-Red, Red-Red Unidirectional: Green Unidirectional: Red
L-850E	Medium Intensity Approach Lighting System; Runway	Unidirectional: Green
L-850T	Runway Status Lights (RWSL) Takeoff Hold Light (THL), Runway Intersection Light	Unidirectional: Red

ORDERING INFORMATION

L-850 A/B/C/D/E/T LED Order Number

Fixture Ty

A = L-850A
B = L-850B
C = L-850C
D = L-850D
E = L-850E
T = L-850T

L = LED

0 = No Arctic Kit
1 = Arctic Kit

Color Options:

WW = White/White
WY = White/Yellow
WR = White/Red
YR = Yellow/Red
YG = Yellow/Green
GR = Green/Red
RR = Red/Red
W = White
G = Green
R = Red

Toeing:

0 = Straight
1 = Toe Left
2 = Toe Right

Cable Options:

1 = One Plug
2 = Two Plugs
(for bidirectional fixtures only)

COMPLIANCES

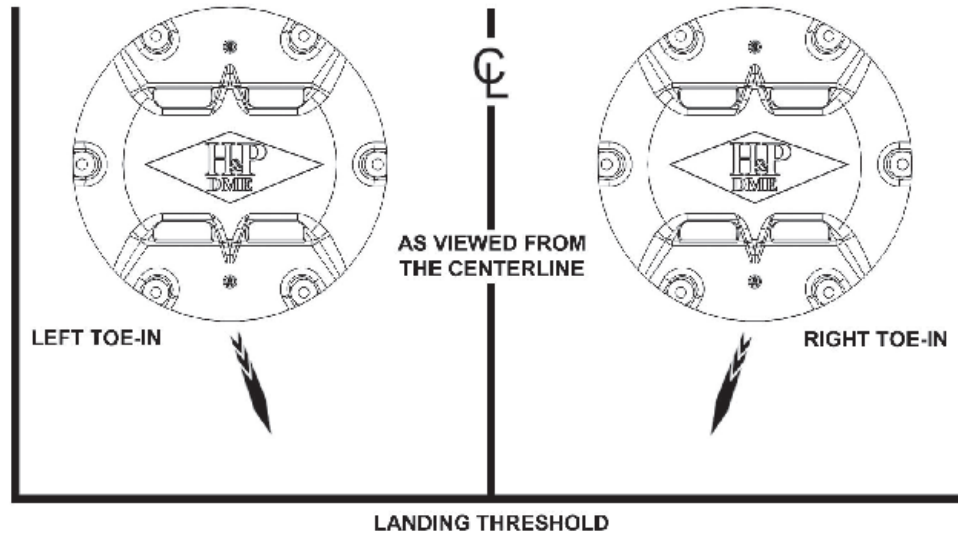
L-850A(L), L-850B(L), L-850C(L),
L-850D(L), L-850E(L), L-850T(L)
FAA AC 150/5345-46 (current edition)
FAA Engineering
Brief 67D

Certified to FAA AC 150/5345-46 and EB67D

Meets "Buy American" requirements.

TOUCHDOWN ZONE TOE-IN CODING

L-850B, C, and D (Green) Fixtures Only



FEATURES

- FAA Style-3 fixture with less than 0.25 inches above ground height.
- Lower power consumption and less required maintenance compared to non-LED version, resulting in lower life-cycle costs.
- Easy to maintain. All components of the fixture are easily replaced.
- Operates on 3-step and 5-step ferroresonant or thyristor CCRs.
- Optional thermostatically controlled heater (Arctic Kit) that cycles on and off when temperature drops below freezing, reducing overall energy consumption.
- Fixture uses high-strength assembly, stainless steel hardware, and a hardened optical glass lens.
- Seals tested to resist Cryotech XT350, EX180, and E36 de-icing fluids.
- LED life greater than 50,000 hours.
- Operating temperature range -40 °C to +55 °C (-40 °F to +131 °F).

WEIGHT AND DIMENSIONS

Weight:	~ 10.2 lbs
Dimensions:	
Height (Depth)	3.93 inches
Outer Diameter	11.94 inches
Bolt-Circle Diameter	11.25 inches

WITHOUT ARCTIC KIT TRANSFORMER REQUIREMENTS

Type	Direction	Color	Plugs	Fixture Load (VA)	Required Transformer	Power Factor
L-850A	Unidirectional	White	1	55.5	65W	0.92
		Red	1	19	20/25W	0.92
	Bidirectional	White/White	2 or (1)	55.5/55.5 or (111)	65W or (150W)	0.92
		White/Red	2 or (1)	55.5/19 (74.5)	65W or (100W)	0.92
L-850B	Unidirectional	White	1	55.5	65W	0.92
L-850C	Bidirectional	White/White	2 or (1)	73.6/73.6 (147.2)	100W or (150W)	0.92
		White/Yellow	2 or (1)	73.6/57.3 (130.9)	100W or (150W)	0.92
		White/Red	2 or (1)	73.6/23.1 (96.7)	100W or (100W)	0.92
		Yellow/Red	2 or (1)	57.3/23.1 (80.4)	65W or (100W)	0.92
		Yellow/Green	2 or (1)	57.3/30.7 (88)	65W or (100W)	0.92
		Green	1	30.7	30/45W	0.92
L-850D	Unidirectional	Red	1	46.5	65W	0.92
		Green/Red	2 or (1)	30.7/46.5 (77.2)	65W or (100W)	0.92
	Bidirectional	Red/Red	2 or (1)	46.5/46.5 (93)	65W or (100W)	0.92
		Green	1	72.6	100W	0.92
L-850E	Unidirectional	Green	1	72.6	100W	0.92
L-850T	Unidirectional	Red	1	23.1	20/25W	0.92

WITH ARCTIC KIT TRANSFORMER REQUIREMENTS

Type	Direction	Color	Plugs	Fixture Load (VA)	Required Transformer	Power Factor
L-850A	Unidirectional	White	1	85.5	100W	0.99
		Red	1	49	65W	0.99
	Bidirectional	White/White	2 or (1)	85.5/85.5 (171)	100W or (200W)	0.99
		White/Red	2 or (1)	85.5/49 (134.2)	100W or (150W)	0.99
L-850B	Unidirectional	White	1	85.5	100W	0.99
L-850C	Bidirectional	White/White	2 or (1)	103.6/103.6 (207.2)	150W or (300W)	0.99
		White/Yellow	2 or (1)	103.6/87.3 (190.9)	150W or (200W)	0.99
		White/Red	2 or (1)	103.6/53.1 (156.7)	150W or (200W)	0.99
		Yellow/Red	2 or (1)	87.3/53.1 (140.4)	100W or (150W)	0.99
		Yellow/Green	2 or (1)	87.3/60.7 (148)	100W or (150W)	0.99
		Green	1	60.7	65W	0.99
L-850D	Unidirectional	Red	1	76.5	100W	0.99
		Green/Red	2 or (1)	60.7/76.5 (137.2)	100W or (150W)	0.99
	Bidirectional	Red/Red	2 or (1)	76.5/76.5 (153)	100W or (200W)	0.99
		Green	1	102.6	150W	0.99
L-850E	Unidirectional	Green	1	102.6	150W	0.99
L-850T	Unidirectional	Red	1	53.1	65W	0.99

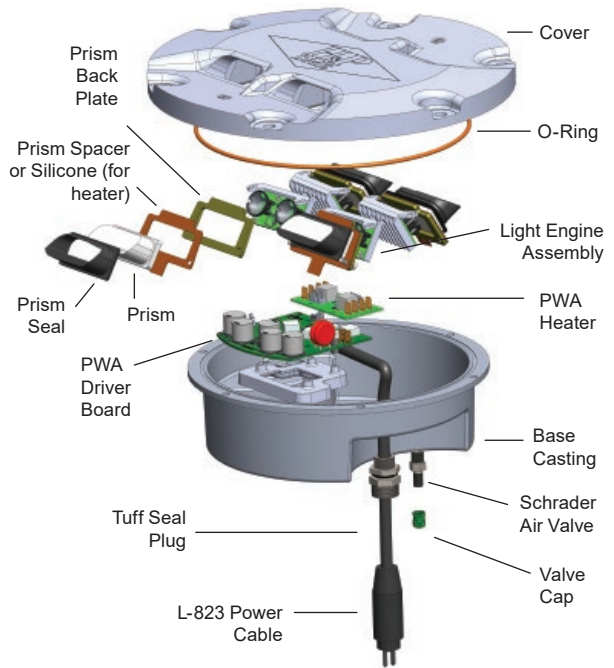
Notes:

- Fixture Load (VA) determines the load to the CCR including the isolation transformer.
- Fixtures can be run with a 6.6 or 20 AMP Series Circuit (50/60 Hz) CCR.

RENEWAL PARTS

Description	Part Number
Valve, Air, Schrader, 1/8	A1-05-0553-001
Replacement Kit, L-85X, L-823 Cable – Includes: Power Cable, L823 - 10518-14-036 Tuff Seal 1 Hole - A1-05-0552-003 Connectors - A1-03-0260-001 O-ring: AS568A-269	K1-02-0003-003
Replacement Kit, Prism, L850X – Includes: Prism – A1-32-0017-001 Prism Seal – A1-25-0091-001 Prism Spacer – A1-18-2169-001 Back Plate, Prism– A1-17-1065-001 O-Ring – AS568A-269	K1-02-0018-001
Replacement Kit, Light Engine, L850X - Includes: -001 for White Light Engine, Assy – A3-06-3199-001 O-Ring – AS568A-269 -002 for Yellow Light Engine, Assy – A3-06-3199-002 O-Ring – AS568A-269 -003 for Green Light Engine, Assy – A3-06-3199-003 O-Ring – AS568A-269 -004 for Red Light Engine, Assy – A3-06-3199-004 O-Ring – AS568A-269	K1-02-0057-001 -002 -003 -004
Replacement Kit, Heater, L850X Uni-Bi – Includes: -001 for Unidirectional PWA, Heater – A3-07-1107-001 Wire Assy, Power Jumper Wire – A3-06-3105-003 Wire Assy, Heater Control Wire - A3-06-3105-004 Heater, Silicone, L85X, F/F – A1-01-0162-001 1EA Heater, Silicone, L85X, M/F – A1-01-0162-002 1EA O-Ring – AS568A-269 -002 for Bidirectional PWA, Heater – A3-07-1107-002 Wire Assy, Power Jumper Wire – A3-06-3105-003 Wire Assy, Heater Control Wire - A3-06-3105-004 Heater, Silicone, L85X, F/F – A1-01-0162-001 2 EA Heater, Silicone, L85X, M/F – A1-01-0162-002 2EA O-Ring – AS568A-269	K1-02-0016-001 -002
Replacement Kit, Driver Board, L850X – Includes: PWA, Driver Board, L850X – A3-07-1177-001 O-Ring – AS568A-269	K1-02-0058-001
Ground Lug Kit Lug - A1-04-0241-001 Washer - MS35335-60 Screw - MS51958-63	K2-02-0005-001

EXPLODED VIEW



ACCESSORIES

Description	Part Number
L-868B Base Can, 24" Deep	AC2424-2Q2-00303
L-823 Primary Connector Kit (8 awg, .320"/.430")	11174-01
L-823 Complete Kit (8 awg, .320"/.430")	11805-01
Heat Shrink Tubing Kit	A2-20-0089-001
L-868B Flange Ring, 1/4" with Epoxy Dam	AF540204Y

Isolation Transformers

L-830-1	30/45W	6.6A/6.6A,	60Hz	11680
L-830-3	65W	6.6A/6.6A,	60Hz	11682
L-830-4	100W	6.6A/6.6A,	60Hz	11683
L-830-6	200W	6.6A/6.6A,	60 Hz	11685
L-830-10	300W	6.6A/6.6A,	60Hz	11736
L-830-17	20/25W	6.6A/6.6A,	60 Hz	11729
L-830-18	150W	6.6A/6.6A,	60 Hz	11730



COMPLIANCES

L-861T(L)
FAA AC 150/5345-46 (current edition)
FAA Engineering Brief 67D



ETL Certified

Meets "Buy American" requirements.

ICAO: Annex 14, Vol. 1, para. 5.3.17

PRODUCT APPLICATION

The Navigate Series® L-861T LED elevated taxiway light is an omnidirectional blue light that is used to delineate the edges of airport taxiways, holding bays, and aprons.

FEATURES

- Die cast aluminum body.
- Total Harmonic Distortion (THD) less than 1.1%.
- Less than 8.5VA at the highest step.
- Fixture MTBF is greater than 50,000 hours.
- Complies with intensity requirements for 3-step and 5-step series circuits.
- Standard fixture (without Arctic Kit) requires only a 10/15W isolation transformer.

EXTERNAL POWER REQUIREMENTS

Input

Constant Current Regulator (CCR)

Power

3 Step 4.8A, 5.5A, and 6.6A

or

5 Step 2.8A, 3.4A, 4.1, 5.2A and 6.6A

L-861T LED

Medium Intensity Taxiway Light

ELEVATED LIGHTS - 1.3A

ORDERING INFORMATION

L-861T LED Order Number:

861T - L - B -

Fixture Type:

L-861T LED Blue

Fixture Height:

14 = 14 inches overall height (standard)

24 = 24 inches overall height

30 = 30 inches overall height

0 = Without Arctic Kit

1 = With Arctic Kit

ACCESSORIES

Description	Part Number	Approx. Wt.
L-867 Base Can	AC2124-2Q2-00301	52 lb/23.6 kg
Stake Mount 1.5" hub	AW2205	12 lb/5.4 kg
L-823 Primary Connector Kit (8 AWG, .320"/.430")	11174-01	.335 lb/.15 kg
L-823 Complete Kit (8 AWG, .320"/.430")	11805-01	.335 lb/.15 kg
Heat Shrink Tubing Kit	A2-20-0089-001	.5 lb/.23 kg
Base Plate	AP1935	8 lb/3.6 kg
2" to 1.5" Baseplate Reducer	10701994	.5 lb/.23 kg
Gasket	10530287	.4 lb/.2 kg
L-861 Leveling Tool	T3-01-0063-001	

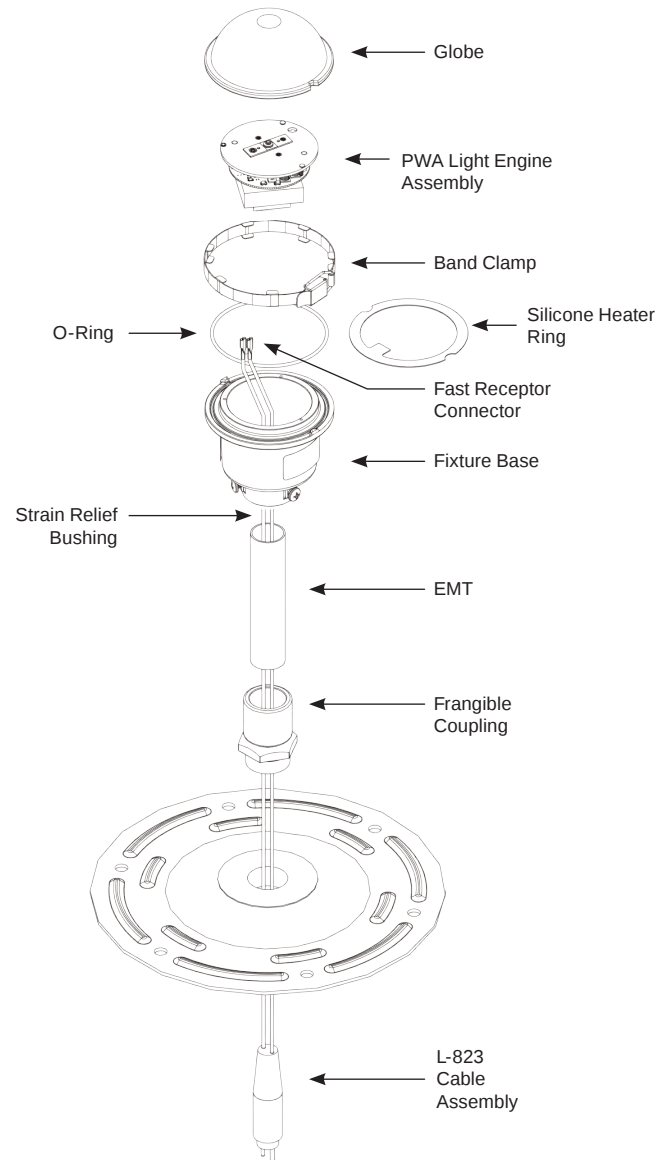
FUNCTIONAL CHARACTERISTICS

Condition	Range
Optics	1 surface-mounted, high-powered blue LED w/optically matched blue glass dome
Weight	4 lbs with 14" EMT and frangible coupling
Height	14-, 24-, and 30-inch options (overall height)
Total Harmonic Distortion	< 1.1%
Arctic Kit	Optional

RENEWAL PARTS

Description	Part Number
Blue Globe	A1-32-0014-005
Light Engine Assembly	
No arctic kit	A3-06-3119-001
With arctic kit	A3-06-3119-002
Band Clamp	A1-17-1027-003
O-Ring, 3 3/4 ID, 0.013 Thick	AS568A-154
Fast Receptor Connector, 14-16 AWG, .187 x.032	A1-03-0260-001
Fixture Base	A1-17-1067-001
Strain Relief Bushing	D5975012-013
EMT	
For 14-inch overall height	A1-17-1034-03
For 24-inch overall height	A1-17-1034-08
For 30-inch overall height	A1-17-1034-21
1.5-inch Frangible Coupling	K1-02-0051-001
L-823 Cable Assembly	
For 14-inch overall height	A2-17-0017-003
For 24-inch overall height	A2-17-0017-002
For 30-inch overall height	A2-17-0017-001
Arctic Kit	A1-01-0163-001

EXPLODED VIEW



TRANSFORMER REQUIREMENTS

Type	Series Circuit	Fixture Load	Required Transformer	Part Number
No Arctic Kit	6.6A, 60Hz	8.19VA	L-830-16 (10/15W)	11717
	6.6A, 50Hz	8.19VA	L-831-16 (10/15W)	11732
	20A/6.6A, 60Hz	8.19VA	L-830-1 (30/45W)	11680
	20A/6.6A, 50Hz	8.19VA	L-831-1 (30/45W)	11710
With Arctic Kit	6.6A, 60Hz	20.2VA	L-830-17 (20/25W)	11729
	6.6A, 50Hz	20.2VA	L-831-17 (20/25W)	11733
	20A/6.6A, 60Hz	20.2VA	L-830-1 (30/45W)	11680
	20A/6.6A, 50Hz	20.2VA	L-831-1 (30/45W)	11710