



# Signature Series™ L-861 & L-861E LED Elevated Runway Edge Light



L-861 LED



L-861E LED

LED  
PRODUCT

## Compliance with Standards

**FAA:** Designed according to L-861 and L-861E AC 150/5345-46 (Current Edition) and the FAA Engineering Brief No. 67 "Light Sources other than Incandescent and Xenon for Airport Lighting and Obstruction Lighting Fixtures." ETL Certified.

**ICAO:** Annex 14, Vol. 1, para. 5.3.9.7 to 5.3.9.9

**FCC:** Title 47, SubPart B, Section 15 regulations concerning the emission of electronic noise

## Uses

### L-861

- Runway edge
- Visual runways or non-precision IFR runways

### L-861E

- Runway threshold/end
  - Visual runways or non-precision IFR runways
- L-861 LED medium-intensity elevated light fixtures are used to delineate the edges of airport runways (L-861) and the threshold end (L-861E).

## Features

- EMIL with arctic option (U.S. Patent 7192155 B2) uses a thermostatically controlled heater to prevent ice and snow buildup from obscuring light output. Melts ice similar to traditional incandescent fixtures.
- Thermostatically controlled heater cycles on and off when temperature drops below freezing, reducing overall energy consumption
- Average LED life of 56,000 hours under high-intensity conditions and more than 150,000 hours under actual operating conditions, resulting in significant reduction or even elimination of ongoing maintenance costs and periodic re-lamping expenses
- Outer colored glass ensures high daytime visibility
- Can be installed on existing series circuits with no modifications to existing CCR or isolation transformer
- Single-latch, stainless steel clamp allows easy removal and replacement of top cover and lens
- A gasket is used between the lens and the top cover and also between the top and bottom fixture head assemblies to form a watertight seal
- Sealed entry at cord set to optical assembly interface prevents insect entry
- Robust, solid-state device withstands damage if fixture is knocked over. Internal electronics ruggedly mounted inside fixture housing.

## EMIL Ordering Code

## EMIL-XXXX0

### LED Color

- 1 = Omnidirectional White (L-861)
- 2 = Omnidirectional Yellow (L-861)
- 3 = Bidirectional White/Yellow (L-861)
- 4 = Bidirectional White/Red (L-861)
- 5 = Bidirectional Yellow/Red (L-861)
- 7 = Bidirectional Red/Green (L-861E)
- 8 = Bidirectional Red/Red (L-861E)
- 9 = Unidirectional Green/Obscure (L-861E)

### Fixture Height

- 1 = 14-inch OAH with 1.5-inch coupling, 12 TPI
- 2 = 24-inch OAH with 1.5-inch coupling, 12 TPI
- 3 = 30-inch OAH with 1.5-inch coupling, 12 TPI
- 4 = 14-inch OAH with 2-inch coupling, 11.5 TPI
- 5 = 24-inch OAH with 2-inch coupling, 11.5 TPI
- 6 = 30-inch OAH with 2-inch coupling, 11.5 TPI
- 7 = 14-inch OAH with 2-inch coupling, 11 TPI<sup>2</sup>
- 8 = 24-inch OAH with 2-inch coupling, 11 TPI<sup>2</sup>
- 9 = 30-inch OAH with 2-inch coupling, 11 TPI<sup>2</sup>
- A = 14-inch OAH without coupling<sup>1,3</sup>

### Power

- 1 = Current Driven, 60Hz
- 2 = Current Driven, 50Hz

### Arctic Option

- 0 = Without arctic option
- 1 = With arctic option

### Notes

Contact the ADB Sales Department for green/yellow applications

<sup>1</sup> Not submitted for ETL testing

<sup>2</sup> Normally used in metric applications

<sup>3</sup> Configuration sold with no column and no coupling

**L-861/E Leveling Device ————— 44A7061**

## Features (Continued)

- LED module is an integral component of above-ground fixture, so electronics are not subject to water or deicing agents and abuse present in L-867 base cans
- Operates on either 3- or 5-step ferroresonant or thyristor CCRs that are designed in compliance with FAA requirements

Elevated Lighting

**Features (Continued)**

- LED module is an integral component of above-ground fixture, so electronics are not subject to water or deicing agents and abuse present in L-867 base cans
- Operates on either 3- or 5-step ferroresonant or thyristor CCRs that are designed in compliance with FAA requirements
- Very low power rating for LED lights contributes to a lower life cycle cost. Limits cost for supporting equipment such as isolation transformers and CCRs to strict minimum.
- When quartz-incandescent fixtures are replaced with LED fixtures, airport staff can add more lights without increasing CCR size
- Offers longer intervals between maintenance and requires fewer spare parts, resulting in lower life cycle costs
- “Smart electronics” control current to LED, so light output matches existing incandescent fixtures at all brightness levels without sacrificing any light characteristics. Actual light output is determined based on a continuous light output curve. Therefore, light output truly represents input current, even if series circuit input current is not within FAA specification limits. Allows for a low cost and progressive evolution of the airfield lighting toward new LED-based technology.
- Direct replacement for existing fixture using existing frangible coupling and base plate, reducing installation time
- Designed to exceed lightning protection requirements of ANSI/IEEE C62.41-1991 Category C1 given in FAA Eng. Brief 67
- Use of LED light source eliminates filter replacement and color shifts when viewed at various angles or CCR step settings
- Three screws allow a 4° leveling adjustment of the fixture after installation
- Fixture comes standard with a 1.5-inch coupling, but is available with a 2-inch coupling and in alternative thread patterns
- Fixture uses aluminum casting, stainless steel hardware, and is protected with aviation yellow powder coat finish

**Operating Conditions**

Temperature: -40°F to +131°F (-40°C to +55°C)

Wind: Withstands wind velocities up to 350 mph (560 kph)

**Electrical Supply, Current Driven**

6.6A through an L-830-1 (for 60Hz) or L-831-1 (for 50Hz) isolation transformer. EMIL LED lights have been designed to work with any FAA-compliant transformer up to 30/45W without affecting performance or lifetime of the light or the transformer. See catalog sheet 1215 for more details on recommended isolation transformers specified below.

	<b>Fixture Load</b>	<b>Isolation Transfmr.</b>	<b>Isol. XF Load</b>	<b>CCR Load</b>
<b>EMIL L-861</b>				
W/out heater	19.6VA	20/25W	7.6VA	27.2VA
With heater	42VA	30/45W	12VA	54VA
<b>EMIL L-861E - Bidirectional</b>				
W/out heater	11.8VA	10/15W	6.2VA	18VA
With heater	33VA	30/45W	14VA	47VA
<b>EMIL L-861E - Unidirectional</b>				
W/out heater	9.9VA	10/15W	6.1VA	16VA
With heater	31VA	30/45W	14VA	45VA

## Packaging

Assembled Fixtures	Dimensions of Cartons		Indiv. Weight
	Individual	9 Per Box	
14-inch OAH	6.5 x 6.5 x 20.5 in 17 x 17 x 52 cm	19.5 x 19.5 x 20.5 in 50 x 50 x 52 cm	5 lb 2.3 kg
24-inch OAH	6.5 x 6.5 x 31 in 17 x 17 x 79 cm	19.5 x 19.5 x 31 in 50 x 50 x 79 cm	6.25 lb 2.8 kg
30-inch OAH	6.5 x 6.5 x 37 in 17 x 17 x 94 cm	19.5 x 19.5 x 37 in 50 x 50 x 94 cm	7 lb 3.2 kg

## Spare Components

Description	Part No.
Column for 14" OAH	62A0007-7
Column for 20" OAH	62A0007-13
Column for 24" OAH	62A0007-17
Column for 30" OAH	62A0007-23
Cord set assembly for 14" OAH	44A7028-14
Cord set assembly for 20" OAH	44A7028-20
Cord set assembly for 24" OAH	44A7028-24
Cord set assembly for 30" OAH	44A7028-30
Frangible coupling, 1.5 inch, 14" OAH	62B0073
Frangible reducer coupling, 2-1 inch, 11.5 TPI, 14" OAH	61A0281
Frangible reducer coupling, 2-1 inch, 11 TPI, 14" OAH	61A0350
Frangible coupling, 1.5 inch, 24" and 30" OAH	60A4247-1
Frangible reducer coupling, 2-1 inch, 11.5 TPI, 24" and 30" OAH	60A4247-2
Frangible reducer coupling, 2-1 inch, 11 TPI, 24" and 30" OAH	60A4247-3
Gasket, lens protection	4071.76.060
LED optical ass'y, white/white, w/out arctic kit	44A6980-100
LED optical ass'y, white/white, with arctic kit	44A6980-110
LED optical ass'y, yellow/yellow, w/out arctic kit	44A6980-200
LED optical ass'y, yellow/yellow, with arctic kit	44A6980-210
LED optical ass'y, white/yellow, w/out arctic kit	44A6980-300
LED optical ass'y, white/yellow, with arctic kit	44A6980-310
LED optical ass'y, white/red, w/out arctic kit	44A6980-400
LED optical ass'y, white/red, with arctic kit	44A6980-410
LED optical ass'y, yellow/red, w/out arctic kit	44A6980-500
LED optical ass'y, yellow/red, with arctic kit	44A6980-510
LED optical ass'y, red/green, w/out arctic kit	44A6980-700
LED optical ass'y, red/green, with arctic kit	44A6980-710
LED optical ass'y, red/red, w/out arctic kit	44A6980-800
LED optical ass'y, red/red, with arctic kit	44A6980-810
LED optical ass'y, green/obscure, w/out arctic kit	44A6980-900
LED optical ass'y, green/obscure, with arctic kit	44A6980-910
Lens, white (L-861)	63A1128-00
Lens, yellow (L-861)	63A1128-11
Lens, white/yellow (L-861)	63A1128-01
Lens, white/red (L-861)	63A1128-02
Lens, yellow/red (L-861)	63A1128-12
Lens, red/green (L-861E)	63A0148-23
Lens, red/red (L-861E)	63A0149-22
Lens, green/obscure (L-861E)	63A0150-39
Light engine without arctic kit, L-861	44A6950-100
Light engine with arctic kit, L-861	44A6950-110
Light engine without arctic kit, L-861E red/green	44A6950-200
Light engine with arctic kit, L-861E red/green	44A6950-210
Light engine without arctic kit, L-861E green/obscure	44A6950-300
Light engine with arctic kit, L-861E green/obscure	44A6950-310
Light engine without arctic kit, L-861E red/red	44A6950-400
Light engine with arctic kit, L-861E red/red	44A6950-410
Seal, lens	4071.76.041
Seal, top to bottom cover	63A1137

ADB Airfield Solutions, LLC  
977 Gahanna Parkway  
Columbus, OH 43230 USA

Tel: +1 614-861-1304  
Fax: +1 614-864-2069  
www.adb-airfieldsolutions.com

ADB Airfield Solutions  
Leuvensesteenweg 585  
B-1930 Zaventem  
Belgium

Tel: +32 (2) 722.17.11  
Fax: +32 (2) 722.17.64

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