

# RUNWAY LIGHTING

## TDZL-L

### LED Runway Touchdown Zone Light STYLE 3, HIGH-INTENSITY



#### Compliance with Standards

- FAA:** L-850B(L) AC 150/5345-46 (Current Edition) and the FAA Engineering Brief No. 67. ETL Certified.
- ICAO:** Annex 14, Vol. 1, par. 5.3.13 and Appendix 2, Figure A2-5.
- T/C:** Transport Canada TP 312 par. 5.3.14.
- CE:** Complies with the requirements of the EMC Directive 2004/108/EC.

#### Uses

##### FAA L-850B(L) ICAO & T/C

- Touchdown zone lighting on category II and III runways

#### Features

- Average LED life of 56,000 hours under high-intensity conditions and more than 150,000 hours under typical operating conditions, which significantly reduces ongoing maintenance costs and periodic re-lamping expenses, resulting in lower life cycle cost
- Use of LED light source eliminates color shifts at lower CCR step settings
- FAA Style 3—Low protrusion above ground of  $\leq 0.25$  inch reduces vibrations caused by aircraft landing gear in both the light fixture and the landing gear, increasing lamp life
- Can be installed on existing 6.6 A or 20 A series circuits with no modifications to existing CCR or isolation transformer
- Operates on either 3- or 5-step ferroresonant or thyristor CCRs that are designed in compliance with IEC or FAA requirements
- Very low power rating for LED lights contributes to a lower life cycle cost. Limits cost for supporting equipment, such as CCRs, to strict minimum.
- When quartz-incandescent fixtures are replaced with LED fixtures, airport staff can add more lights without increasing CCR size
- Smart electronics control current to LED, so light output matches existing incandescent fixtures.
- Smart electronics allow for a low cost and progressive evolution of the airfield lighting toward new LED-based technology.
- LED photometric performance will be maintained longer due to a cleaner lens. Lower lens temperature prevents the “baking effect” that causes contaminants to stick to the lens surface.

- Rugged lightning protection complies with ANSI/IEEE C62.41-1991 Location Category C2 given in FAA Eng. Brief 67. Category C2 is defined as a  $1.2/50\mu\text{s} - 8/20\mu\text{s}$  combination wave, with a peak voltage of 10,000 V and a peak current of 5,000 A.
- Light channel in front of prism windows protects prisms from damage and prevents rubber buildup thereby maintaining optimal light output
- Includes a UL 467 rated ground lug, which accepts an AWG 6 earth ground wire
- Environment-friendly, precision-cast aluminum alloy cover, optical support, and inner cover assembly with stainless steel hardware

#### Operating Conditions

- Temperature: -40 °C to +55 °C (-40 °F to +131 °F)  
Altitude: Sea level to 10,000 feet (3000 m)  
Relative Humidity: Up to 100%

#### Electrical Supply

It is recommended that the L-850B(L) LED fixture be powered from a dedicated CCR and that separate remote controls are available. TDZL LED lights have been designed to work with any IEC- or FAA-compliant transformer up to 100 W without affecting the performance or lifetime of the light fixture or transformer. See data sheet 3033 for more details on recommended isolation transformers specified below.

L-850B(L)	Fixture Load	Isolation Transformer	Isol. XF Load	CCR Load
W/out heater	15 VA	20/25 W	6 VA	21 VA
W/out heater	15 VA	30/45 W	9 VA	24 VA
With heater	30 VA	30/45 W	6 VA	36 VA

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### Ordering Code

- Light Beam**  
 1 = Straight  
 2 = Toe-in Right  
 3 = Toe-in Left

- Monitoring**  
 1 = No monitoring

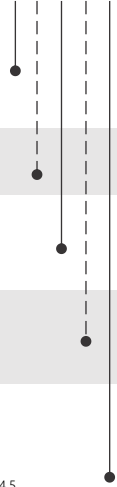
- Frequency**  
 1 = 60 Hz  
 2 = 50 Hz<sup>1</sup>

- Arctic Option**  
 1 = No<sup>1</sup>  
 2 = Yes

- Specification**  
 0 = FAA Configuration 1<sup>2</sup>  
 2 = ICAO Configuration 2<sup>3</sup>  
 3 = FAA with heavy-duty abrasion-resistant lens coating<sup>4,5</sup>  
 4 = ICAO with heavy-duty abrasion-resistant lens coating<sup>4,5</sup>

- Notes**  
<sup>1</sup> L-850B(L) LED 50 Hz without heater carries the CE Mark  
<sup>2</sup> Comes with smaller bottom cover and standard 2-pin FAA L-823 connector  
<sup>3</sup> Comes with intermediate size bottom cover and 2-pin FAA L-823 connector. Cord set can be easily replaced without opening fixture.  
<sup>4</sup> Typically used for intensive winter service where sand is applied to runways and rotating brushes are used.  
<sup>5</sup> Not ETL Certified.

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### Packaging

In cardboard box:	7 × 13 × 13 in (17.8 × 33 × 33 cm)
Weight with packing:	16.5 lb (7.48 kg)
Weight without packing:	13.25 lb (6 kg)

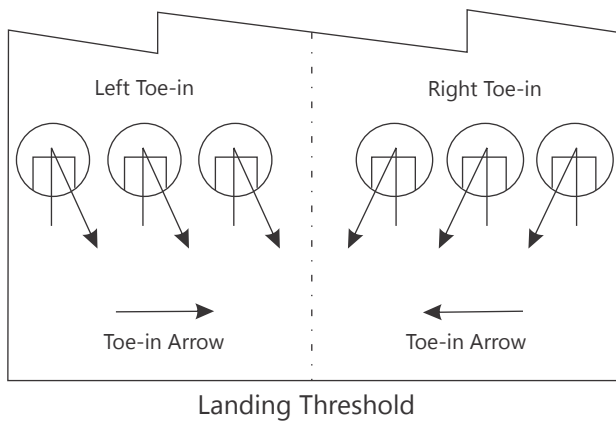
### Dimensions: FAA / ICAO - Configuration 1

Outside diameter:	11.94 in (30.33 cm)
Bolt-circle diameter (L-868B):	11.25 in (28.58 cm)
Max. Bottom Cover O.D.:	6.25 in (15.88 cm)
Bottom Cover Depth:	3.88 in (9.9 cm)

### Dimensions: ICAO - Configuration 2

Outside Diameter:	11.94 in (30.33 cm)
Bolt Circle Diameter (L-868B):	11.25 in (28.58 cm)
Max. Bottom Cover O.D.:	- 9.94 in (25.20 cm) <i>down to depth of 1.63 in (4.14 cm)</i> - 8.69 in (22.07 cm) <i>from depth of 1.63 in (4.14 cm) to 3.88 in (9.86 cm)</i>
Bottom Cover Depth:	3.88 in (9.9 cm)

### Touchdown Zone Toe-in Coding



### FAA Photometric Data

