RUNWAY LIGHTING

IREL-L

LED Runway Edge Light

ICAO 60M, HIGH-INTENSITY

Compliance with Standards

ICAO: Runway Edge: Annex 14, Vol. I, par. 5.3.9.7 and 5.3.9.10; Fig. A2-10 for 60 m runways.

T/C: Runway Edge: Transport Canada TP 312 par. 5.3.10.11 and 5.3.10.14 and Appendix B, Fig. B.1.11 for 60 m runways.

Military: Runway Edge: Photometry complies with UFC 3-535-01 Fig. 4-2.B for runways 60 m (200 feet) or more wide.

Uses

ICAO, T/C & U.S. Military

- Runway edge on category I, II, and III runways
- Runway edge applications 60 m (200 feet) or more wide

Features

- Average LED life of 56,000 hours under high-intensity conditions and more than 150,000 hours under typical operating conditions, resulting in significant reduction or even elimination of ongoing maintenance costs and periodic re-lamping expenses
- For white runway edge applications, use of LED light source eliminates color shifts at lower CCR step settings. For red or yellow runway applications, use of LED light source eliminates filter replacement and color shifts when viewed at various angles or CCR step settings.
- Low protrusion above ground of ≤ 12 mm reduces vibrations caused by aircraft landing gear in both light fixture and 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
- LED photometric performance will be maintained longer due to a cleaner lens. The lower temperature of the lens prevents the ";baking effect" that causes contaminants to stick to the surface of the lens.
- Offers longer maintenance intervals and requires fewer spare parts, resulting in lower life cycle cost
- ";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.
- Low-temperature lights. Temperature rise at center of top cover remains below 320 °F (160 °C).
- Light channel in front of prism windows protects prisms from damage and prevents rubber buildup thereby maintaining optimal light output
- 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 1.2/50µS – 8/20 µS combination wave, with a peak voltage of 10,000 Volts and a peak current of 5,000 Amps
- Unique double-barrier cord set design eliminates risk for water incursion in case the cord set becomes damaged. Cord set can also be easily replaced without opening fixture.
- 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%

IREL-L

Ordering Code

IREL - X X X 0 X X X 1

LED Colors - Side 1
0 = Obscured
3 = White Left Toed
6 = Red Left Toed
9 = Yellow Left Toed

LED Colors - Side 2
0 = Obscured
2 = White Right Toed
5 = Red Right Toed
8 = Yellow Right Toed

Power
1 = 50 Hz
2 = 60 Hz

0

Number of Cord Sets
1 = One
2 = Two

Arctic Kit
1 = No
2 = Yes

Cord Set Style and Length
0 = Style 6 (2-pin), 18" long (FAA standard) [1]
1 = Style 1 SO Jacketed cable, 2-pin, 18" long (FAA standard) [1]
2 = Style 6 (2-pin), 10" long [2]
3 = Style 6 (3-pin), 10" long [2]
4 = German Style 1 (2-pin), 10" long [2]
5 = German Style 1 (3-pin) 10" long [2]
6 = French Style (3-pin), 10" long [2]

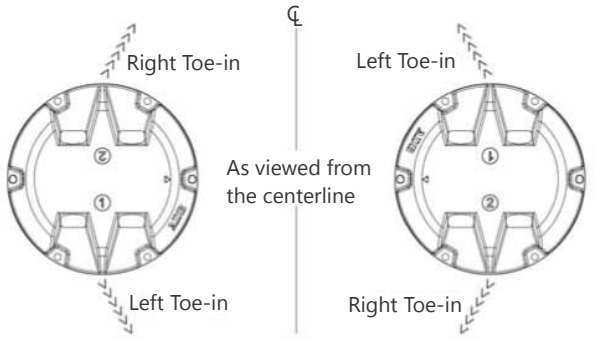
Type
1 = ICAO 60 m
4 = ICAO 60 m with heavy-duty abrasion-resistant lens coating [3,4]

Notes
1. Fixtures with 18" cord sets are for installation on deep base cans and therefore are not supplied with an external O-ring gasket.
2. Fixtures with 10" cord sets are for installation on shallow bases and are supplied with an external O-ring gasket.
3. Typically used for intensive winter service where sand is applied to runways and rotating brushes are used.
4. Not ETL Certified.

Optional Snow Plow Ring

Depending on installation method and snow plowing technique used, a snow plow ring may be necessary. Snow plow rings are available for either standard or stainless steel adjustable Size B L-868 cans. Contact the ADB SAFEGATE Sales Department for additional details.

Toe-in Coding



Triangle embossed on the top cover should point toward the centerline to ensure correct toe-in position.

Electrical Supply

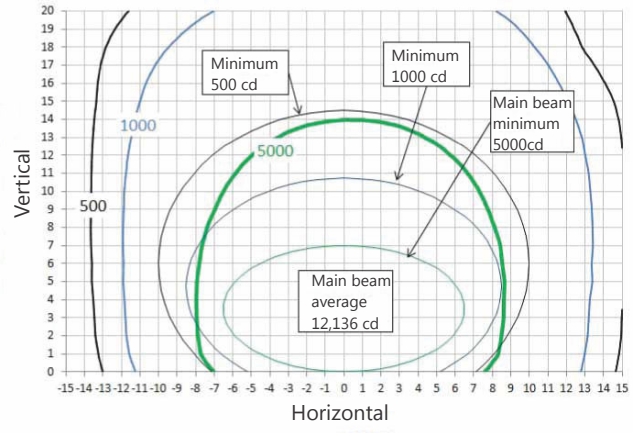
It is recommended that the IREL-L LED fixture be powered from a dedicated CCR and that separate remote controls are available. IREL-L lights have been designed to work with any IEC or FAA-compliant transformer up to 200 W without affecting the performance or lifetime of the light fixture or transformer.

IREL-L	Fixture Load	Isolation XF	Isol. XF Load	CCR Load
Without Heater				
Unidirectional	21 VA	30/45 W	8 VA	29 VA
Bidirectional [1]	36 VA	65 W	17 VA	53 VA
Bidirectional [2]	21 VA/side (42 VA total)	30/45 W per side	8 VA/XF	29 VA/side (58 VA total)
With Heater				
Unidirectional	49 VA	65 W	15 VA	64 VA
Bidirectional [1]	64 VA	65 W	13 VA	77 VA
Bidirectional [2]	49 VA/side (98 VA total)	65 W per side	15 VA per XF	64 VA /side (128 VA total)

Notes
1 One cord set
2 One cord set per side

IREL-L

Photometric Data: IREL-L 60 m White



Dimensions

Outside Diameter:	11.94 in (30.33 cm)
Bolt Circle Diameter (L-868B):	11.25 in (28.58 cm)
Max. Bottom Cover O.D.: - 9.92 in (25.20 cm) *down to depth of 1.63 in (4.14 cm)* - 8.69 in (22.07 cm) *from depth of 1.63 in (4.14 cm) to 3.88 in (9.86 cm)* Compatible with L-868B Top Sections where the overall height of the Top Section is less than 4 in (10.16 cm).	
Bottom Cover Depth:	3.88 in (9.9 cm)

Packaging

In cardboard box:	7 × 13 × 13 in (17.8 × 33 × 33 cm)
Weight with packing:	18.5 lb (8.4 kg)
Weight without packing:	15.5 lb (7 kg)