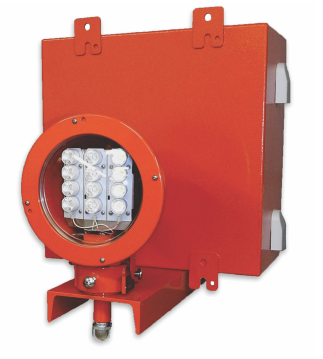
APPROACH LIGHTING

LED REIL

Runway End Identification Light



LED REIL - A/C/E

Compliance with Standards

FAA	L-849(L) Style A, C and E AC 150/5345-51 (Current Edition) and the FAA Engineering Brief No. 67. ETL Certified.
ICAO	Annex 14, Vol. 1, para. 5.3.8
T/C	Transport Canada TP 312, 5th Edition, Sec. 5.3.10

Uses

LED REIL provides a visual indication to pilots of the runway threshold during an approach.

Style A

- Unidirectional, high intensity, one brightness step

Style C

- Unidirectional, low intensity, one brightness step

Style E

- Unidirectional, three brightness steps

Features

- Long LED life
- Style A/C/E REIL all built with the same components. Configuration on the control board to change style.
- Improved safety – Very low voltage internal to LED REIL vs. 2000 VDC in traditional xenon flash lamp units
- Elimination of expensive xenon flash lamp replacement
- Elimination of ozone, generated by xenon flash lamps, an oxidant that degrades internal component life
- Provides significant energy savings of up to 90% compared to xenon flash lamp REILs
- Includes external alarm indication in case of system fault. System fault indication for:
  - Loss of input power
  - Minimum 25% LEDs failed
  - Number of misfires exceeded (switch selectable from 0-7)
- The current-powered LED REIL (powered by a constant current regulator or CCR) does not need a separate isolation transformer for current sensing applications
- Due to robust primary to secondary flasher unit trigger signal design, a shielded interconnection wire is not required. Use 16 AWG 600 V wire (supplied by contractor).
- Easier to install due to reduced size and weight
- Easier to service due to much simpler design
- NEMA 4 rated enclosure
- PAR-56 flash head may be installed separately on a 2-inch EMT with a maximum cable length of 100 feet from the control cabinet

Operating Conditions

Temperature	-40 °F to +131 °F (-40 °C to +55 °C)
Humidity	0 to 100% (including conditions where condensation takes place in the form of water or frost)
Altitude	0 to 10,000 ft (3,000 m)
Wind	Up to 150 knots
Exposure	Withstands windblown rain, sand, dust particles,and a salt-laden atmosphere

Optional Features

- On/Off Maintenance Switch Kit 94A0609 – Local switch for removing power to the LED REIL for field maintenance. Installed on the LED REIL enclosure. Available for current-driven only.
- Flange Mount 62B0107/3 – A single-leg enclosure is normally installed onto a threaded coupling, which is attached to the end of a conduit elbow. An optional 6.25-inch (15.88 cm) O.D. flange can be bolted over any conduit elbow flush with the top of the pad.
- Baffle Kit 94A0198-LED – If the standard +15° horizontal beam axis is operationally objectionable on the LED REIL, an optional baffle kit is available. If used, the LED REIL must be set at +3° vertical and +10° horizontal.

LED REIL

Ordering Code

REIL / X X X X X 0 X 2

Style
A = High-intensity, one brightness step
C = Low-intensity, one brightness step
E = Three brightness steps

Power
1 = Current-powered[1]
2 = Voltage-powered

Current Sensing Option[2]
0 = Without current sensing
1 = With current sensing

Flash Head Mounting
0 = Mounted with enclosure (as shown above)
1 = Separate remote mounting on a 2-inch EMT[3]

Enclosure Mounting
1 = One-leg mounting
2 = Two-leg mounting

0

Enclosure Type
1 = Steel (Painted Aviation Orange)
2 = Stainless Steel (Not ETL Certified)

2

Notes

1 A current-powered REIL (powered by a CCR) always has current sensing and cannot be ordered without the current sensing option.

2 The current sensing option provides ON/OFF control (Style A/C) or 3-step intensity control (Style E) of the REIL system depending on the current level in the series lighting circuit. The current-powered LED REIL doesn't require a separate isolation transformer. The input current from the isolation transformer that powers the primary cabinet is also used for current sensing control. The current sensing input of a voltage-powered LED REIL can be connected to 6.6 A or 20 A series with a 30/45 W isolation transformer 6.6/6.6 A (35C0077) or 20/6.6 A (35C0078). Use 16 AWG 600 V shielded cable supplied by contractor.

3 EMT and flash head cabling to be supplied by contractor. Use 16 AWG 600 V shielded cable. Cable length may be up to 100 ft (30.5 m) maximum.

Photometric Data

Style	High Intensity (cd)	Medium Intensity (cd)	Low Intensity (cd)
Style A	15,000	N/A	N/A
Style C	N/A	N/A	700
Style E	15,000	1,500	300

Note: Candelas above are within a beam pattern of 10° vertical by 30° horizontal for each flasher. Tolerance of 50% in effective intensity.

Packaging

Styles A/C/EWeight	
Weight	40 lb (18.1 kg) each assembly
Enclosure Dimensions (H x W x D)	16 x 16 x 9 in (40.6 x 40.6 x 22.9 cm)
Packaging Dimensions (H x W x D)	24 x 41 x 29 in (60.96 x 104.14 x 73.66 cm)

Note: Packaging is for information purposes only and is based on, one pallet containing one primary and one secondary cabinet in a box

Equipment Data

Control	Remote, local, or automatic (when current sensing used)
Flash Rate	120 flashes per minute. Both optical assemblies flash simultaneously with less than a 10-millisecond separation.
Light Beam	Adjustable vertically from 0° to 15° and horizontally 15° each side of the zero reference point. The horizontal scale is in 1° increments and the vertical scale is in 0.5° increments. Nominal setting is +10° vertical and +15° horizontal.
Light Source Locking	A positive locking device prevents accidental movement of LED light assembly after aiming
Mounting	Each LED REIL cabinet with frangible coupling (supplied) can be mounted on a concrete pad with a 2-inch NPT pipe or with an optional floor flange
Enclosure	The cabinets can be padlocked and include an interlock switch to disconnect input power when the cabinet door is open

Power Supply

The LED REIL system operates from a 240 VAC (2-wire) or 120/240 VAC (3-wire), ±10%, 50/60 Hz power supply. The system can also operate from a series lighting circuit using a 6.6/6.6 A or 20/6.6 A isolation transformer at each unit.

Power Requirements			
Style	**Each Unit**	**Transformer Size**	**Total**
Voltage-powered LED REIL			
A/E	36 VA Average, 119 VA Peak	NA	72 VA Average, 238 VA Peak
C	19 VA Average, 35 VA Peak	NA	38 VA Average, 70 VA Peak
Current-powered LED REIL [1]			
A/E	73 VA Average, 161 VA Peak	100 W	146 VA Average, 322 VA Peak [2]
C	48 VA Average, 53 VA Peak	30/45 W	96 VA Average, 106 VA Peak [2]

Notes

[1] As powered by ferroresonant CCR

[2] This is total CCR load and includes isolation transformer losses