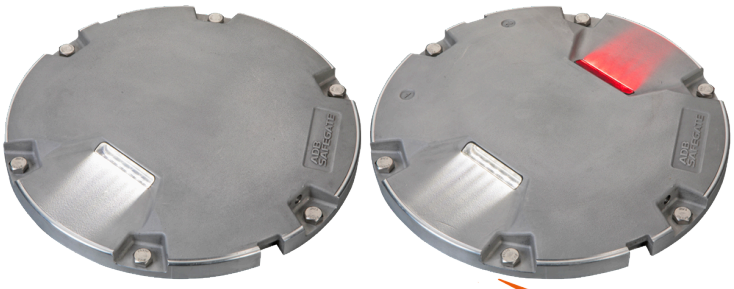
AXON

LED L-850A(L) Runway Centerline and L-850B(L) Touchdown Zone — ICAO and FAA

Uni and Bidirectional Inset, 8-inch and 12-inch



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Compliance with Standards

FAA	AC 150/5345-46 and FAA Engineering Brief No. 67
ICAO	Annex 14, Volume 1
IEC	61827
NATO	STANAG 3316
EASA	CS-ADR-DSN
STAC	SPE/STAC/SE/E/VIS/6008
UK	CAP 168
UFC	3-535-01
Canada	TP 312
Australia	MOS 139

CE

Uses

ICAO

- Runway centerline
- Touchdown zone

FAA

- L-850A(L) runway centerline
- L-850B(L) touchdown zone

Features and Benefits

Efficiency

- EQ has an integrated ILCMS remote for use with the LINC 360 system providing high data capacity and resisting degradation from various types of radio effects to provide a superior communication platform
- Precision aimed optics enhancing photometric performance and complementing extended LED life
- Reduced bottom pan profile allowing for very shallow base can installation
- LED pulse width modulated (PWM) at 400 Hz optimizing LED performance and eliminating perceptible flicker to a moving human observer throughout the range of brightness steps
- Operates at all steps of constant current regulator technologies designed in compliance with IEC or FAA requirements
- Fully dimmable lights, conforming to the dimming curve of traditional halogen lights
- Low protrusion, high-intensity, Style 3 (≤ 6.35 mm) inset light fixtures
- No negative slope in front of the prisms

Sustainability

- Fully encapsulated all-in-one universal power supplies for Runway, Taxiway, Approach and Omni inset families
- Latest generation LEDs providing a long-lasting light source with high efficiency and low power consumption
- Reinforced top cover substantially exceeding standards to improve durability and longevity (directional beams only)
- One single family of fixtures covering all runway, taxiway and approach applications
- IP68 rated enclosure designed for harsh environments; all fastenings are stainless steel
- Reinforced prism available as an option
- Compatible with existing infrastructure allowing for direct replacement of existing LED inset fixtures

Safety

- Improved mechanical design to strengthen and consolidate components, improving the customer maintenance experience
- Fail-open option for compatibility with legacy monitoring systems and optimization of advanced control and monitoring systems
- Failed LED detection as required by Engineering Brief 67D
- Robust lightning protection complying with ANSI/IEEE C62.41-1991; Location Category C2 as required by FAA Engineering Brief 67 Category C2 is defined as a 1.2/50 µS – 8/20 µS combination wave, with a peak voltage of 10,000 V and a peak current of 5,000 A

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Ordering Code

	Application	Standard(s)	Market Specific	Dimensions	Prism	Beam Orientation	Toe-in	Color - Side 1 (Left)	Color - Side 2 (Right)	Power and Monitoring	Connector and Cable6	Options	Version
RS													

Application
RC = Runway Centerline, L-850A(L)
RZ = Touchdown Zone, L-850B(L)

Standard(s)
1 = FAA / ICAO[1]

Market Specific
0 = None
1 = Buy American Preference (BAP)[2,3]
2 = Anodized Finish
4 = German MIL 7-step FO[9]

Dimensions
1 = 8-inch (203 mm) diameter, 2 bolt
2 = 12-inch (305 mm) diameter, 11.25-inch BC (285 mm)
3 = 8-inch (203 mm) diameter, 4 bolt

Prism
S = Standard prism
R = Reinforced prism[9]

Beam Orientation
1 = Unidirectional
2 = Bidirectional

Toe-in
L = Left Side Toe-in (Unidirectional - for RZ only)[4]
R = Right Side Toe-in (Unidirectional - for RZ only)[4]
N = None[4]

Color - Side 1 (Left)
W = White
R = Red

Color - Side 2 (Right)
W = White
R = Red
N = None (Unidirectional only)

Power and Monitoring
S = 2.8 - 6.6 A, Non-Monitored — Power Only
M = 2.8 - 6.6 A, Fail-Open Monitoring[9]
R = 2.8 - 6.6 A, EQ Integrated LINC 360[5]

Connector and Cable[6]
1 = 1 x Style 6 2-Pole Plug, 2 Individual Wires[9]
2 = 1 x Style 1 2-Pole Plug, Jacketed SO 2 Core Cable[8]
3 = 2 x Style 6 2-Pole Plug, 2 Individual Wires[7,9]
4 = 2 x Style 1 2-Pole Plug, Jacketed SO 2 Core Cable[7,8]
5 = 1 x Flat 3-Pole Plug, 3 Individual Wires[9]
6 = 2 x Flat 3-Pole Plug, 3 Individual Wires[9]

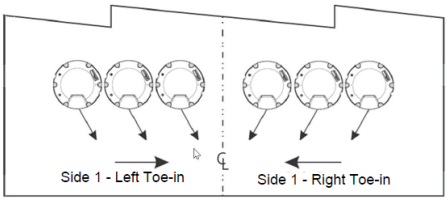
Options
0 = None
1 = Arctic Kit

Version
1 = Version 1

Ordering Code Notes

1. Includes standards NATO, EASA, STAC, CAP 168, TP 312 and MOS 139.
2. Required for FAA when funded by AIP.
3. If a 2-cord set fixture is required meeting BAP, Digit 13, "power and monitoring", must be M.
4. L and R designations are always in relationship to side 1 only.
5. EQ light fixtures are only available as a one connector option.
6. All Style 1 corded fixtures will include a ground lug. All Style 6 or 3-pole corded fixtures will be provided with grounding screw(s).
7. Only available in digit 13 options S and M and bi-directional configuration.
8. SO cord set option is not compatible with shallow bases. If required please contact ADB Safegate.
9. Not ETL submitted or not applicable to FAA market.

Toe-in Coding RZ



Runway Touchdown Zone

Power Supply Options

- Non-monitored — power only
- Monitored — integrated fail-open technology
- EQ with integrated ILCMS with OFDM technology for use with LINC 360 system

Installation and Maintenance

The light fixture can be installed in a 12-inch or an 8-inch base. Gaskets are sold separately. Refer to the user manual INTEROPERABILITY appendix to identify the correct gasket and bolts for your specific base and ensure a reliable fit.

Operating Conditions

Operating temperature	-55 °C to +55 °C / -67 °F to +131 °F
Storage temperature	-60 °C to +80 °C / -76 °F to +176 °F
Humidity	Up to 100%

Dimensions and Weight

Dimensions	203 mm (8 in)	304 mm (12 in)
Weight	3 kg / 6.6 lb (8 in)	6.8 kg / 15 lb (12 in)

ANNEX

8-inch and 12-inch light fixtures without arctic kit (heater)

Fixture type – 1 cord set[1]	**Fixture load**	**Isolation transformer**		**CCR load**
		Wattage	**Load**	
Runway centerline, L-850A(L), bidirectional	30 VA	45 W	14.2 VA	44.2 VA
Touchdown zone, L-850B(L), unidirectional	20 VA	25 W	7.2 VA	27.2 VA

8-inch and 12-inch light fixtures with arctic kit (heater)

Fixture Types – 1 cord set[1]	**Fixture load**	**Isolation transformer**		**CCR load**
		Wattage	**Load**	
Runway centerline, L-850A(L), bidirectional	62.6 VA	65 W	16.6 VA	79.2 VA
Touchdown zone, L-850B(L), unidirectional	48.8 VA	45 W	9.7 VA	58.5 VA

[1]Values provided are for the "S" option non-monitored power only.

Note:

- EQ fixtures:
  - The isolation transformer must have an additional 8 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 8 VA coverage
  - Legacy BRITE II or AGLAS 2 systems — Order "M" power supply
- Fail-open fixtures:
  - The maximum rating for the isolation transformer is 150 W (a correctly calibrated CCR is important to achieve an accurate fail open response)
- Additional voltage loss not included in the above table which must be factored into the circuit load calculation:
  - Primary cables will result in a higher CCR load
  - Longer secondary cables may result in a larger size isolation transformer requirement
- Efficiency of the isolation transformer depends on the manufacturer of the transformer
- See user manual for cable loss formula and other power supplies

For more information about the product, including manuals and certifications, please see our Product Center on the ADB SAFEGATE website: www.adbsafegate.com.