

RELIANCE

LED Runway Threshold/End and End,
L-850D(L)

Uni- or bidirectional inset 12-inch



Compliance with Standards (current Version)

FAA	AC 150/5345-46 and the FAA Engineering Brief No. 67
ICAO	Annex 14, Volume 1
IEC	61827
NATO	STANAG 3316
EASA	CS-ADR-DSN
STAC	PRO/STAC/SE/ENIS/600S
Canada	TP 312
Australia	MOS 139
CE	

Uses

ICAO

- Runway threshold/end
- Runway end

FAA

- Runway threshold/end (bidirectional green and red) L-850D(L)
- Runway end L-850D(L)

Features and Benefits

Efficiency

- Available in two versions:
 - RELIANCE™ IQ with integrated intelligence
 - RELIANCE with integrated fail-open (Mon) technology. Fuse resistors are part of the Mon-functionality and spares needs to be ordered separately.
- Light Emitting Diode (LED) technology that offers a long-lasting light source with low power consumption
- Compatibility between RELIANCE IQ version and RELIANCE Intelligent Lighting 2A system for further power savings and ILCMS
- No visual flicker. PWM is used for some applications to optimize the LED performance and light fixtures show no visual flickering.

Sustainability

- Fully encapsulated all-in-one electronics
- IP68 protected, anodized aluminum housing designed for harsh weather environments, all fastenings in stainless steel
- Reinforced prism available as an option
- Operates on 3- or 5-step ferroresonant or thyristor CCRs designed in compliance with IEC or FAA requirements
- Easy handling and maintenance by modular design with few mechanical parts
- Compatible with existing infrastructure

Safety

- Built-in voltage surge and lightning protection
- Fully dimmable lights, respecting the response curve of traditional halogen lights
- Low protrusion, high-intensity, Style 3 inset light fixtures
- No negative slope in front of the prisms

Accessories

Refer to the user manual for 12-inch RELIANCE inset lights.

Power Supply

An integrated, encapsulated 6.6A electronic converter. Two-pole L-823 plug for connection to the transformer. Power factor typically >0.95 at 6.6A.

Note: Refer to the user manual for 12-inch RELIANCE inset lights and the complete power table and cable loss formula.

Maintenance and Installation

The light fixture can be installed in a 12-inch base. Gaskets are sold separately. Check what gasket and bolts to order depending on base and installation.

Note: Refer to the user manual for 12-inch RELIANCE lights and the interoperability information for installation in a specific base.

RELIANCE

Operating Conditions

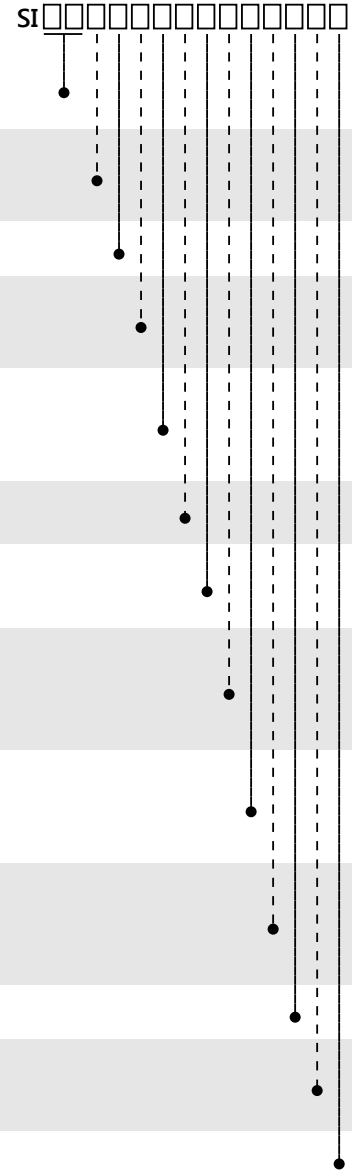
Operating temperature	-60 °C to +55 °C / -76 °F to +131 °F
Storage temperature	-60 °C to +80 °C / -76 °F to +176 °F
Humidity	Up to 100%

Dimensions and Weight

Dimensions	304 mm / 12-in
Runway threshold / end ICAO	5.3 kg / 11.8 lb
Runway end, Runway threshold / end FAA, L-850D(L)	6.3 kg / 13.9 lb

Ordering Code

- Application**
 RT = Runway threshold end
 RN = Runway end
- Prism**
 S = Standard prism
 R = Sapphire prism (reinforced)
- Diameter**
 2 = 12 in
- Type**
 B = Bidirectional
 U = Unidirectional
- Toe-in**
 S = Straight
 L = Left
 R = Right
- Options**
 0 = No options
- Color — B-side**
 R = Red
 F = F-Green
- Color — A-side**
 R = Red
 F = F-Green
 N = None
- Power and Monitoring**
 M = 6.6 A, with monitoring
 P = IQ disabled (IQ0)
 Q = IQ enabled (IQ1)
- Standards**
 G = Global (RN)
 I = ICAO (RT)
 F = FAA (RT)
- Cord Set Style**
 A = FAA Style 6 (2 -pin) plug
- Cable and Connector**
 2 = one (2 - pin-) plug
 3 = two (2 - pin-) plugs
- Version**
 3 = Third version



Note:

- Fixture supports: Compatible with both shallow and deep 12 - inch bases.
- Toe - in options only affect the green threshold side. 2 The IQ functionality allows control and monitoring of the RELIANCE IQ. IQ1 fixtures are pre - configured for the specific position at delivery. This function is disabled in IQ0 fixtures but could be enabled later. IQ light fixtures are only available as one connector option in an ILCMS.

ANNEX

Fixture type – 1 cord set	Fixture load	Isolation transformer			CCR load
		Rating	Loss	Efficiency	
Approach white	64 VA	65 W	11 VA	0.85	75 VA
Approach red	42 VA	45 W	8 VA	0.85	50 VA
Runway centerline, L-850A(L),white/white	23 VA	25 W	10 VA	0.7	33 VA
Runway centerline, L-850A(L), white/red	18 VA	25 W	8 VA	0.7	26 VA
Runway touchdown zone, L-850B(L)	15 VA	25 W	6 VA	0.7	21 VA
Runway RETIL ¹	12 VA	-	-	-	-
Runway edge, L-850C(L)	53 VA ²	65 W	9 VA	0.85	62 VA
Displaced threshold, L-850C(L)	40 VA	45 W	7 VA	0.85	47 VA
Runway threshold/end, L-850D(L)	30 VA	45 W	5 VA	0.85	35 VA
Runway threshold/end, ICAO	60 VA	65 W	11 VA	0.85	71 VA
Runway threshold, L-850D(L)	21 VA	25 W	9 VA	0.7	30 VA
Runway threshold, ICAO	51 VA	65 W	9 VA	0.85	60 VA
Runway threshold wingbar, ICAO	52 VA	65 W	9 VA	0.85	61 VA
Runway end, L-850D(L), red	18 VA	25 W	8 VA	0.7	26 VA
Runway end, L-850D(L), red/red	27 VA	45 W	5 VA	0.85	32 VA
Runway status, takeoff, intersection L-850T(L)	15 VA	25 W	6 VA	0.7	21 VA
Stopway ICAO	22 VA	25 W	10 VA	0.7	32 VA
Taxiway centerline narrow, L-852C(L)	12 VA ²	25 W	5 VA	0.7	17 VA
Taxiway centerline curved, L-852K(L)	14 VA ²	25 W	6 VA	0.7	20 VA
Taxiway centerline wide	14 VA ²	25 W	6 VA	0.7	20 VA
Taxiway centerline lead-in, L-852D(L)	15 VA ²	25 W	6 VA	0.7	21 VA
Runway guard light, L-852G(-L)	21 VA	25 W	9 VA	0.7	30 VA
Stopbar ICAO	14 VA ²	25 W	6 VA	0.7	20 VA
Stopbar L-852S(L)	16 VA	25 W	7 VA	0.7	23 VA

Notes

¹ System requirements to be considered

² Depending on color and if it is a bi- or unidirectional fixture

Fixture type – 2 cord set	Fixture load	Isolation transformer			CCR load
		Rating	Loss	Efficiency	
Runway centerline, L-850A(L), white/white	12 + 12 VA	2 × 25 W	2 × 5 VA	0.7	2 × 17 VA
Runway centerline, L-850A(L), white/red	12 + 6 VA	2 × 25 W	5 + 3 VA	0.7	17 + 9 VA
Runway edge, L-850C(L), white/white	27 + 27 VA	2 × 45 W	2 × 5 VA	0.85	2 × 32 VA
Runway edge, L-850C(L), white/yellow	27 + 22 VA	2 × 45 W	5 + 4 VA	0.85	32 + 26 VA
Runway edge, L-850C(L), white/red	27 + 13 VA	2 × 45 W	5 + 2 VA	0.85	32 + 15 VA
Runway edge, L-850C(L), red/yellow	13 + 22 VA	2 × 25 W	2 + 4 VA	0.85	15 + 26 VA
Displaced threshold, L-850C(L)	19 + 22 VA	2 × 25 W	8 + 9 VA	0.7	27 + 31 VA
Runway threshold/end, L-850D(L)	17 + 14 VA	2 × 25 W	7 + 6 VA	0.7	24 + 20 VA
Runway threshold/end, ICAO	47 + 14 VA	65 + 25 W	8 + 6 VA	0.85 + 0.7	55 + 20 VA
Runway end, L-850D(L), red/red	14 + 14 VA	2 × 25 W	2 × 6 VA	0.7	2 × 20 VA
Taxiway centerline narrow, L-852C(L)	7 + 7 VA	2 × 25 W	2 × 3 VA	0.7	2 × 10 VA
Taxiway centerline curved, L-852K(L)	8 + 8 VA	2 × 25 W	2 × 3 VA	0.7	2 × 11 VA
Taxiway centerline wide	9 + 9 VA	2 × 25 W	2 × 4 VA	0.7	2 × 13 VA
Taxiway centerline, lead-in, L-852D(L)	9 + 9 VA	2 × 25 W	2 × 4 VA	0.7	2 × 13 VA

Note:

- For IQ fixtures:
 - The minimum dimension for the isolation transformer is 65 W
 - The isolation transformer must have an extra 12 VA available on top of the load for communication bandwidth
- For fail-open fixtures:
 - The maximum dimension for the isolation transformer is 200 W
- For a 2A power system, refer to the 2A power system description for further explanation:
 - The 2A power system requires the isolation transformer to be 3.3 times the rating for an IQ-fixture on a 6.6A constant current power system with a minimum of 200 W
 - The regulator load is correct as indicated in the table, but the size of the regulator must be 3.3 times the load that is needed
- Extra losses in secondary cables or due to extra equipment (e.g. ILCMS remotes) are not included in above table; these extra losses will result in a higher required size of isolation transformers
- Extra losses in primary cables are not included in above table; these extra losses will result in a higher required CCR load
- Efficiency of the secondary transformer depends on the supplier of secondary transformers

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