

RELIANCE

LED Taxiway Centerline, Lead-on/Exit,
Apron Lead-in, L-852C(L), L-852D(L),
L-852K(L)

Uni- and bidirectional inset 8-inch and
12-inch



Compliance with Standards (current edition)

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

Uses

ICAO

- Taxiway centerline
- Lead-on/exit taxiway
- Intermediate holding position
- Aircraft stand maneuvering guidance

FAA

- Taxiway centerline L-852C(L), L-852D(L), L-852K(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 8-inch and 12-inch RELIANCE inset lights.

Power Supply

An integrated, encapsulated 6.6 A electronic converter. Two-pole L-823 plug for connection to the transformer. Length of cable 18 inch. No additional electrical components between light fixtures and transformer needed. Power factor typically >0.9 @ 6.6 A.

Refer to the appendix in the user manual for 8-inch and 12-inch RELIANCE inset lights and the complete power table and cable loss formula.

Maintenance and Installation

The light fixture can be installed in an 8-inch or 12-inch base. Gaskets are sold separately. Check what gasket and bolts to order depending on base and installation.

Refer to the appendix in the user manual for 8-inch and 12-inch RELIANCE inset lights and the complete power table and cable loss formula.

RELIANCE

Dimension and Weight

Dimension	203 mm / 8-in	304 mm / 12-in
Weight	2.7 kg / 6.0 lb	6.3 kg / 13.9 lb

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

Ordering Code

SI TC XXXX0XXXXAX3

Application

TC = Taxiway centerline

Prism

S = Standard prism
R = Sapphire prism (reinforced)

Diameter

1 = 8-in
2 = 12-in

Type

B = Bidirectional
U = Unidirectional

Light Distribution

C = Curved (bidirectional)
L = Curved Left
R = Curved Right
W = Wide (ICAO)
N = Narrow
D = Extra Wide (L-852D(L))

Options

0 = No options

Color – B Side

R = Red
Y = Yellow
B = Blue
F = F-green (standard green for ICAO & FAA)
G = G-green (MOS & ICAO)¹

Color – A Side

R = Red
Y = Yellow
B = Blue
F = F-green (standard green for ICAO & FAA)
G = G-green (MOS & ICAO)¹
N = None

Power & Monitoring

M = With monitoring
P = IQ Disabled (IQ0)²
Q = IQ Enabled (IQ1)²

Standards

G = Global
I = ICAO only

Cord Set Style

A = FAA Style 6 (2-pin) plug

Cable and Connector

2 = 1 plug (2-pin)
3 = 2 plugs (2-pin)

Version

3 = Third edition

Notes

- Fixture compatible with both shallow 8" and 12" and deep 12" bases, check base compatibility matrix.

¹ Used in SafeLED TC-I Gen1 (4-window version).

² The IQ-functionality allows control and monitoring of the RELIANCE IQ. IQ1 fittings 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 with connector option 2.

ANNEX – Power Table

8-inch light fixtures

Fixture type - 1 cordset	Fixture load	Isolation transformer			CCR load
		Size	Load	Efficiency	
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	15 W	6 VA	0.7	21 VA
Runway RETIL	12 VA	15 W	5 VA	0.7	17 VA
Taxiway centerline narrow, L-852C(L)	12 VA	15 W	5 VA	0.7	17 VA
Taxiway centerline curve, L-852K(L)	14 VA ¹	15 W	6 VA	0.7	20 VA
Taxiway centerline wide	14 VA ¹	15 W	6 VA	0.7	20 VA
Taxiway centerline/lead-in, L-852D(L)	15 VA ¹	15 W	6 VA	0.7	21 VA
Runway guard light, L-852G(L)	21 VA	25 W	9 VA	0.7	30 VA
Stop bar ICAO	14 VA ¹	15 W	6 VA	0.7	20 VA
Stop bar L852S(L)	16 VA	15 W	7 VA	0.7	23 VA

Notes

¹ Worst case value, may be lower depending on the color

Fixture type - 2 cordset	Fixture load	Isolation transformer			CCR load
		Size	Load	Efficiency	
Runway centerline, L-850A(L), white/white	12 + 12 VA	2 × 15 W	2 × 5 VA	0.7	2 × 17 VA
Runway centerline, L-850A(L), white/wed	12 + 6 VA	2 × 15 W	5 + 3 VA	0.7	17 + 9 VA
Taxiway centerline narrow, L-852C(L)	7 + 7 VA	2 × 15 W	2 × 3 VA	0.7	2 × 10 VA
Taxiway centerline curved, L-852K(L)	8 + 8 VA	2 × 15 W	2 × 3 VA	0.7	2 × 11 VA
Taxiway centerline wide	9 + 9 VA	2 × 15 W	2 × 4 VA	0.7	2 × 13 VA
Taxiway centerline/lead-in, L-852D(L)	9 + 9 VA	2 × 15 W	2 × 4 VA	0.7	2 × 13 VA

- 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 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

12-inch light fixtures

Fixture type – 1 cordset	Fixture load	Isolation transformer			CCR load
		Size	Load	Efficiency	
Approach white	64 VA	65 W	11 VA	0.85	75 VA
Approach red	42 VA	46 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	15 W	6 VA	0.7	21 VA
Runway RETIL	12 VA	15 W	5 VA	0.7	17 VA
Runway edge, L-850C(L)	53 VA ¹	45 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	45 W	9 VA	0.85	60 VA
Runway threshold wingbar, ICAO	52 VA	45 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	15 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 ¹	15 W	5 VA	0.7	17 VA
Taxiway centerline curved, L-852K(L)	14 VA ¹	15 W	6 VA	0.7	20 VA
Taxiway centerline wide	14 VA ¹	15 W	6 VA	0.7	20 VA
Taxiway centerline lead-in, L-852D(L)	15 VA ¹	15 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 ¹	15 W	6 VA	0.7	20 VA
Stopbar L-852S(L)	16 VA	15 W	7 VA	0.7	23 VA

Notes

¹ Depending on color and if it is a bi- or unidirectional fixture

Fixture type – 2 cordset	Fixture load	Isolation transformer			CCR load
		Size	Load	Efficiency	
Runway centerline, L-850A(L), white/white	12 + 12 VA	2 × 15 W	2 × 5 VA	0.7	2 × 17 VA
Runway centerline, L-850A(L), white/red	12 + 6 VA	2 × 15 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 × 45 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	45 + 25 W	8 + 6 VA	0.85 + 0.7	55 + 20 VA
Runway end, L-850D(L), red/red	14 + 14 VA	2 × 15 W	2 × 6 VA	0.7	2 × 20 VA
Taxiway centerline narrow, L-852C(L)	7 + 7 VA	2 × 15 W	2 × 3 VA	0.7	2 × 10 VA
Taxiway centerline curved, L-852K(L)	8 + 8 VA	2 × 15 W	2 × 3 VA	0.7	2 × 11 VA
Taxiway centerline wide	9 + 9 VA	2 × 15 W	2 × 4 VA	0.7	2 × 13 VA
Taxiway centerline, lead-in, L-852D(L)	9 + 9 VA	2 × 15 W	2 × 4 VA	0.7	2 × 13 VA

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- Extra losses in primary cables are not included in above table; these extra losses will result in a higher required CCR load