

RELIANCE 2

LED ICAO Taxiway Centerline
Uni- and Bidirectional Inset, 8-inch



Compliance with Standards

ICAO	Annex 14, Volume 1
IEC	61827
NATO	STANAG 3316
EASA	CS-ADR-DSN
STAC	SPE/STAC/SE/E/VIS/6008
Canada	TP 312
Australia	MOS 139
China	CAAC
CE	

Uses

ICAO

- Taxiway centerline
- Lead-in
- Intermediate holding position

Features and Benefits

Efficiency

- Available in three versions:
 - RELIANCE IQ with integrated intelligence
 - RELIANCE with integrated fail - open (Mon) technology. Fuse resistors are part of the Mon - functionality and spares need to be ordered separately
 - RELIANCE Non-MON, non-monitored lights
- 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
- 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
- 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 μ S – 8/20 μ S 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 Cable	Options	Version
LS												

Application

TC = Taxiway Centerline Narrow¹

TK = Taxiway Centerline Curved²

TR = Enhanced Taxiway Centerline for Rapid Exit³

TW = Taxiway Centerline Wide^{4,5}

Standard(s)

3 = ICAO⁶

Market Specific

2 = Anodized Finish

Dimensions

1 = 8 inch (203 mm) diameter, 2 bolt

Prism

S = Standard prism

R = Reinforced prism

Beam Orientation

1 = Unidirectional

2 = Bidirectional

Toe-in

N = None

C = Curved^{7,8}

Color - Side 1 (Left)

F = F-Green (ICAO, default green)

Y = Yellow

N = None⁹

G = G-Green (MOS and ICAO special)¹²

Color - Side 2 (Right)

F = F-Green (ICAO, default green)

Y = Yellow

N = None⁹

G = G-Green (MOS and ICAO special)¹²

Power and Monitoring

S = 2.8 - 6.6 A, Non-Monitored — Power Only¹⁰

M = 2.8 - 6.6 A, Fail-Open Monitoring¹⁰

P = 2.8 - 6.6 A IQ0 Integrated (IQ disabled)¹³

Q = 2.8 - 6.6 A IQ1 Integrated (IQ enabled)¹³

Connector and Cable

1 = 1 x Style 6 2-Pole Plug, 2 Individual Wires

3 = 2 x Style 6 2-Pole Plug, 2 Individual Wires¹¹

5 = 1 x Flat 3-Pole Plug, 3 Individual Wires

6 = 2 x Flat 3-Pole Plug, 3 Individual Wires¹¹

Options

0 = None

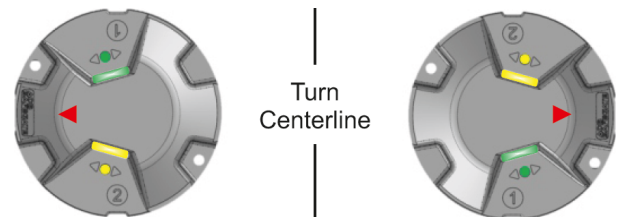
Version

1 = Version 1

Ordering Code Notes

1. Straight sections, narrow beam, < 350 m RVR, used for turn pad centerline.
2. Lead-on / exit, curved beam, < 350 m RVR, used for turn pad.
3. Taxiway centerline, wide beam, < 350 m RVR.
4. Taxiway centerline, straight sections, wide beam, < 350 m RVR.
5. TW application includes intermediate holding position light which is yellow/blank with wide beam distribution.
6. Includes standards NATO, EASA, STAC, CAP 168, TP 312 and MOS 139.
7. TK application only.
8. Left and right side determined by viewing fixture from interior turn radius pavement edge. Side 1 is on your left, side 2 is on your right.
9. TK CVR application only.
10. 2-cordset option available.
11. Only available in digit 13 options S and M and bi-directional configuration.
12. MOS and existing ICAO installations with G-green
13. 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.

Toe-In Color Coding



Left and right side determined by viewing fixture from interior turn radius pavement edge. Side 1 is on your left, side 2 is on your right.

Power Supply Options

- Non-monitored — power only
- Monitored — integrated fail-open technology
- IQ with integrated remote for RELIANCE IL

Installation and Maintenance

The light fixture can be installed in an 8-inch base or a 12-inch base with an adapter ring. 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.

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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)
Weight	3 kg / 6.6 lb (8 in)

ANNEX

8-inch light fixtures

Fixture type – 1 cord set ¹	Fixture load	Isolation transformer		CCR load
		Wattage	Load	
Taxiway centerline wide, bidirectional	13.5 VA	15 W	8 VA	21.5 VA
Taxiway centerline curved, bidirectional	12.5 VA	15 W	8 VA	20.5 VA
Taxiway centerline narrow, bidirectional	11 VA	15 W	10 VA	21 VA
Taxiway centerline enhanced, bidirectional	28 VA	35 W	12 VA	40 VA
Taxiway centerline enhanced, unidirectional	18 VA	25 W	10 VA	28 VA

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

8-inch light fixtures

Fixture type – 2 cord sets ¹	Fixture load Side 1/Side 2	Isolation transformer		CCR load Side 1/Side 2
		Wattage Side 1/Side 2	Load Side 1/Side 2	
Taxiway centerline narrow, bidirectional	8 VA/8 VA	15 W/15 W	8 VA/8 VA	16 VA /16 VA
Taxiway centerline wide, bidirectional	10 VA/10 VA	15 W/15 W	8 VA/8 VA	18 VA/18 VA
Taxiway centerline curved, bidirectional	9 VA/9 VA	15 W/15 W	8 VA/8 VA	17 VA /17 VA
Taxiway centerline enhanced, bidirectional	18 VA/18 VA	25 W/25 W	10 VA/10 VA	28 VA/28 VA

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

Note:

- IQ fixtures:
 - The minimum rating (dimension) for the isolation transformer is 65 W
 - The isolation transformer must have an additional 12 VA available above the fixture load for communication bandwidth. Size transformer to next size up to assure additional 12 VA coverage
- Fail-open fixtures:
 - The maximum rating for the isolation transformer is 200 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.