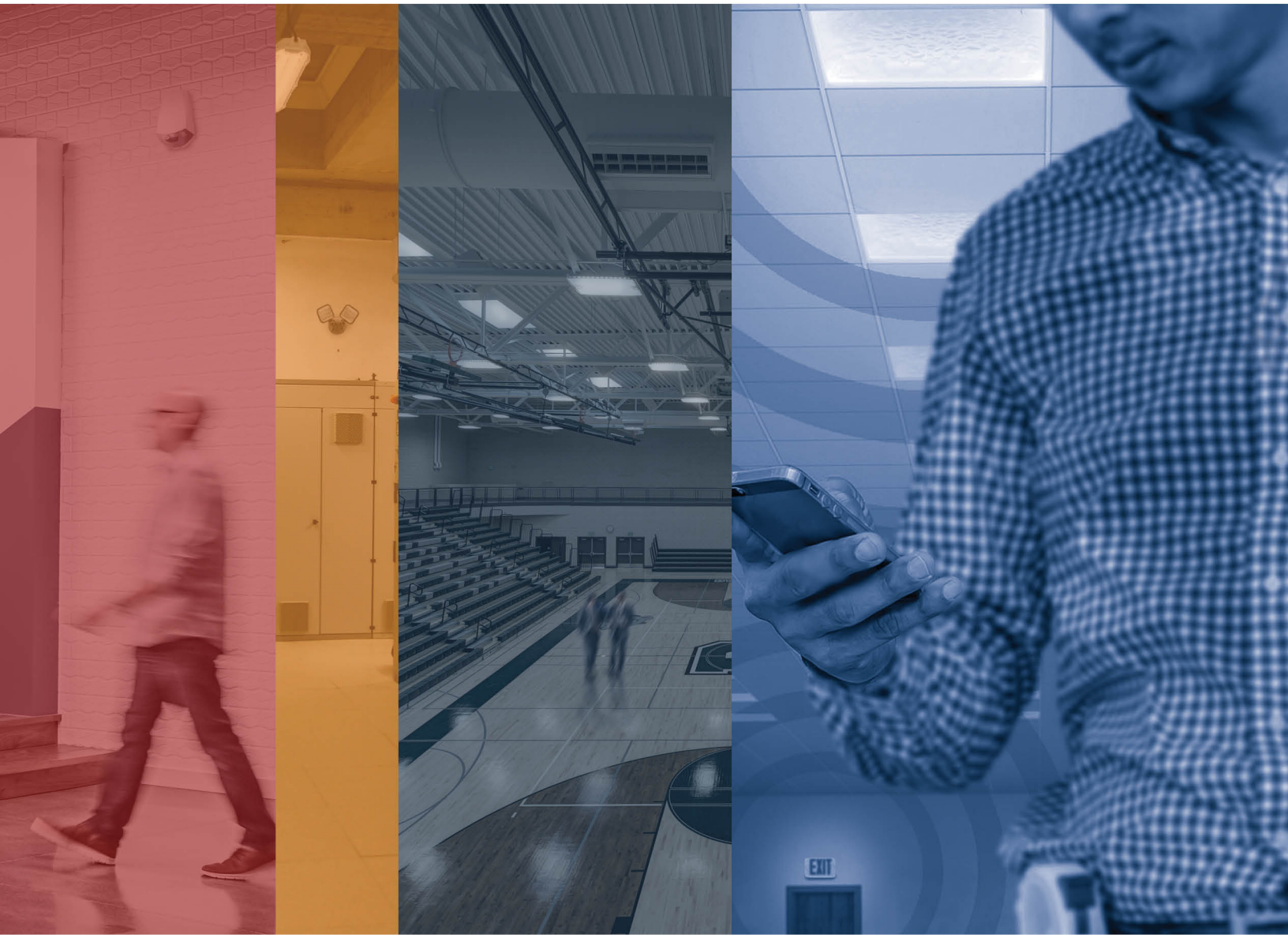
LITHONIA LIGHTING®

IOTA®

nLIGHT®

Life Safety
SOLUTIONS

Exit Signs • Emergency Lighting Units and Remotes • Emergency Drivers and Ballasts • Inverter Systems • ALCR Devices



AcuityBrands.

Where Life Meets Safety.

Beyond the lighting designs of commercial and public spaces, careful consideration is given for critical Life Safety emergency egress requirements. Emergency lighting functionality is incorporated to provide the needed safety performance without negatively impacting normal lighting form and design.

The nature and extent of emergency lighting is driven by a combination of governmental standards, facility and space criteria, and the ultimate needs of building occupants. Every commercial and public space is unique, but the goal of emergency lighting remains the same: provide a safely-lit environment for occupants when normal life is interrupted by unexpected circumstances.

Leading the Way in Life Safety Solutions

Acuity Brands® delivers the largest portfolio of emergency lighting solutions for today's commercial, institutional, industrial, and public spaces. Our emergency lighting products offer confident performance for both general application projects and leading-edge architectural designs. Whether a large space or small, whether single foot-candle or full light output, indoor or outdoor egress, or traditional lighting equipment versus innovative architectural concepts, Acuity Brands emergency lighting solutions cover the scope of virtually any project requirement.

Lithonia Lighting® is a mainstay for delivering reliable and affordable exit and emergency lighting unit solutions for both general commercial applications or demanding heavy-duty performance requirements.

IOTA® is a leading provider of emergency battery designs and inverter systems that equip your existing fixtures to deliver confident emergency egress lighting during a loss of normal power.

Cutting-edge nLight® controls bring the next generation of connectivity to emergency systems, empowering networked communication to emergency-equipped fixture designs.

AcuityBrands®

The Largest Life Safety Portfolio...

Because there are so many factors that can influence your emergency illumination, selecting the optimal solutions that balance so many factors may seem overwhelming.

Acuity Brands® is here to help. With the broadest portfolio of emergency lighting products on the market today, there is no better place to find the Life Safety solutions that fit your project demands. Whether it's full light output for optimal occupant needs, discreet architectural designs to complement your interior space, or confident reliability in harsh and extreme environments, Acuity Brands has the solutions that won't leave your facilities in the dark.

Emergency Lighting Considerations

Code Requirements

The Life Safety Code outlines the primary requirements needed for providing emergency lighting for commercial and public spaces, including levels of illumination, duration of illumination, signage along the paths of egress, markings at building exit points, and means of regular testing of system readiness.

Occupant Requirements

While the Life Safety Code outlines minimum levels of illumination, additional consideration must be given to the needs of occupants. Elderly or individuals with physical impairments, for example, may require increased lighting to assist in exiting a building.

Design Requirements

The nature of the illuminated space can influence the requirements for emergency lighting options. Is it indoor or outdoor lighting? Is it an architectural space that requires more discreet designs? Elevated ceilings, decorative fixtures, and the area to be illuminated can all impact the ideal solutions for achieving design requirements.

Budget Requirements

Not all facilities and projects are equal, and there is no one-size-fits-all emergency lighting system. Availability to a wide selection of emergency lighting options gives designers the ability to tailor an egress package that is ideal at every level without unnecessary additional costs.

What are the Life Safety requirements for emergency lighting?

In general terms, the Life Safety Code establishes the following:

- A minimum **level of emergency illumination** along the path of egress (indoors or outdoors) to allow occupants to exit a building to a safe distance during a loss of normal lighting.
- **Visible Signage** along the paths of egress and building exit points.
- Capability to provide emergency illumination for a minimum of **90 minutes**.
- Emergency systems must have a scheduled **testing** and documentation process to ensure system readiness in the event of an emergency.

Lumens vs. Foot-candles

Knowing the difference between "lumens" and "foot-candles" is important when discussing emergency lighting. *Lumens* measures the amount of light generated at the source, whereas *foot-candles* measure the amount of light reaching an object (in this case, the object is the floor or path of egress.) While the two concepts cannot be neatly equated, it is generally accepted by codes that 1 foot-candle is equal to 10.76 lux (luminous flux) or lumens.

The Life Safety Code focuses on how much light reaches the floor (foot-candles) while emergency lighting products measure the amount of light (lumens) produced at the source. Many factors (ceiling height or reflectivity, for example) can impact how much light from the source actually makes it to the path of egress.

Find the solution that fits your application...

This catalog will help you recognize the emergency solution that delivers the performance your project needs. Learn how each product family meets unique emergency lighting objectives and easily compare options to tailor your solution to your application.

Exit Signs

Lithonia Lighting® Exit Signs achieve the signage needs of most any building application. Lithonia Lighting products include architectural, industrial, harsh location, and exit/emergency light combination units. Added performance benefits such as self-testing options, remote lamp connectivity, and adaptable face and chevron features bring extra versatility for meeting signage and emergency lighting requirements. **Page 9**

Emergency Unit Equipment

Lithonia Lighting® Emergency Lighting Units mount to the ceiling or wall to provide battery-powered illumination where and when needed. The simplicity of emergency lighting unit solutions, combined with a variety of illumination levels and styles, make them a popular choice for commercial or public spaces, including demanding and heavy-duty environments. **Page 21**

Remote Lighting Heads

Lithonia Lighting® Remote Lighting extends the functionality of battery-powered exit signs and emergency units to areas where battery equipment is not feasible, such as outdoor egress points or high-temperature areas. Remote lighting options offer several designs and lamp-head options to match needed illumination performance. **Page 31**

Looking for running man signage or other emergency solutions for Canada? Check out our **Canada Emergency Lighting Solutions** catalog at **www.AcuityBrands.com**

Emergency Drivers and Ballasts

IOTA® Emergency Drivers and Ballasts allow facilities to utilize their existing fixtures as both normal and emergency lighting. Battery-powered emergency drivers and ballasts are popular for avoiding the use of visible wall-mounted emergency lighting while easily adapting to the locations and lumen levels needed along the path of egress. **Page 39 and Page 61**

Inverter Systems

IOTA® IIS Inverter Systems deliver auxiliary AC power to designated fixtures to operate at full brightness in an emergency. Known for their versatility and capability, inverter solutions can operate virtually any type of lighting load (LED, fluorescent, incandescent, and more) with load sizes from 25W to 50KVA. IIS Inverters allow you to supply emergency power to a single fixture, a designated emergency circuit, or a building's entire lighting system. **Page 73**

ALCR Control Devices

Automatic Load Control Relays (ALCR) are control devices that allow the use of energy-saving controls on emergency lighting without compromising performance. ALCRs override switch, dimmer, sensor or other control settings when normal power is lost, enabling an auxiliary inverter or generator to power them at full output.

Standalone options include ETS DR fixture-level or ETS 20 circuit-level solutions. **Page 88**

nLight® networked ALCR solutions detect a loss in normal power to enable emergency lighting for networked control applications. **Page 90**

LITHONIA LIGHTING®

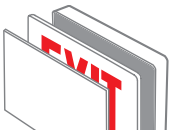
Exit Signs

Lithonia Lighting® Exit Signs offer a variety of models to meet interior egress requirements. Our signage solutions are designed and manufactured for efficient, long-lasting performance, easy installation, and with versatile options to accommodate the demands of any application.

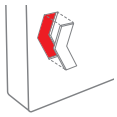
Models include popular, readily available commercial design, specification-grade solutions for demanding environments, combination units for added functionality, and performance options like internal battery power or self-testing capability.

In this Section:

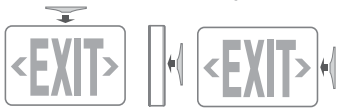
Red or Green Lettering Selections with 100-ft viewing distance



Face plate conversion for single or double sided applications



Adjustable chevrons to match egress direction



Top, back, or side Mounting

Standard AC connection or battery back-up models

Solutions for wireless communication to the STAR Self-Testing Automated Reporting app.

Remote lamp head capability on most models

Life Safety Code Excerpts

Below are pertinent sections of the Life Safety Code concerning the use, maintenance, and testing of exit signage. Referencing local state and municipal safety codes is also advised, as these may supersede national requirements.

"7.9.2 Performance of System

7.9.2.1 Emergency illumination shall be provided for a minimum of 1½ hours in the event of failure of normal lighting.

7.9.3.1 Required emergency lighting systems shall be tested in accordance with one of the three options offered by 7.9.3.1.1 (manual), 7.9.3.1.2 (self-diagnostic), or 7.9.3.1.3 (computer-based).

7.10 Marking of Means of Egress

7.10.1.2.1 Exits, other than main exterior exit doors that obviously and clearly are identifiable as exits, shall be marked by an approved sign that is readily visible from any direction of exit access.

7.10.1.2.2 Horizontal components of the egress path within an exit enclosure shall be marked by approved exit or directional exit signs where the continuation of the egress path is not obvious.

7.10.1.8 Visibility. Every sign required in Section 7.10 shall be located and of such size, distinctive color, and design that it is readily visible and shall provide contrast with decorations, interior finish, or other signs. No decorations, furnishings, or equipment that impairs visibility of a sign shall be permitted. No brightly illuminated sign (for other than exit purposes), display, or object in or near the line of vision of the required exit sign that could detract attention from the exit sign shall be permitted.

7.10.5.1 General. Every sign required by 7.10.1.2 or 7.10.1.5, or 7.10.8.1, other than where operations or processes require low lighting levels, shall be suitably illuminated by a reliable light source. Externally and internally illuminated signs shall be legible in both the normal and emergency lighting mode.

7.10.6.1 Size of Signs.

(1) For new signs, the letters shall be not less than 6 in. (150 mm) high, with the principal strokes of letters not less than 3/4 in. (19 mm) wide.

(2) For existing signs, the required wording shall be permitted to be plainly legible letters not less than 4 in. (100 mm) high.

(3) The word EXIT shall be in letters of a width not less than 2 in. (51 mm), except the letter I, and the minimum spacing between letters shall be not less than 3/8 in. (9.5 mm).

(4) Sign legend elements larger than the minimum established in 7.10.6.1.1(1) through (3) shall use letter widths, strokes, and spacing in proportion to their height.

7.10.6.2 Size and location of Directional Indicator.

7.10.6.2.1 Directional indicators, unless otherwise provided in 7.10.6.2.2, shall comply with the following:

(1) The directional indicator shall be located outside of the EXIT legend, not less than 3/8 in. (9.5 mm) from any letter.

(2) The directional indicator shall be of a chevron type, as shown in Figure 7.10.6.2.1.

(3) The directional indicator shall be identifiable as a directional indicator at a distance of 40 ft (12 m).

(4) A directional indicator larger than the minimum established for compliance with 7.10.6.2.1(3) shall be proportionately increased in height, width and stroke.

(5) The directional indicator shall be located at the end of the sign for the direction indicated."

Primary take-aways:	What this means for exit signs:
Exit signs are required at exits not obviously recognizable as an exit and signage must be installed where egress path continuation is not obvious.	Lithonia Lighting exit signs are designed for versatile application for either single-face or double-face installation and adjustable chevrons to match the requirements of any facility's path of egress.
Exit signs must be illuminated, whether internally or externally, both during times of normal lighting and emergency lighting conditions.	Lithonia Lighting exit signs can be powered in the emergency mode from an external emergency source, such as an auxiliary inverter system, or from an internal battery supply.
Exit sign lettering must meet minimum size and distance viewing requirements.	Lithonia Lighting exit signs feature 6" letters with a 3/4" brushstroke and chevrons visible at distances up to 40 feet. Some models exceed these requirements for meeting more stringent local codes.
Exit signs must be illuminated for a minimum of 90 minutes during an emergency.	Units with internal battery supplies operate for the required 90 minutes, and in some cases, offer larger capacities to operate additional remote equipment.
The exit sign must have a means of periodic testing to ensure performance of system.	All battery-powered units are equipped with a manual test button and indicator light to assess system readiness. Self-testing/self-diagnostic models are also available for convenient Life Safety code compliance.

Application Concept

In this example, exit signs are located at strategic points along the interior paths of egress and exit points. Different exit sign models are selected based on the individual space requirements.

Mid-Size Office Building
Approx. 10,000 sq. ft

Red or Green?

The selection of the lettering color - red or green - can depend on a few different factors. The Life Safety Code dictates that the sign must provide "contrast" and be "distinctive," therefore interior design may determine the optimal lettering color. Some local codes may require exit signs be a specific color (only RED exit signs, for instance.) It is not unusual for some codes and preferences to call for GREEN exit signs along the path of egress and the use of RED signs to denote the end of the egress path, or exit point. Always refer to local building requirements. If no specific color is mandated, then the decision can be based on individual preference.

1 EDG Exit Sign

At the side exits of the facility, the EDG provides an effective yet unobtrusive solution for indicating the exit point with added benefits of self-diagnostic performance.

2 Quantum LQM Exit Sign

To avoid the maintenance room from being mistaken as an exit, a ceiling-mounted Quantum® LQM with a left-pointing chevron directs occupants around the corner. Due to the higher ceiling in the open space, the LQM self-diagnostics bring added convenience for maintaining Life Safety Code requirements.

3 Quantum LHQM Combination Exit Sign / Light

For this corner, the Quantum® LHQM with a right-pointing chevron was chosen. The added self-diagnostics simplify maintenance, and the 24-ft spread of the LED lamp heads is perfect for providing additional egress lighting along the floor in a high-traffic corner.

4 LRE Recessed Exit Sign

To blend with the visual aesthetics of the lobby, the LRE is installed above the exit point flush with the wall, providing the required exit markings without distracting from the interior design of the space. Like the LQM and LHQM, the self-diagnostics of the LRE make it easier to comply with the Life Safety requirements.

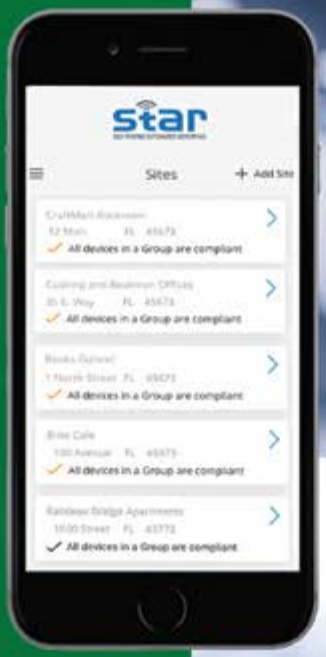
star
SELF-TESTING AUTOMATED REPORTING

Per Life Safety Code, emergency lighting equipment must undergo regular monthly and annual tests to ensure proper emergency operation during a loss of normal power.

Additionally, records of these tests must be maintained for inspection as needed. With the STAR mobile application and STAR-enabled emergency lighting products, meeting these emergency lighting requirements is simpler than ever!

The benefits of using STAR Self-Testing and Automated Reporting include:

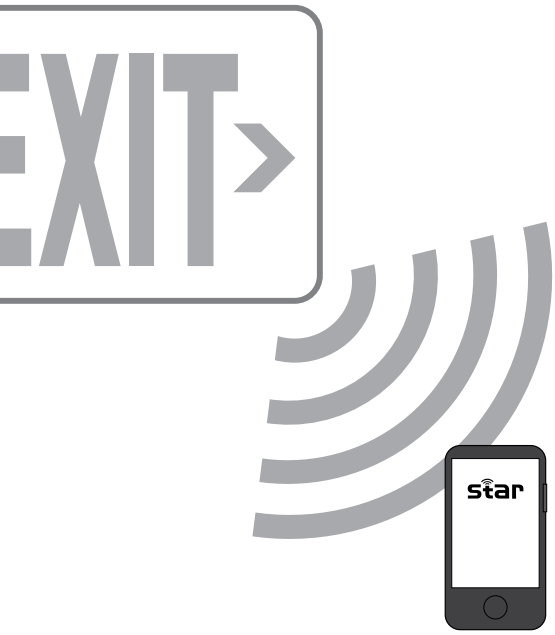
- **Removes the need for manual testing of your emergency lighting and exit signage.**
- **Easily view your facility's emergency lighting equipment test data and compliance status on your mobile device.**
- **Export and share PDF records of your compliance reports electronically...no more maintaining cumbersome written records.**



Use the STAR app with our full suite of wireless-enabled emergency lighting solutions:

- **Lithonia Lighting® AELR Exit Signs**
- **Lithonia Lighting® AELR Lighting Units**
- **IOTA® AELR Emergency Drivers**

See the full selection of STAR emergency lighting solutions and find in-depth videos and literature at **www.acuitybrands.com/STAR**.



Signage Solutions for STAR

The LQM AELR combines the advantages of Quantum Series performance with the convenience of wireless connectivity! The LQM AELR automatically conducts code-required testing and easy access to test data and compliance status in the STAR mobile app!

Walk Around - Satisfy your IBC visual inspection requirements without need for physically interfacing with your emergency devices.

Connect - When the STAR app is open on your mobile device, it will automatically connect to your STAR-enabled devices within range.

View and Download - When all of your devices have reported their test data, you can view your site compliance report as needed.

Export and Share - Export your compliance report as a PDF document to share or email to other devices.

STAR Self-Testing Automated Reporting is part of the CLAIRITY™+ app suite, available for free for iOS and Android devices in the App Store and Google Play.

LQM AELR

In addition to enhanced power consumption and electrical performance, LQM Exit Signs feature an innovative Quick-Mount™ snap-together housing for fast, cleaner installation and finished appearance.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: single-face / double-face with configurable chevrons

Operation: Ni-Cad backup, Self-Testing with wireless reporting

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Dimensions: 11.75 x 2 x 7.625 in

Weight: 2.6 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. FCC Title 47, Part 15, Subpart B. Certified in CA T20 MAEDBS. UL Damp Location Listed. NOM Certified Option. Certified wireless module: FCC ID BRM1, Model BRM1-3

Self-Testing Diagnostics with Automated Reporting

Helps meet CA Title 20 and registered in the MAEDBS database

LITHONIA LIGHTING

Lithonia Lighting Basics™

Lithonia Lighting Basics selections are popular, readily available models capable of serving your general signage needs. The durable and lightweight, thermoplastic construction can be installed on both wall and ceiling spaces and is available in white or black housings to match interior aesthetics. New switchable RED/GREEN lettering versatility delivers added convenience!

EXRG

The EXRG is a switchable Red or Green exit sign that brings functionality and versatility to general-purpose signage applications.

Lettering (Switchable): Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: AC Only or Nickel Metal Hydride backup battery options

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 2-year (limited)

Mounting: top/back/end

- Switchable Design for Red or Green Lettering
- Contractor Select models available

ECRG SQ

The switchable Red/Green ECRG SQ combines versatile exit signage and emergency lighting functionality into a single general-purpose solution.

Lettering (Switchable): Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: Includes Nickel Metal Hydride backup battery. HO options available.

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 2-year (limited)

Mounting: top/back/end

- Switchable Design for Red or Green Lettering
- Combination Exit / Emergency Light
- Single Unit Lighting Spread Up to 10-ft
- Remote Head Capability
- Contractor Select models available

ECRG RD

The switchable Red/Green ECRG RD combines versatile exit signage and emergency lighting functionality into a single, general-purpose solution. Unobtrusive LED lamps provide 14-ft lighting spread.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: Includes Nickel Metal Hydride backup battery. HO options available.

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120-277VAC input

Warranty: 2-year (limited)

Mounting: top/back/end

- Switchable Design for Red or Green Lettering
- Combination Exit / Emergency Light
- Single Unit Lighting Spread Up to 14-ft
- Remote Head Capability
- Contractor Select models available

ECBR / ECBG

The ECBR and ECBG combination units feature a unique, low-profile swivel LED light bar for providing emergency egress lighting and streamlined appearance.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: Includes Ni-Cad backup battery.

Temp: 10° to 50°C indoor, damp location rated

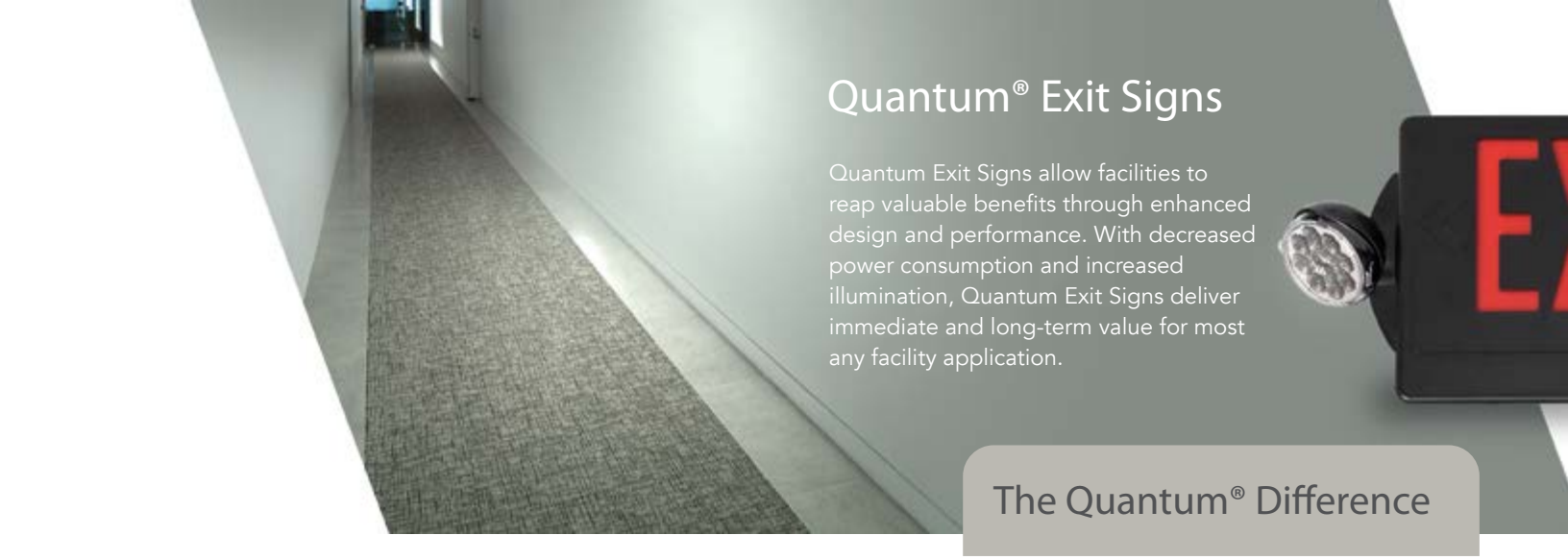
Voltage: 120/277VAC input

Warranty: 2-year (limited)

Mounting: top/back/end

- Combination Exit / Emergency Light
- Sleek, discreet swivel-design lamp
- Remote Head Capability

Products are UL 924 Listed and Registered in the CA Title 20 MAEDBS Database



Quantum® Exit Signs

Quantum Exit Signs allow facilities to reap valuable benefits through enhanced design and performance. With decreased power consumption and increased illumination, Quantum Exit Signs deliver immediate and long-term value for most any facility application.

LQM

In addition to enhanced power consumption and electrical performance, LQM Exit Signs feature an innovative Quick-Mount™ snap-together housing for fast, cleaner installation and finished appearance.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: single-face / double-face with configurable chevrons

Operation: AC Only, Ni-Cad backup battery, and Self-Test options.

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

LHQM LED

The LHQM combination unit includes the Quantum performance features, innovative Quick-Mount™ snap-together housing, and powerful twin-head LED lamps with a lighting spread up to 24-ft.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: single-face / double-face with configurable chevrons

Operation: Includes Ni-Cad backup battery. Self-Test option available.

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

White or Black Housing Options

Contractor Select models available

Combination Exit / Emergency Light

Single Unit Lighting Spread Up to 24-ft

White or Black Housing Options

Remote Head Capability

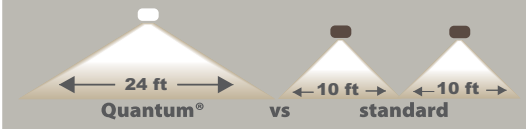
Contractor Select models available

The Quantum® Difference

Quantum Exit Signs include advanced design features to provide optimal performance and long life...

Impressive Emergency Output

The powerful 24-ft beam spread of the LHQM simplifies corridor egress challenges by delivering the needed ft-candles with fewer units. The LHQM can meet the Life Safety requirements of a 40-ft hallway with two units, as opposed to four emergency lighting units with a 10-ft lighting spread.



Minimized Energy Consumption

Exit signs are in a continual state of use, illuminated at all times and ready to provide assistance in the event of a power loss. The duration of time in operation combined with the number of units installed in a facility can significantly impact utility costs over an extended period. By using low energy LEDs and a specialized current-limiting battery charger system, Quantum designs offer dramatic energy savings over standard exit sign options.

Labor-Saving Self-Testing Options

Self-testing functionality eliminates the time needed to manually conduct the code-required tests, as well as helping avoid the dangers of non-compliant emergency egress lighting by alerting facility managers of issues before they become a major problem.

Products are UL 924 Listed and Registered in the CA Title 20 MAEDBS Database

LITHONIA LIGHTING®

Die-Cast Exit Signs

Die-cast exit signs feature a precision-molded aluminum housing that is both durable and attractive. The clear lacquer finish inhibits fingerprints, smudges, and other surface contaminants. The premium construction cleanly and easily assembles with no light leaks and is capable of side, back, or top mounting installation.

LQC

The LQC is ideal for general-purpose applications desiring a durable die-cast exit sign appearance.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: AC Only or Ni-Cad backup battery options

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

TLE

The TLE provides a durable die-cast exit sign option with a thin, less obtrusive **7/8 inch profile**.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: AC Only or Ni-Cad backup battery options

Temp: 0° to 50°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

LE / LRE

The LE provides a durable die-cast exit sign option with additional performance options and finishes. The LRE features a flanged housing for recessed wall mounting.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: AC Only or Ni-Cad backup battery options. Self-Test Option available.

Temp: 10° to 40°C indoor, damp location rated

Voltage: Universal 120-277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end/recessed wall

Brushed Aluminum or White Finish

Brushed Aluminum or White Finish

Unobtrusive Thin Profile

Registered in the CA Title 20 MAEDBS database

Brushed Aluminum, Bronze, Black or White Finish

Recessed Wall Mounting Option

Self-Diagnostics Option

Products are UL 924 Listed

Architectural / Edge-Lit Signs

Architectural / Edge-Lit signs are elegant signage solutions that feature recessed mounting options and clear or reflective panel designs for blending effortlessly into the architectural space.

EDG / EDGR

The versatile EDG/EDGR edge-lit exits are well suited for any application requiring attractive edge-lit exit signage. Use the EDGR for recessed installation within a ceiling.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single or double face with white, mirror or clear insert options.

Operation: AC Only or Ni-Cad backup battery options. Self-Diagnostic option.

Temp: 0° to 50°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end/recessed ceiling

LRP

The LRP from Lithonia Lighting's Precise® Collection features unobtrusive recessed mounting with different hardware finishes for an attractive, streamlined appearance.

Lettering: Red or green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single or double face with white, mirror or clear insert options.

Operation: AC Only or Ni-Cad backup battery options.

Temp: 20° to 30°C

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: recessed top / recessed back/ recessed end

Brushed Aluminum or White Canopy Finish

Recessed Mounting Options

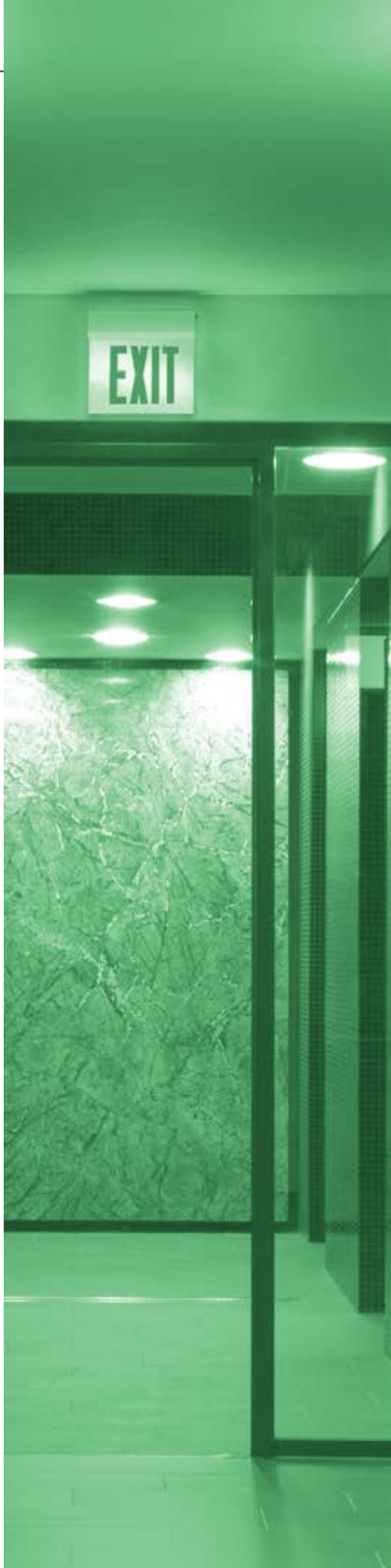
Self-Diagnostics Option

Brushed Aluminum, Bronze, Black, Brass, or White Finish

Wedge Panel Design for Superior Illumination

Unobtrusive Recessed Mounting

Products are UL 924 Listed and Registered in the CA Title 20 MAEDBS Database



Specialized Signage

These specialized Lithonia Lighting solutions feature 20-gauge die-formed steel housing and are engineered to meet exacting national and local criteria for general and heavy-duty signage applications.

LX

The Titan® LX is ideal for light industrial warehouse and manufacturing facilities requiring sturdy, steel construction signage.

Lettering: Red or Green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with knock-out chevrons

Operation: AC Only or Ni-Cad backup battery options

Temp: 0° to 50°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

LXNY

The Titan® LXNY series feature NYC required 8" letters in a durable steel constructed enclosure. Approved for NYC.

Lettering: Red 1" stroke, 8" high for 100 ft. visibility

Panels: Single-face / double-face with knock-out chevrons

Operation: AC Only or Ni-Cad backup battery options

Temp: 0° to 50°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

LXC

The LXC includes 20-gauge steel construction and glass panel face with or without a full stroke directional arrow to meet City of Chicago requirements.

Lettering: Red 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face options with or without directional arrow

Operation: AC Only or Ni-Cad backup battery options

Temp: 0° to 50°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

LLXC

The LLXC is a combination exit sign and emergency lighting unit with steel housing, glass panel face, and two adjustable lamp heads. Meets City of Chicago Requirements.

Lettering: Red 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face options with or without directional arrow

Operation: Ni-Cad battery

Temp: 20° to 50°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back

Registered in the CA Title 20 MAEDBS database

NYC Approved

Registered in the CA Title 20 MAEDBS database

City of Chicago Approved

Registered in the CA Title 20 MAEDBS database

Combination Exit / Emergency Light

Single Unit Lighting Spread Up to 62-ft

City of Chicago Approved

Products are UL 924 Listed

Demanding Environments

Extreme environments demand more capability from exit signage. These designs offer heavy-duty solutions for wet, high-abuse, and hazardous locations.

WLTE

The WLTE is designed for wet location areas that are subject to saturation with non-mechanically delivered water.

Lettering: Red or Green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: AC Only or Ni-Cad backup battery options. Self-Diagnostic option

Temp: -20° to 50°C indoor, wet location rate

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

- Wet Location
- White, Black or Gray Housing Options
- Self-Diagnostics Option
- Registered in the CA Title 20 MAEDBS database

WLTC

The WLTC is a combination exit sign / emergency light designed for wet locations (non-mechanically delivered water.)

Lettering: Red or Green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: Ni-Cad backup. Self Diagnostic and Cold Weather options available

Temp: 0° to 50°C indoor wet location -20° to 50°C cold-weather model

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: top/back/end

- Wet Location
- Combination Exit / Emergency Light
- Single Unit Lighting Spread Up to 24-ft (←24 ft→)
- White or Black Housing Options
- Self-Diagnostics Option
- Cold Weather Option

LV

LV units feature a cast-aluminum housing and thick polycarbonate casing for use in hose-down, security, and high-abuse applications.

Lettering: Red or Green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face with configurable chevrons

Operation: AC Only. Self Diagnostic and Cold Weather options available

Temp: 10° to 40°C indoor -40° to 40°C cold-weather model

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Mounting: back (standard)/Universal mounting optional

- Designed for Extreme Conditions
- White or Black Housing Options
- Self-Diagnostics Option
- Cold Weather Option

D

Self-luminous, tritium gas exit sign for applications where electrical power cannot be provided.

Lettering: Red or Green 3/4" stroke, 6" high for 100 ft. visibility

Panels: Single-face / double-face

Operation: 10-yr and 20-yr units meet 100' viewing distance requirements.

Temp: -28° to 65°C

Optics: Contained tritium level is 7.5 Curies (10 year) and 11.5 Curies (20 year). Level is 2x for double face option.

Warranty: 3-year (limited)

Mounting: top/back/end

- Hazardous Location (CLASS 1 DIV 1)
- Self-Luminous (no electricity required)
- Plastic or Anodized Aluminum Frame

Products are UL 924 Listed

LITHONIA LIGHTING

Emergency Lighting Units

Emergency Lighting Units are stand-alone emergency solutions that mount strategically on the wall or ceiling. In the event of a power loss, the emergency lighting unit activates and provides egress illumination via the unit's internal battery supply.

Emergency Lighting Units are a popular choice due to their simplicity and fixed performance. With a selection of discreet architectural models and industrially-designed options for demanding environments, Lithonia Lighting® emergency unit equipment provides an option for most any egress application.

In this Section:

A full selection of lighting capabilities to solve both small or large egress requirements.

Architectural and industrial designs to match form and function of individual spaces.

Reduce costs and labor with self-diagnostics, remote testing, and energy efficient models.

Remote lamp head capability on select models.

Life Safety Code Excerpts

Below are pertinent sections of the Life Safety Code concerning the use, maintenance, and testing of emergency lighting equipment. Referencing local state and municipal safety codes is also advised, as these may supersede national requirements.

"7.9.2.1 Emergency illumination shall be provided for a minimum of 1 1/2 hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 ft-candle (10.8 lux) and, at any point, not less than 0.1 ft-candle (1.1 lux), measured along the path of egress at floor level. Illumination levels shall be permitted to decline to not less than an average of 0.6 ft-candle (6.5 lux) and, at any point, not less than 0.06 ft-candle (0.65 lux) at the end of the 1 1/2 hours. A maximum-to-minimum illumination shall not exceed a ratio of 40 to 1."

Periodic Testing of Emergency Lighting Equipment

7.9.3.1.1 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Functional testing shall be conducted monthly, with a minimum of 3 weeks and a maximum of 5 weeks between tests, for not less than 30 seconds, except as otherwise permitted by 7.9.3.1.3.

(2) The test interval shall be permitted to be extended beyond 30 days with the approval of the authority having jurisdiction.

(3) Functional testing shall be conducted annually for a minimum of 1 1/2 hours if the emergency lighting system is battery powered.

(4) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1 (1) and 7.9.3.1.1 (3).

(5) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

Testing of Self-Diagnostic Equipment

7.9.3.1.2 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.

(2) Not less than once every 30 days, self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform a test with a duration of a minimum of 30 seconds and a diagnostic routine.

(3) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.

(4) A visual inspection shall be performed at intervals not exceeding 30 days.

(5) Functional testing shall be conducted annually for a minimum of 1 1/2 hours.

(6) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2 hour test.

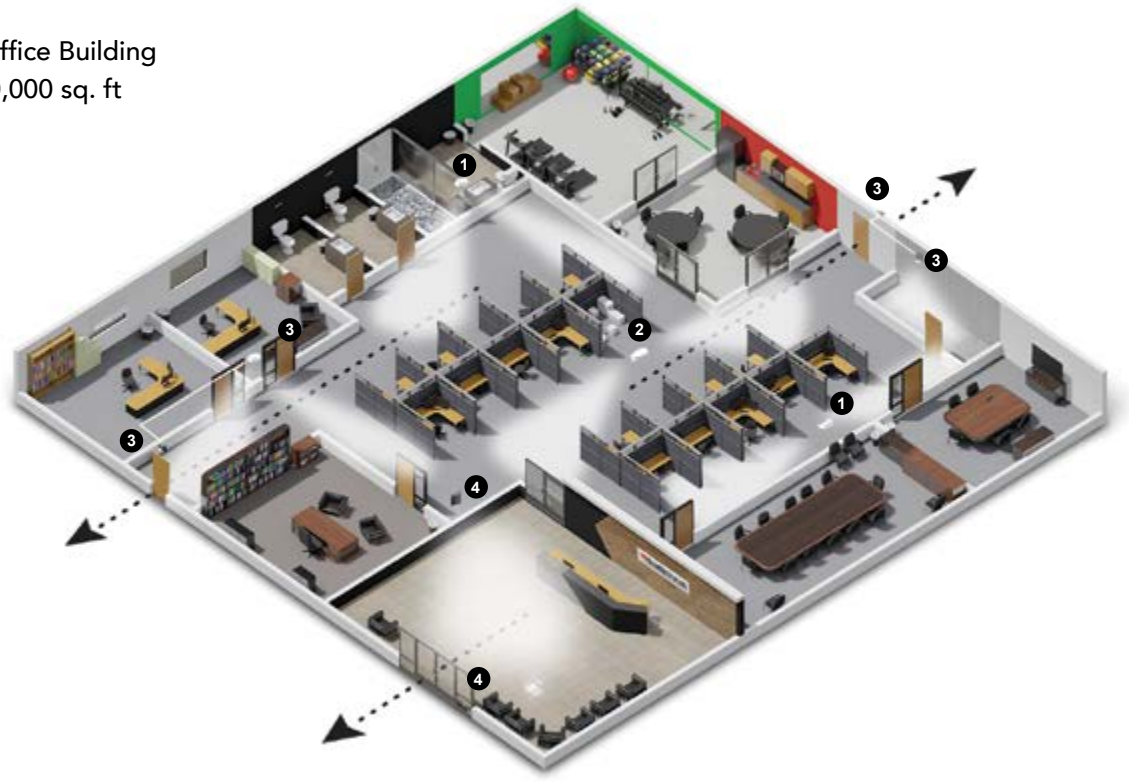
(7) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction."

Primary take-aways:	What this means for emergency lights:
An emergency fixture must be able to provide no less than 90 minutes of emergency illumination.	All Lithonia Lighting Emergency Units are engineered to run greater than 90 minutes with an included operating margin to account for typical reduced battery performance over the lifetime of the unit.
The emergency illumination must maintain a minimum average level of 1 ft-candle initially, and .6 ft candles at the end of the 90 minutes.	Emergency Lighting Units will provide a fixed level of illumination and can be mounted at optimal heights and distances to ensure desired ft-candle levels.
An emergency battery must have a means to be tested and inspected for system readiness.	Lithonia Lighting Emergency Units include a test switch and illuminated charge indicator for physical testing and visual inspection of the unit as needed.
Testing must include a 30-second monthly test and a 90-minute annual test.	Testing of Lithonia Lighting units can be achieved through manual activation of the test switch or through the use of automatic self-testing programming on select units.
Written records of these tests must be maintained for reference and inspection as needed.	Self-Testing/Self-Diagnostic emergency units minimize the labor involved in maintaining Life Safety requirements, reducing monthly labor requirements to simply a visual inspection for the written record.

Application Concept

In this example, emergency lighting units are located at strategic points along the interior paths of egress, exit points, and outdoor paths of egress. Product selections are optimized to serve the overall needs of the facility.

Mid-Size Office Building
Approx. 10,000 sq. ft



1 Quantum® ELM4L

The ELM4L delivers the moderate level of lighting needed for illuminating both corridors effectively. The track-and-swivel lamp heads easily adjust to accomplish the bi-directional lighting

2 Quantum® ELM6L

This ceiling-mounted ELM6L delivers a wider lighting spread to easily provide the footcandles along the longer path of egress. The ELM6L's 24-ft mounting height is ideal for this raised ceiling.

3 ELM6L and ELMRW

The ELM6L capacity balances the additional corridor lighting requirements near the exit with an additional remote on the building's exterior.

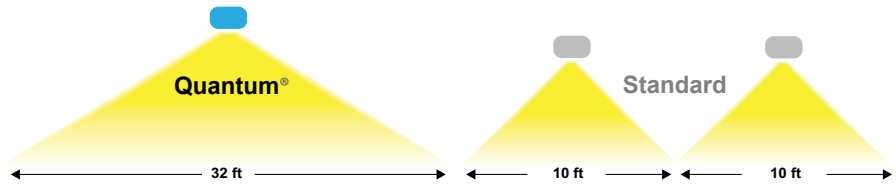
The wet location listed ELM6L is also used in the maintenance room, protecting the emergency equipment from moisture during typical area use. Additionally, the ELM6L remotely powers an outdoor ELMRW above the building's rear exit point.

4 Affinity® AFF

The architectural design of the AFF blends well with the interior aesthetics of the lobby while meeting the illumination requirements for the space. An additional AFF OELR remote provides exterior egress lighting at the exit.

Effective Performance

Specification-grade emergency units are purposefully engineered to deliver more advantageous performance for your facility. Matching the capability of your emergency equipment to your application requirements is beneficial for a number of reasons:



A higher performance product accomplishes the work of two or more "standard" units. While initial product cost may be slightly more, cost benefits add up by needing fewer units.

Fewer units require less labor for installation and decreased maintenance costs for monthly and annual testing.

Fewer units maintaining internal batteries in the standby mode means reduced energy consumption for the facility.

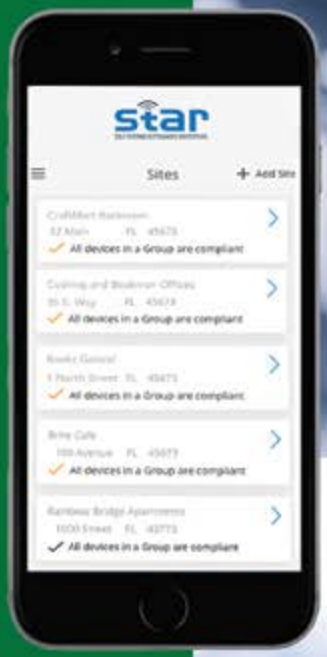
star
SELF-TESTING AUTOMATED REPORTING

Per Life Safety Code, emergency lighting equipment must undergo regular monthly and annual tests to ensure proper emergency operation during a loss of normal power.

Additionally, records of these tests must be maintained for inspection as needed. With the STAR mobile application and STAR-enabled emergency lighting products, meeting these emergency lighting requirements is simpler than ever!

The benefits of using STAR Self-Testing and Automated Reporting include:

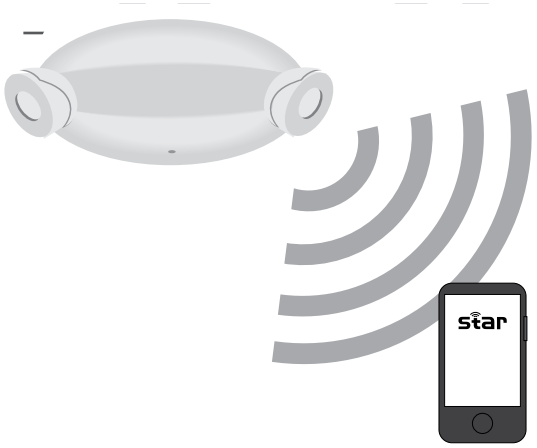
- **Removes the need for manual testing of your emergency lighting and exit signage.**
- **Easily view your facility's emergency lighting equipment test data and compliance status on your mobile device.**
- **Export and share PDF records of your compliance reports electronically...no more maintaining cumbersome written records.**



Use the STAR app with our full suite of wireless-enabled emergency lighting solutions:

- **Lithonia Lighting® AELR Exit Signs**
- **Lithonia Lighting® AELR Lighting Units**
- **IOTA® AELR Emergency Drivers**

See the full selection of STAR emergency lighting solutions and find in-depth videos and literature at **www.acuitybrands.com/STAR**.



Emergency Unit Solutions for star

Lithonia Lighting offers STAR-enables emergency unit equipment for both standard commercial and industrial applications...these emergency lighting solutions automatically conducts code-required testing with easy access to test data and compliance status in the STAR mobile app.

ELM2L AELR

The Quantum® ELM2L combines an impressive 32-ft lighting spread with low-profile design and energy-saving performance. Fixed Optic model ELM-2LF also available with AELR for STAR

Optics: (2) 1.2W LED lamp heads. Aimable or Fixed Lamp and Remote Head options.

Mounting: Wall or Ceiling Mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with all-inclusive lamp, reflector and lens assembly.

Battery: Long-life Ni-Cad or Lithium LiFePO$_4$ options provide 90 minute operation

Temp: 10° to 40°C indoor, damp location rated. Wet Location option.

Voltage: Multiple voltage models available

Warranty: 5-year (limited)

ELM4L / ELM6L AELR

The Quantum® ELM4L and ELM6L deliver exceptional lighting output to meet foot- candle levels from heights of up to 24 ft and distances up to 76 ft.

Optics: (2) 3.3W (4L) or (2) 5.3W (6L) LED lamp heads with unique track-and swivel arrangement.

Mounting: Wall or Ceiling Mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with all-inclusive lamp, reflector and lens assembly.

Battery: Long-life Ni-Cad or Lithium LiFePO$_4$ models provide 90 minute operation

Temp: 10° to 40°C indoor, damp location rated. Wet Location option.

Voltage: Multiple voltage models available

Warranty: 5-year (limited)

INDL AELR

The INDL provides several levels of egress illumination in a heavy duty yet lightweight design for wet locations.

Optics: Track and swivel LED lamp heads offer 640, 1100, or 2200 lumen levels.

Mounting: Wall Mount

Construction: Gray impact-resistant, flame-rated thermoplastic design with UV-stable resin to resist discoloration.

Battery: Maintenance-free Lithium Iron Phosphate (LiFePO$_4$).

Temp: 0° to 50°C
Cold Weather option: -30° to 50°C

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

EXTL AELR

The EXTL provides several levels of egress illumination in a NEMA 4X enclosure for added protection against debris and moisture in hose-down environments.

Optics: Track and swivel LED lamp heads offer 640, 1100, or 2200 lumen levels.

Mounting: Wall Mount

Construction: Gray impact-resistant, flame-rated thermoplastic design with UV-stable resin to resist discoloration.

Battery: Maintenance-free Lithium Iron Phosphate (LiFePO$_4$).

Temp: 0° to 50°C
Cold Weather option: -30° to 50°C

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

STAR Self-Testing Automated Reporting is part of the CLAIRITY™+ app suite, available for free for iOS and Android devices in the App Store and Google Play.

Self-Testing Diagnostics with Automated Reporting

UL LISTED UL 924 Listed

TITLE 20 Helps meet CA Title 20 and registered in the MAEDBS database

LITHONIA LIGHTING®

Commercial Solutions

Lithonia Lighting's line of commercial, indoor solutions provide an attractive, reliable selection of emergency lighting units for general commercial space requirements that offer unrivaled photometric performance for both large and small spaces.

Basics™

EU2C

The EU2C provides fully-adjustable, bi-directional emergency illumination suitable for spaces such as stairways or hallways.

Optics: (2) 1W LED lamp heads. Remote Lamp Head option (up to 2).

Mounting: Wall Mount Only

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with snap-fit design.

Battery: Long-life Ni-Cad provides 90 minute emergency operation

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC input

Warranty: 2-year (limited)

- Single Unit Lighting Spread Up to 10-ft
- Remote Head Capability
- Self-Diagnostics Option
- Contractor Select models available

EU2L

The EU2L is a low-profile, bi-directional emergency lighting solution featuring a 14-ft lighting spread.

Optics: (2) .75W LED lamp heads. Remote Lamp Head option.

Mounting: Wall or Ceiling Mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with all-inclusive lamp, reflector and lens assembly.

Battery: Long-life Ni-Cad provides 90 minute emergency operation

Temp: 10° to 40°C indoor, damp location rated

Voltage: 120/277VAC or 120/230VAC

Warranty: 2-year (limited)

- Single Unit Lighting Spread Up to 14-ft
- Remote Head Capability
- Contractor Select models available

Quantum®

ELM2L

The Quantum® ELM2L combines an impressive 32-ft lighting spread with low-profile design and energy-saving performance.

Optics: (2) 1.2W LED lamp heads. Aimable or Fixed Lamp and Remote Head options.

Mounting: Wall or Ceiling Mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with all-inclusive lamp, reflector and lens assembly.

Battery: Long-life Ni-Cad or Lithium $LiFePO_4$ options provide 90 minute operation

Temp: 10° to 40°C indoor, damp location rated. Wet Location option.

Voltage: Multiple voltage models available

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 32-ft
- Remote Head Capability
- Self-Diagnostics and Remote Test Option
- Available for STAR. See Page 25.
- Contractor Select models available

ELM4L / ELM6L

The Quantum® ELM4L and ELM6L deliver exceptional lighting output to meet foot-candle levels from heights of up to 24 ft and distances up to 76 ft.

Optics: (2) 3.3W (4L) or (2) 5.3W (6L) LED lamp heads with unique track-and swivel arrangement.

Mounting: Wall or Ceiling Mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with all-inclusive lamp, reflector and lens assembly.

Battery: Long-life Ni-Cad or Lithium $LiFePO_4$ models provide 90 minute operation

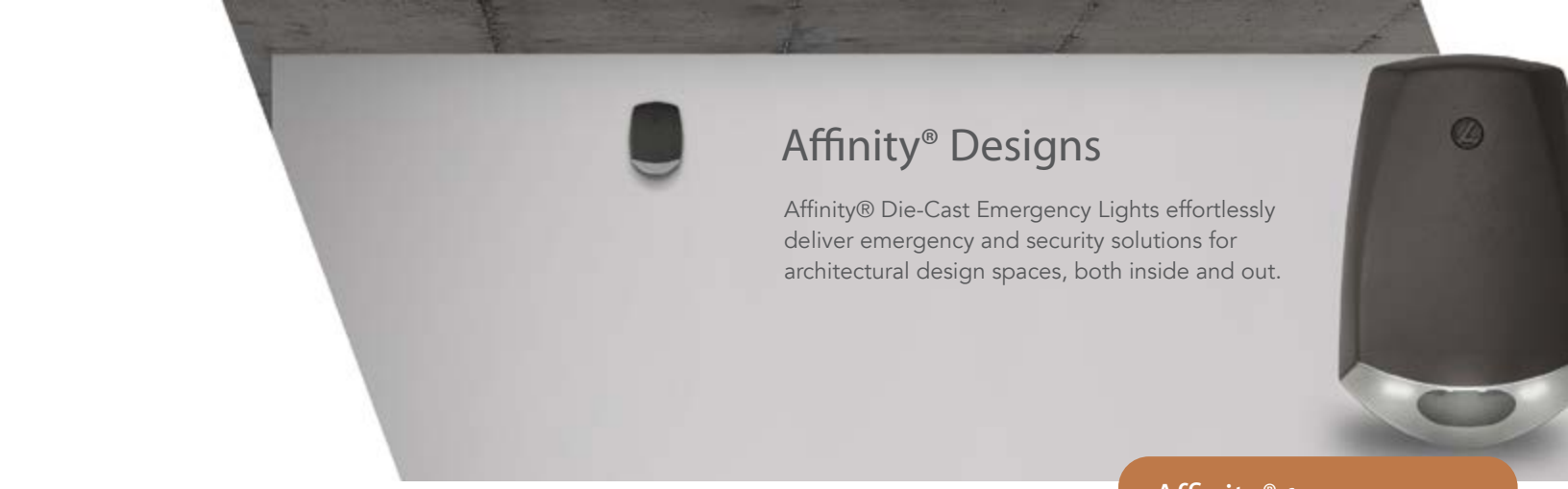
Temp: 10° to 40°C indoor, damp location rated. Wet Location option.

Voltage: Multiple voltage models available

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 60 to 76-ft
- Up to 24 ft Mounting Height
- Remote Head Capability
- Self-Diagnostics and Remote Test Option
- Available for STAR. See Page 25.
- Contractor Select models available

Products are UL 924 Listed and Registered in the CA Title 20 MAEDBS Database



Affinity® Designs

Affinity® Die-Cast Emergency Lights effortlessly deliver emergency and security solutions for architectural design spaces, both inside and out.

AFB

The AFB Affinity Basic provides 225 lumens in both normally-on and emergency modes with a 26-ft lighting spread.

Optics: Long-life LED. Normally-Off Remote Lamp Head option.

Mounting: Wall Mount

Construction: Die-cast aluminum available in white and dark bronze powder-coat.

Battery: Ni-Cad or Lithium $LiFePO_4$ models provide 90 minute operation

Temp: 0° to 50°C wet location rated. -30° to 50°C Cold Weather optional.

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 26-ft
- Self-Diagnostics and Remote Test Option
- Photocell Function Options
- Cold Weather Option
- Buy American Option

AFO

The AFO Affinity Oval delivers 1275 lumens for normal security lighting and 350 lumens during emergency. Includes photocell.

Optics: Long-life LED

Mounting: Wall Mount

Construction: Die-cast aluminum available in white and dark bronze powder-coat.

Battery: Long-life Ni-Cad provides 90 minute emergency operation

Temp: 0° to 50°C wet location rated. -30° to 50°C Cold Weather optional.

Voltage: 120-277VAC, 50/60Hz input

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 26-ft
- Self-Diagnostics
- Photocell Function Included
- Cold Weather Option

AFF

The AFF Affinity Premium offers extensive 62-ft spread and patented forward throw options at 635 lumens in both normal and emergency modes.

Optics: Long-life LED. Normally-Off Remote Lamp Head option. Forward Throw configurable.

Mounting: Wall Mount

Construction: Die-cast aluminum available in white or dark bronze powder-coat or natural aluminum.

Battery: Lithium $LiFePO_4$ battery provides 90 minute operation

Temp: 0° to 50°C wet location rated. -30° to 50°C Cold Weather optional.

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 62-ft
- Self-Diagnostics and Remote Test
- Photocell Function Options
- Cold Weather Option
- Buy American Option

Affinity® for Architecture

Finished Look

Sleek, low-profile designs of Affinity Emergency Lights provide the discreet appearance that takes your architectural environment into consideration. White, bronze, and natural aluminum finishes complement interiors and exteriors without compromising emergency performance.

Die-Cast Design

The die-cast aluminum design provides both aesthetic appeal for indoors and added durability for outdoor emergency lighting. With standard wet location ratings, extended temperature performance, and cold-weather options, Affinity offers attractive and capable solutions for facility exteriors.

Security Simplified

Affinity Emergency Lights also offer photocell control for added security functionality in outdoor applications. Photocell sensing allows the Affinity to activate in hours of darkness for general security lighting. Additionally, Affinity designs offer forward and wide throw optics that deliver optimal emergency lighting for outdoor egress away from the building.

Products are UL 924 Listed and Registered in the CA Title 20 MAEDBS Database

LITHONIA LIGHTING®

Industrial Performance

For emergency lighting in more demanding environments, Lithonia Lighting provides steel cabinet, wet-location rated, NEMA 4X, IP66, and NSF-rated models that deliver added protection and impressive illumination options.

TCU

The TCU offers two levels of performance in a durable steel cabinet for **120-347VAC** project requirements.

Optics:
High-performance LED lampheads delivering 371 or 775 lumens

Mounting: Wall Mount

Construction: 20-gauge steel housing with white finish.

Battery:
9.6V Nickel Metal Hydride

Temp: 0° to 40°C

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 56-ft
- Remote Head Capability
- City of Chicago Approved
- Registered in the CA Title 20 MAEDBS database

ELT

The ELT features a durable steel cabinet with extensive selection of lamp wattages for desired light output.

Optics:
Incandescent and halogen lamp options from 16W to 275W

Mounting: Wall Mount

Construction: 18-gauge steel housing with tan finish.

Battery: Maintenance-free Sealed Lead-Acid (SLA) battery provide 90 minute operation. Ni-Cad option on select models.

Temp: 15° to 32°C

Voltage: 120/277VAC, 50/60Hz input

Warranty: 3-year (limited)

- 16W to 275W Brightness Options
- Registered in the CA Title 20 MAEDBS database

WLTU LED

WLTU unit equipment provides emergency lighting in wet or damp locations and in extended temp applications.

Optics:
Incandescent PAR36 style (7.2W) and LED (1.9W) lamp options.

Mounting: Wall Mount

Construction: Gray, engineering-grade impact-resistant thermoplastic housing.

Battery: Maintenance-free Sealed Lead-Acid (SLA) battery (Incandescent) or Ni-Cad battery (LED) provide 90 minute operation.

Temp: 5° to 50°C (SLA), 0° to 50°C (Ni-Cad)

Voltage: 120/277VAC, 50/60Hz input

Warranty: 3-year (SLA), 5-Year (Ni-Cad)

- Single Unit Lighting Spread Up to 20-ft
- Wet Location
- Remote Head Capability

Products are UL 924 Listed

Indura®

Indura exemplifies craftsmanship in both design and duty, delivering powerful egress lighting in a lightweight yet rugged enclosure.

Available for STAR

See Page 25

INDL

The INDL provides several levels of egress illumination in a heavy duty yet lightweight design for wet locations.

Optics: Track and swivel LED lamp heads offer 640, 1100, or 2200 lumen levels.

Mounting: Wall Mount

Construction: Gray impact-resistant, flame-rated thermoplastic design with UV-stable resin to resist discoloration.

Battery: Maintenance-free $LiFePO_4$

Temp: 0° to 50°C
Cold Weather option: -30° to 50°C

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 124-ft
- Wet Location
- Remote Head Capability
- Self-Diagnostics / Remote Test
- Cold Weather Option

EXTL

The EXTL provides several levels of egress illumination in a NEMA 4X enclosure for added protection against debris and moisture in hose-down environments.

Optics: Track and swivel LED lamp heads offer 640, 1100, or 2200 lumen levels.

Mounting: Wall Mount

Construction: Gray impact-resistant, flame-rated thermoplastic design with UV-stable resin to resist discoloration.

Battery: Maintenance-free $LiFePO_4$

Temp: 0° to 50°C; Cold Weather option: -30° to 50°C

Voltage: 120-347VAC, 50/60Hz input

Warranty: 5-year (limited)

- Single Unit Lighting Spread Up to 110-ft
- IP66 and NEMA 4X Protection against moisture and debris
- NSF Listed
- Remote Head Capability
- Self-Diagnostics / Remote Test
- Cold Weather Option
- Buy American Option

Built to Perform

Indura® Emergency Lights combine impressive emergency functionality with sleek, vertical design. The vertical mounting footprint enables Indura models to install easily onto columns and unistruts to deliver emergency lighting up to 124 feet wide and from heights up to 40 feet.

Durable Enclosure

The Indura Series features an impact resistant thermoplastic enclosure designed to resist scratches, corrosion, and discoloration. Engineered for wet locations, with added NEMA 4X ingress protection with the Indura EXTL.

Versatile Brilliance

Powerful dual LED lamp heads provide three levels of desired illumination - 640, 1100, or 2200 lumens - and feature track and swivel design for adjusting to your egress requirements.

Compact Design

The Indura features advance lithium battery technology for optimal performance in the field while significantly reducing both size and weight. The internal battery is capable of operating INDLRE and EXTLRE remote lamp heads for added functionality.

Products are UL 924 Listed and Registered in the CA Title 20 MAEDBS Database

LITHONIA LIGHTING®

Remote Lamps

Remote Lamps bring added versatility and functionality to battery-powered Lithonia Lighting® Exit Signs and Emergency Lights. Bring emergency lighting to building's exterior where environmental conditions prevent the use of standard battery designs.

Remote Lamps are offered in a variety of output levels and design styles to maintain consistent appearance and performance along the facility's indoor and outdoor paths of egress.

In this Section:

Remotes contain no batteries, making them a cost-effective means of expanding emergency capability.

Select remotes are compatible with self-testing/self-diagnostic emergency lights and exit signs.

Single or Twin Lamp Head options provide optimal egress lighting levels.

Remotes bring emergency lighting functionality to demanding environments, such as wet or freezing locations.

Indoor Basics & Performance Remotes

Emergency lighting system for the path of egress. Available in both single and dual lamp head models, these units feature easily-adjustable lamps for optimal emergency lighting.

ERE RD

The ERE RD features single or twin round-head lamps designed to operate in conjunction with EU2L emergency light models.

Optics: Round LED heads, 0.75W / lamp

Output: 75 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with white or black finish.

DC Voltage Compatibility: 3.6V

Temp: 10° to 40°C indoor, damp location rated

Warranty: 2-year (limited)

Designed for	Compatible with
• EU2L • ECC	• EU2C • ECC R/G • ECR / ECG (LED)

ERE SQ

The ERE SQ features single or twin square-head lamps designed to complement EU2C emergency light installations.

Optics: Square LED lampheads, 1W per lamp

Output: 90 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with white or black finish.

DC Voltage Compatibility: 3.6V - 12V

Temp: 10° to 40°C indoor, damp location rated

Warranty: 2-year (limited)

Designed for	Compatible with
• EU2C / EU2L • ECC • ECR / ECG (LED) • LHQM • TCU • ECRM	• ELM2L / ELM2LF • ELM4L / ELM6L • INDL • EXTL • ELT

ELMRE LP

ELMRE LP remotes complement your Quantum® emergency model installations and feature a linear light throw.

Optics: Single/twin round heads, 1.2W ea.

Output: 110 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Low-profile contemporary design is high-impact, flame-retardant, thermoplastic housing. White or black finish.

DC Voltage Compatibility: 5V - 30V

Temp: 10° to 40°C indoor, damp location

Warranty: 5-year (limited)

Designed for	Compatible with
• ELM2L / 4L / 6L • LHQM LED • INDL • EXTL	• ECR / ECG (LED) • ELT • TCU • LHQM

ELMRE SP

ELMRE SP remotes complement your Quantum® emergency model installations. Features spotlight distribution.

Optics: Single/twin heads, up to 5.3W ea.

Output: 320-550 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Low-profile contemporary design is high-impact, flame-retardant, thermoplastic housing. White or black finish.

DC Voltage Compatibility: 5V - 30V

Temp: 10° to 40°C indoor, damp location

Warranty: 5-year (limited)

Designed for	Compatible with
• ELM2L / 4L / 6L • LHQM LED • INDL • EXTL	• ECR / ECG (LED) • ELT • TCU • LHQM

Fully-Adjustable Lamp Head Function

Fully-Adjustable Lamp Head Function

Lamp Head Design for Linear Lighting Pattern

Fully-Adjustable Lamp Head Function

Self-Diagnostic Compatible

Buy American Option

Lamp Head Design for Spotlight Pattern

Fully-Adjustable Lamp Head Function

Self-Diagnostic Compatible

Buy American Option

Products are UL 924 Listed

Outdoor Basics Remotes

Emergency lighting is not just for indoor settings! Single and twin head options feature fully-articulating lamps to adjust to path of egress requirements for outdoor and wet location requirements.

ERE WP RD

The ERE WP RD single or twin round-head lamps are rated for use in wet or outdoor applications.

Optics: Round LED heads, 0.75W / lamp

Output: 75 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Engineering grade, high-impact resistant thermoplastic, sealed and gasketed housing.

DC Voltage Compatibility: 3.6V

Temp: -30° to 50°C indoor, damp location rated

Warranty: 2-year (limited)

Designed for	Compatible with
• EU2L • ECC	• EU2C • ECC R/G • ECR / ECG (LED)

Fully-Adjustable Lamp Head Function

Outdoor / Wet Location Rated

ERE WP SQ

ERE WP SQ provide weather-proof single and twin lamp remote options for most Lithonia Basics™ emergency lights and exit signs.

Optics: Square LED lampheads, 1W per lamp

Output: 90 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Injection-molded, high-impact, flame-retardant, thermoplastic housing with black or gray finish.

DC Voltage Compatibility: 3.6V - 12V

Temp: -20° to 50°C wet location rated

Warranty: 2-year (limited)

Designed for	Compatible with
• EU2C / EU2L • ECC • ECR / ECG (LED) • LHQM • TCU • ECRM	• ELM2L / ELM2LF • ELM4L / ELM6L • INDL • EXTL • ELT

Fully-Adjustable Lamp Head Function

Outdoor / Wet Location Rated

Products are UL 924 Listed UL LISTED

Outdoor Performance

Extend emergency lighting to outdoor paths of egress with remote lamps designed for lower temperatures and wet location requirements.

ELMRW LP

ELMRW LP remotes provide wet location capability for Quantum® installations and feature a linear light throw.

Optics: Single/twin round heads, 1.2W ea.

Output: 110 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Die-cast, wet-location housing with powder-coat finish. Dark bronze, black, white, or natural aluminum.

DC Voltage Compatibility: 8V - 30V

Temp: -40° to 55°C wet location listed

Warranty: 5-year (limited)

Designed for	Compatible with
• ELM2L / 2LF • ELM4L / 6L • LHQM LED	• ECR / ECG (LED) • ELT50 / ELT125 ELT180 / ELT275 • INDL / EXTL

- Outdoor / Wet Location Rated
- Lamp Head Design for Linear Lighting Pattern
- Fully-Adjustable Lamp Head Function
- Self-Diagnostic Compatible

ELMRW SP

ELMRW SP remotes provide wet location capability for Quantum® installations. Features spotlight distribution.

Optics: Single/twin heads, 3.3W ea.

Output: 320 lumens per lamp

Mounting: Wall mount or ceiling mount

Construction: Die-cast, wet-location housing with powder-coat finish. Dark bronze, black, white, or natural aluminum.

DC Voltage Compatibility: 8V - 30V

Temp: -40° to 55°C wet location listed

Warranty: 5-year (limited)

Designed for	Compatible with
• ELM2L / 4L / 6L • LHQM LED • INDL / EXTL	• ECR / ECG (LED) • ELT • TCU • LHQM

- Outdoor / Wet Location Rated
- Lamp Head Design for Spotlight Pattern
- Fully-Adjustable Lamp Head Function
- Self-Diagnostic Compatible
- City of Chicago Approved

AFF OELR

The AFF OELR works in conjunction with Affinity® AFF emergency lights for expanded remote lighting functionality.

Optics: Wide or forward throw LED, 8.5W

Output: Up to 635 lumens

Mounting: Wall mount or ceiling mount

Construction: Die-cast, wet-location housing with powder-coat finish. Dark bronze, black, white, or natural aluminum.

DC Voltage Compatibility: 8V - 30V

Temp: -40° to 50°C wet location listed

Warranty: 5-year (limited)

Designed for	Compatible with
• INDL / EXTL • ELM6L • LHQM LED	• ECR / ECG (LED) • ELT

- Outdoor / Wet Location Rated
- Self-Diagnostic Compatible
- Buy American Option

AFB OELR

The AFB OELR works with Affinity® AFB emergency lights for expanded remote lighting functionality.

Optics: Wide throw LED, 2.6W

Output: 225 lumens

Mounting: Wall mount or ceiling mount

Construction: Die-cast aluminum available in white and dark bronze powder-coat.

DC Voltage Compatibility: 8V - 30V

Temp: -40° to 50°C wet location listed

Warranty: 5-year (limited)

Designed for	Compatible with
• INDL / EXTL • ELM6L • LHQM LED	• ECR / ECG (LED) • ELT

- Outdoor / Wet Location Rated
- Self-Diagnostic Compatible
- Buy American Option

Products are UL 924 Listed

Industrial and Heavy Duty Solutions

Indura® and Hazardous Location remotes provide confident performance in the most demanding of applications...

INDRE

The INDRE delivers optimal emergency lighting for light and heavy environments, including wet location.

Optics: Dual or single LED, up to 11W

Output: 320, 550, or 1100 lumens

Mounting: Wall mount or ceiling mount

Construction: Impact-resistant thermoplastic housing with die-cast base.

DC Voltage Compatibility: 7V - 30V

Temp: -30° to 50°C wet location listed

Warranty: 5-year (limited)

Designed for	Compatible with
• INDL	• ECR / ECG (LED)
• EXTL	• ELT
• ELM4L / 6L	

Outdoor / Wet Location Rated

Self-Diagnostic Compatible

Buy American Option

EXTLRE

The EXTLRE delivers optimal emergency lighting for extreme location demands.

Optics: Dual or single LED, up to 11W

Output: 320, 550, or 1100 lumens

Mounting: Wall mount or ceiling mount

Construction: Impact-resistant thermoplastic housing and shield with die-cast base.

DC Voltage Compatibility: 7V - 30V

Temp: -30° to 50°C wet location listed

Warranty: 5-year (limited)

Designed for	Compatible with
• INDL	• ECR / ECG (LED)
• EXTL	• ELT
• ELM4L / 6L	

IP66 and NEMA 4X Protection against moisture and debris

NSF Listed

Self-Diagnostic Compatible

Buy American Option

Products are UL 924 Listed

Remote Reference Chart

Select Lithonia Lighting® exit signs and emergency lights are capable of operating remote units. To do so, the battery supply must be properly rated to power the additional remotes. Refer to the chart below for recommended combinations and remote quantities.

[1] Options include outdoor rated, weather-proof remote models unless noted otherwise.

ERE Round Single Lamp[1]

ERE Round Twin Lamp[1]

ERE Square Single Lamp[1]

ERE Square Twin Lamp[1]

ERE WP Round Single Lamp[1]

ERE WP Round Twin Lamp[1]

ERE WP Square Single Lamp[1]

ERE WP Square Twin Lamp[1]

Exit Signs

ECRG SQ	**ECRG SQ HO**			ERE SGL SQ (1)	ERE T SQ (1)
	ECG LED HO			ERE SGL SQ (1)	ERE T SQ (1)
ECRG RD/ECC	**ECRG RD HO**	ERE SGL RD (3)	ERE T RD (1)	ERE SGL SQ (2)	ERE T SQ (1)
	ECC LLH	ERE SGL RD (2)	ERE T RD (1)	ERE SGL SQ (1)	
	ECC REM LLH	ERE SGL RD (5)	ERE T RD (2)	ERE SGL SQ (4)	ERE T SQ (2)
ECBR / ECBG	**ECBR**			ERE SGL SQ (2)	ERE T SQ (1)
	ECBG			ERE SGL SQ (1)	ERE T SQ (2)
LHQM	**LHQM LED HO**			ERE SGL SQ (1)	ERE T SQ (1)

Emergency Lights

EU2C	**EU2C HO**	ERE SGL WP RD (3)	ERE T WP RD (2)	ERE SGL SQ (2)	ERE T SQ (1)
EU2L	**EU2L REM**	ERE SGL RD (2)	ERE T RD (1)	ERE SGL WP SQ (1)	
ELM2L	**ELM2L**				
ELM4L	**ELM4L LTP**				
	ELM4L LTP HO				
	ELM4L LTP EHO				
ELM6L	**ELM6L LTP HO**				
	ELM6L LTP EHO				
	ELM6L LLH LTP				
	ELM6L LLH LTP HO				
	ELM6L LLH LPT EHO				
WLTU LED	**WLTU**			ERE SGL SQ (1)	ERE T SQ (1)
INDL / EXTL	**INDL or EXTL SP640L**				
	INDL or EXTL SP640L HO				
	INDL or EXTL SP640L EHO				
	INDL or EXTL SP1100L HO				
	INDL or EXTL SP1100L EHO				
	INDL or EXTL SP2200L EHO				
TCU	**TCU 350 L**			ERE SGL SQ (2)	ERE T SQ (1)
	TCU 750L HO			ERE SGL SQ (6)	ERE T SQ (3)

Additional pairings of Lithonia Lighting® exit signs and emergency lights are possible. Contact our Technical Services team for questions regarding other remote combinations possibilities.

ELMRE Round Single Lamp[1]

ELMRE Round Twin Lamp[1]

AFB OELR

AFF OELR

INDRE / EXTLRE SP640L

INDRE / EXTLRE SP1100L

INDRE / EXTLRE SP2200L

ELMRW Round Single Lamp[1]

ELMRW Round Twin Lamp[1]

ELMRE SGL (1)	ELMRE T (1)					

ELMRE SGL (2)*	ELMRE T (1)*					
ELMRE SGL (3)*	ELMRE T (1)*					
ELMRE SGL (12)*	ELMRE T (6)*	AFB OELR (1)	AFF OELR (1)			
ELMRE SGL (21)*	ELMRE T (10)*	AFB OELR (1)	AFF OELR (1)			
ELMRE SGL (9)*	ELMRE T (4)*	AFB OELR (1)	AFF OELR (1)			
ELMRE SGL (17)*	ELMRE T (8)*	AFB OELR (1)	AFF OELR (1)			
ELMRE SGL (9)*	ELMRE T (4)*	AFB OELR (1)	AFF OELR (1)			
ELMRE SGL (18)*	ELMRE T (9)*	AFB OELR (1)	AFF OELR (1)			
ELMRE SGL (26)*	ELMRE T (13)*	AFB OELR (1)	AFF OELR (1)			
				SP640L (1)		
		AFB OELR (1)	AFF OELR (1)	SP640L (4)	SP1100L (2)	SP2200L (1)
		AFB OELR (1)	AFF OELR (1)	SP640L (7)	SP1100L (4)	SP1100L (2)
				SP640L (3)	SP1100L (1)	
		AFB OELR (1)	AFF OELR (1)	SP640L (6)	SP1100L (4)	SP1100L (1)
		AFB OELR (1)	AFF OELR (1)	SP640L (3)	SP1100L (1)	
ELMRW SGL (2)*	ELMRW T (1)*					
ELMRW SGL (4)*	ELMRW T (2)*					

*Max. remote quantity based on lowest ELM lamp wattage option. RW may not be available on highest lamp head wattage.

LED Emergency Drivers

IOTA® Emergency Drivers provide confident battery back-up to your existing individual fixtures, enabling them to deliver emergency egress lighting where you need it and at the illumination level you desire.

Emergency LED drivers wire in conjunction with the normal LED driver and LED board. If normal power to the AC driver fails, the emergency driver activates and powers the LED array directly from the emergency driver's battery supply.

In this Section:

True Constant Power Performance delivers unwavering output wattage, resulting in non-diminishing illumination for the full emergency runtime.

Auto-Sense Forward Voltage automatically detects the needed Class 2 voltage to operate the LED array. Non-Class 2 designs also available.

UL Listed for both Field and Factory Installation in U.S. and Canada

Models available with or without flexible metal conduit to accommodate individual fixture requirements.

Solutions for wireless communication to the STAR Self-Testing Automated Reporting app.

Enhanced performance options such as self-diagnostics, high-efficiency models certified for CA Title 20, and more.

Life Safety Code Excerpts

Below are pertinent sections of the Life Safety Code concerning the use, maintenance, and testing of emergency lighting equipment. Referencing local state and municipal safety codes is also advised, as these may supersede national requirements.

"7.9.2.1 Emergency illumination shall be provided for a minimum of 1 1/2 hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 ft-candle (10.8 lux) and, at any point, not less than 0.1 ft-candle (1.1 lux), measured along the path of egress at floor level. Illumination levels shall be permitted to decline to not less than an average of 0.6 ft-candle (6.5 lux) and, at any point, not less than 0.06 ft-candle (0.65 lux) at the end of the 1 1/2 hours. A maximum-to-minimum illumination shall not exceed a ratio of 40 to 1."

Periodic Testing of Emergency Lighting Equipment

7.9.3.1.1 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Functional testing shall be conducted monthly, with a minimum of 3 weeks and a maximum of 5 weeks between tests, for not less than 30 seconds, except as otherwise permitted by 7.9.3.1.3.

(2) The test interval shall be permitted to be extended beyond 30 days with the approval of the authority having jurisdiction.

(3) Functional testing shall be conducted annually for a minimum of 1 1/2 hours if the emergency lighting system is battery powered.

(4) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1 (1) and 7.9.3.1.1 (3).

(5) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

Testing of Self-Diagnostic Equipment

7.9.3.1.2 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.

(2) Not less than once every 30 days, self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform a test with a duration of a minimum of 30 seconds and a diagnostic routine.

(3) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.

(4) A visual inspection shall be performed at intervals not exceeding 30 days.

(5) Functional testing shall be conducted annually for a minimum of 1 1/2 hours.

(6) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2 hour test.

(7) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction."

Primary take-aways:	What this means for emergency drivers:
An emergency fixture must be able to provide no less than 90 minutes of emergency illumination.	All IOTA® emergency drivers are engineered to run greater than 90 minutes with an included operating margin to account for typical reduced battery performance over the lifetime of the unit.
The emergency illumination must maintain a minimum average level of 1 ft-candle initially, and .6 ft candles at the end of the 90 minutes.	The amount of lumens required from a fixture in order to meet ft-candle requirements will vary, therefore IOTA offers a wide range of wattage packages to achieve the needed illumination levels for different situations. IOTA Constant Power designs provide non-diminishing illumination for the full runtime, eliminating concerns of dropping below required minimum levels.
An emergency battery must have a means to be tested and inspected for system readiness.	All IOTA emergency drivers include a single-piece test switch and illuminating charge indicator accessory for physical testing of the unit as needed.
Testing must include a 30-second monthly test and a 90-minute annual test.	Testing of IOTA units can be achieved through manual activation of the test switch or through the use of automatic self-testing programming on select units.
Written records of these tests must be maintained for reference and inspection as needed.	Self-Testing/Self-Diagnostic emergency drivers minimize the labor involved in maintaining Life Safety requirements, reducing monthly testing to only a visual inspection for the written record. STAR reporting options simplify compliance by providing electronic data collection and recording.

Application Concept

In this example, emergency drivers are located at strategic points along the interior paths of egress, exit points, and outdoor paths of egress. Emergency lighting at various egress points can be tailored to the needs of the occupants and preferences of the facility owner.

Mid-Size Office Building
Approx. 10,000 sq. ft

Lumen Precision

IOTA's selection of emergency drivers offers a variety of wattage levels, electrical specifications, and mounting configurations to adapt to most any egress requirement. Using emergency drivers as the primary emergency lighting solution allows the specifier to select the optimal emergency option for each illuminated space.

Emergency Lighting and SPOF

Fixture-level solutions like emergency drivers provide an additional safeguard against the risks of SPOF (single-point-of-failure.) By providing independent sources of emergency power, it makes it highly unlikely that a facility will ever be completely without egress lighting.

1 ILB CP15 HE SD

The elevated ceiling and architectural fixtures in the lobby benefit from a capable combination of compact design and high emergency lumen output. Self-diagnostics simplify the testing requirements for these raised fixtures.

2 ILB CP12 or ILB CP10

12W or 10W emergency drivers in larger, open spaces allow for maximum distancing between emergency fixtures while meeting Life Safety ft-candle minimums.

3 ILBSL CP07

This area uses a streamlined LED fixture design that is well-suited for the narrow profile of the ILBSL CP07. The 7W output is perfect for illuminating a medium-size space.

4 ILB CP05

Smaller spaces can take advantage of lesser output driver solutions. Here, the ILB CP05 delivers the proper level of illumination for occupants exiting the room.

5 ILB CP18 CW

The outdoor-rated ILB CP18 CW provides emergency illumination along the outdoor paths of egress, allowing occupants to proceed to a safe distance from the building.

Take Advantage of Luminaire Efficacy

The Life Safety Code requires an average of 1 ft-candle (10.8 lux) along the path of egress. Since IOTA emergency drivers themselves are not the light source providing the emergency illumination, they are not classified by 'lumen output' but rather the amount of power (wattage) they will provide to the light source in the emergency mode. This power rating will work in conjunction with the luminaire's efficacy (lumens per watt) to produce a particular lumen level. The higher the wattage of the emergency driver, the higher the ultimate lumen output. Additionally, the higher the efficacy of the fixture, the higher the ultimate lumen output.

Below are some examples of how emergency driver wattage and luminaire efficacy work together to produce lumen values:

Emergency Driver Wattage	Luminaire Efficacy	Lumen Output
5 Watts	110 lumens / watt	550 lumens
7 Watts	120 lumens / watt	840 lumens
10 Watts	120 lumens / watt	1200 lumens
12 Watts	100 lumens / watt	1200 lumens

In this example, a lower wattage driver is able to deliver the same amount of lumens as a higher wattage unit because it was paired with a more efficient fixture. Knowing your luminaire's efficacy can add potential savings by selecting the optimal emergency driver.

Calculating Lumen Performance

ILB CP Constant Power performance simplifies the specification process by making it easy to determine the actual lumen output. To calculate lumen performance, multiple your luminaire's published efficacy (lumens per watt) by the output wattage of the ILB CP emergency driver.

Formula: **L/W x CP Wattage = EM Lumens**

Example: **119 x 12 = 1428 Lumens**

Insert indicated efficacy from luminaire specification...

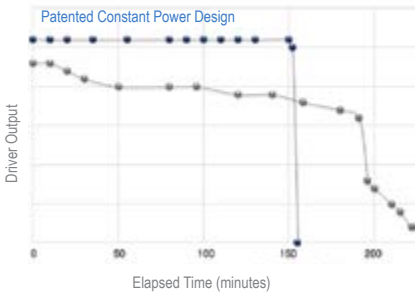
Insert the wattage of your IOTA ILB CP unit...

and calculate!

With Constant Power, the final lumen calculation is the full lumen value during Minute 1 through Minute 90 of the emergency runtime. Therefore, it is not necessary to purchase a higher wattage unit to account for diminishing light output (ie. specify a 7-watt emergency driver to ensure it is delivering 5 watts at the end of the required 90 minute runtime.)

Constant Power vs. Constant Current

Constant Power provides useful advantages over constant current emergency driver options. Power (or wattage) is a measure of ***volts* multiplied by *amperage***. Every LED array requires a specific voltage in order to illuminate (which can vary significantly between board designs.) Since the LED dictates the operating voltage, the resulting wattage or current must adjust. With constant current drivers, the current remains fixed, forcing the wattage to adjust. Wattage is what determines lumen output, so if the wattage varies, so will your light output. *IOTA Constant Power emergency drivers adjust the operating current, so that the wattage - and light output - never changes from spec, regardless of the LED component design.*



Two primary advantages of Constant Power design are:

- **The emergency lumen output of the luminaire is fixed, making it easier to calculate and select the needed wattage for meeting ft-candle requirements.**
- **The lumen levels will not diminish during runtime - the ft-candles delivered at Minute 1 are the same during Minute 90, with no need to 'oversize' the emergency driver to avoid dropping below the Life Safety required minimums.**

Even though the initial outputs are similar, the "CP" design maintains the emergency output for the full required runtime while illumination from the constant current product declines.

Auto-Sense: A Simpler Way to Meet Forward Voltage Requirements

Every LED board or array requires a specific DC voltage in order to illuminate the LED diodes. While different boards may have the same number of diodes or the same level of light output, the required DC voltage can, and often will, differ based on the board design. Generally, the forward voltage requirement to operate an LED board falls within the Class 2 (low voltage) range of 10-60VDC. Some luminaire designs require a higher voltage in the Class 1 range (greater than 60VDC).

For Class 2 luminaires, IOTA emergency drivers feature an advanced Auto-Sense forward voltage design that detects the required voltage within the 10-60VDC range and supplies the necessary voltage. The full 10-60VDC range means designers do not need to verify the forward voltage requirements for their Class 2 fixture to confirm electrical compatibility.

For LEDs with forward voltages greater than 60VDC, IOTA offers "Non-Class 2" Auto-Sense designs compatible between 50 to 250VDC (see our "HV" product offerings on page 45.)

Class 2 (10-60VDC) 

Auto-adjusting 10-60 VDC output accommodates a full range of Class 2 forward voltage LED designs, eliminating the need for specific voltage product SKUs.

Non-Class 2 (50-250VDC) 

"HV" output IOTA designs deliver a non-Class 2 forward voltage of up to 250VDC depending on model.

- **IOTA's wide Class 2 Auto-Sense ensures compatibility with any 10-60VDC luminaire, as opposed to emergency driver models with 'split' forward voltage options that require two different models to operate different voltage ranges.**

Additional Design Advantages...

Surge Protection

Repeated exposure to electrical surges (transients) has a detrimental effect on electrical components, resulting in shortened product life. IOTA safeguards against premature failure of critical Life Safety equipment by designing and testing our emergency LED drivers to withstand extensive electrical transients per ANSI/EEE C62.41.2-2002

Thermal Performance

Lifespan of electronic equipment (specifically batteries) is reduced by half for every 10°C above normal ambient temperature. Having just one component overstressed by excessive temperatures within the fixture or ceiling space jeopardizes Life Safety functionality. IOTA emergency drivers are designed for optimal performance in high-temperature, high-humidity conditions.

Responsible Design

IOTA emergency drivers are designed and manufactured in compliance with adopted RoHS standards. Every effort is taken to minimize environmental impact by restricting the presence of specified chemicals and substances and by utilizing quality-driven and verified components that support both our commitment to the environment and life safety product performance.

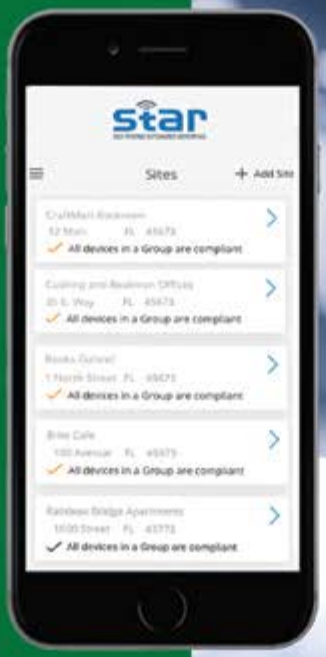
star
SELF-TESTING AUTOMATED REPORTING

Per Life Safety Code, emergency lighting equipment must undergo regular monthly and annual tests to ensure proper emergency operation during a loss of normal power.

Additionally, records of these tests must be maintained for inspection as needed. With the STAR mobile application and STAR-enabled emergency lighting products, meeting these emergency lighting requirements is simpler than ever!

The benefits of using STAR Self-Testing and Automated Reporting include:

- **Removes the need for manual testing of your emergency lighting and exit signage.**
- **Easily view your facility's emergency lighting equipment test data and compliance status on your mobile device.**
- **Export and share PDF records of your compliance reports electronically...no more maintaining cumbersome written records.**



Use the STAR app with our full suite of wireless-enabled emergency lighting solutions:

- **Lithonia Lighting® AELR Exit Signs**
- **Lithonia Lighting® AELR Lighting Units**
- **IOTA® AELR Emergency Drivers**

See the full selection of STAR emergency lighting solutions and find in-depth videos and literature at **www.acuitybrands.com/STAR**.

Wireless-Enabled Emergency Drivers for STAR

IOTA ILB AELR emergency driver designs feature automatic monthly and annual testing and provide wireless connectivity to the STAR mobile app for easily capturing your emergency lighting test data and compliance status.

2022 PROGRESS Report SELECTION

10W Lumen Performance

Patented Constant Power performance means predictable emergency lumens and no lost foot-candles for the full emergency runtime.

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	1000	1000
110 lm/W	1100	1100
120 lm/W	1200	1200
130 lm/W	1300	1300
140 lm/W	1400	1400
150 lm/W	1500	1500

20W Lumen Performance

Patented Constant Power performance means predictable emergency lumens and no lost foot-candles for the full emergency runtime.

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	2000	2000
110 lm/W	2200	2200
120 lm/W	2400	2400
130 lm/W	2600	2600
140 lm/W	2800	2800
150 lm/W	3000	3000

ILB CP10 HE AELR

The ILB CP10 HE AELR offers 10W constant power performance for Class 2 luminaire designs.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 0.1A (@10VDC) - 0.16A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 15.37 x 2.24 x 1.3 in. (mounting center 15.0 in.)

Weight: 4.0 lbs

Certifications: UL 924 Listed for U.S and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified wireless module: FCC ID BRM1, Model BRM1-3

ILB CP20 HE AELR HV

The ILB CP20 HE AELR HV offers 20W constant power performance for non-Class 2 luminaires with 50-200VDC LEDs.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 5.75 Watts (max)

Output (Forward) Voltage Range: 50-200VDC

Output Power: 20 Watts (Constant)

Output Current Range: 0.4A (@50VDC) - 0.1A (@200VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 17.75 x 2.5 x 2.375 in. (mounting center 17.2 in.)

Weight: 6.0 lbs

Certifications: UL 924 Listed for U.S. and Canada. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified wireless module: FCC ID BRM1, Model BRM1-3

- **Self-Testing Diagnostics with Automated Reporting**
- **Auto-Sense Class 2 Compatible with 10-60VDC LED Designs**
- **Helps meet CA Title 20 and registered in the MAEDBS database**

- **Self-Testing Diagnostics with Automated Reporting**
- **Auto-Sense High-Voltage Output 50-200VDC**
- **Helps meet CA Title 20 and registered in the MAEDBS database**

STAR Self-Testing Automated Reporting is part of the CLAIRITY™+ app suite, available for free for iOS and Android devices in the App Store and Google Play.

5W Drivers for Basic Egress

IOTA 5W Emergency Drivers provide constant power solutions in a minimal enclosure - ideal for smaller spaces and standard height ceilings. Constant Power performance is especially advantageous for lower wattage emergency drivers where there is less tolerance for diminishing foot candles.

5W Lumen Performance

Patented Constant Power performance means predictable emergency lumens and no lost foot-candles for the full emergency runtime.

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	500	500
110 lm/W	550	550
120 lm/W	600	600
130 lm/W	650	650
140 lm/W	700	700
150 lm/W	750	750

ILB CP05

The ILB CP05 offers 5W constant power performance in a standard profile enclosure. Available with or without flexible conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 2.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 5 Watts (Constant)

Output Current Range: 0.5A (@10VDC) - 0.08A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 9.5 x 2.4 x 1.5 in. (mounting center 9.0 in.)

Weight: 2.5 lbs (no flex), 3.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Auto-Sense Class 2 Compatible with 10-60VDC LED Designs

Available in Different Mounting Configurations

Contractor Select models available

ILBSL CP05

The ILBSL CP05 features a slim profile enclosure designed for integral installation in narrow compartment spaces.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 2.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 5 Watts (Constant)

Output Current Range: 0.5A (@10VDC) - 0.08A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 16.5 x 1.54 x 1.2 in. (mounting center 16.07 in.)

Weight: 2.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Auto-Sense Class 2 Compatible with 10-60VDC LED Designs

Slim Profile Enclosure

ILB CP05 HE

The ILB CP05 HE includes microprocessor control for high efficiency performance. Meets CA Title 20 energy requirements.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 2.3 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 5 Watts (Constant)

Output Current Range: 0.5A (@10VDC) - 0.08A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 13.88 x 2.2 x 1.2 in. (non-flex model) 14.95 x 2.2 x 1.375 in.(flex model)

Weight: 2.5 lbs (no flex), 3.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

Auto-Sense Class 2 Compatible with 10-60VDC LED Designs

Available in Different Mounting Configurations

Helps meet CA Title 20 and registered in the MAEDBS database

Contractor Select models available

7W Lumen Performance

Patented Constant Power performance means predictable emergency lumens and no lost foot-candles for the full emergency runtime.

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	700	700
110 lm/W	770	770
120 lm/W	840	840
130 lm/W	910	910
140 lm/W	980	980
150 lm/W	1050	1050

8W Lumen Performance

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	800	800
110 lm/W	880	880
120 lm/W	960	960
130 lm/W	1040	1040
140 lm/W	1120	1120
150 lm/W	1200	1200

7W/8W Drivers for Increased Lumen Output

7W and 8W emergency drivers deliver increased emergency lumen options for general egress applications, smaller spaces and standard ceiling heights.

ILB CP07

The ILB CP07 offers 7W constant power performance in a standard profile enclosure with or without flexible conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.5 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 7 Watts (Constant)

Output Current Range: 0.7A (@10VDC) - 0.12A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 13 x 2.2 x 1.25 in. (mounting center 12.6 in.)

Weight: 2.5 lbs (no flex), 3.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Available in Different Mounting Configurations

ILBSL CP07

The ILBSL CP07 features a slim profile enclosure designed for integral installation in narrow compartment spaces.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.5 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 7 Watts (Constant)

Output Current Range: 0.7A (@10VDC) - 0.12A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 22.44 x 1.2 x 1.2 in. (mounting center 22.0 in.)

Weight: 3.0 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Slim Profile Enclosure

ILB CP07 HE

The ILB CP07 HE includes high efficiency performance and meets CA Title 20 energy requirements.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 2.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 7 Watts (Constant)

Output Current Range: 0.7A (@10VDC) - 0.12A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 15.0 x 2.2 x 1.2 in. (non-flex model) 15.37 x 2.24 x 1.3 in.(flex model)

Weight: 3.5 lbs (no flex), 4.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Different Mounting Configurations

ILBSL CP08 HE

The ILBSL CP08 HE features 8W Constant Power in a slim profile enclosure and meets CA Title 20 requirements

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 2.9 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 8 Watts (Constant)

Output Current Range: 0.8A (@10VDC) - 0.13A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hour Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 22.17 x 1.18 x 1.18 in. (mounting center 21.77 in.)

Weight: 2.25 lbs

Certifications: UL 924 Listed for U.S and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Slim Profile Enclosure

10W Spec-Grade Performance

IOTA 10W Emergency Drivers are popular solutions for achieving specification-level performance, featuring significant lumen output with several model options to match almost any application requirement.

10W Lumen Performance

Patented Constant Power performance means predictable emergency lumens and no lost foot-candles for the full emergency runtime.

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	1000	1000
110 lm/W	1100	1100
120 lm/W	1200	1200
130 lm/W	1300	1300
140 lm/W	1400	1400
150 lm/W	1500	1500

ILB CP10

The ILB CP10 offers 10W constant power performance in a standard profile enclosure. Available with or without flexible conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 1.0A (@10VDC) - 0.16A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 13.3 x 2.375 x 1.5 in. (mounting center 12.75 in.)

Weight: 3.5 lbs (no flex), 4.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Available in Different Mounting Configurations
- Contractor Select models available

ILBSL CP10

The ILBSL CP10 features a slim profile enclosure designed for integral installation in narrow compartment spaces.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 1.0A (@10VDC) - 0.16A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 24.17 x 1.2 x 1.2 in. (mounting center 23.78 in.)

Weight: 3.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Slim Profile Enclosure

ILB CP10 HE

The ILB CP10 HE includes microprocessor control for high efficiency performance. Meets CA Title 20 energy requirements.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 1.0A (@10VDC) - 0.16A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 15.37 x 2.24 x 1.3 in. (mounting center 15.0 in.)

Weight: 3.5 lbs (no flex), 4.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Different Mounting Configurations
- Self-Diagnostic Model Available
- Contractor Select models available

ILBSL CP10 HE

The ILBSL CP10 HE includes microprocessor control for high efficiency performance in a slim enclosure. Meets CA Title 20 requirements.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 1.0A (@10VDC) - 0.16A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 26.75 x 1.18 x 1.18 in. (mounting center 26.33 in.)

Weight: 3.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Slim Profile Enclosure

10W Low Profile Designs

Low Profile "LP" Emergency Drivers utilize advanced lithium battery technology to deliver dramatic advantages in reduced size and weight compared to traditional nickel-cadmium designs. These advanced designs include the benefits of constant power output, high-efficiency performance, and automatic monthly and annual self-diagnostics.

ILBLP CP10 HE SD

The ILBLP CP10 HE SD delivers 10W constant power output in a low-profile enclosure with or without flexible conduit. Includes Self-Diagnostics and CA Title 20 performance.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.053A (max)

Output (Forward) Voltage Range: 15-55VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 0.67A (@15VDC) to 0.18A (@55VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate, 24 Hour Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 10.5 x 2.34 x 1.18 in. (mounting center 9.92 x 1.1 in.)

Weight: 1.5 lbs (no flex), 2.5 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Compatible with 15-55VDC LED Designs
- Self-Diagnostics Included
- Helps meet CA Title 20 and registered in the MAEDBS database
- Features AC Activate for simplified Installation
- Available in Different Mounting Configurations

ILBLP CP10 HE SD N

The ILBLP CP10 HE SD N delivers 10W constant power output in a narrow low-profile enclosure with hardwire connections. Includes Self-Diagnostics and CA Title 20 performance.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.10A (max)

Output (Forward) Voltage Range: 15-55VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 0.67A (@15VDC) to 0.18A (@55VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate, 24 Hour Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 16.7 x 1.19 x 1.18 in. (mounting center 16.2 in.)

Weight: 1.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Compatible with 15-55VDC LED Designs
- Self-Diagnostics Included
- Helps meet CA Title 20 and registered in the MAEDBS database
- Features AC Activate for simplified Installation
- Slim Profile Enclosure

ILBLP CP10 HE SD NP

The ILBLP CP10 HE SD NP delivers 10W constant power output in a narrow low-profile enclosure with poke-in wiring terminals. Includes Self-Diagnostics and CA Title 20 performance.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.0 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 1.0A (@10VDC) to 0.167A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate, 24 Hour Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 16.7 x 1.18 x 1.18 in. (mounting center 16.39 in.)

Weight: 1.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Compatible with 15-55VDC LED Designs
- Self-Diagnostics Included
- Helps meet CA Title 20 and registered in the MAEDBS database
- Features AC Activate for simplified Installation
- Slim Profile Enclosure with Poke-In Wiring Terminals

12W / 15W / 20W for Elevated Mounting Heights

IOTA 12W to 20W emergency drivers deliver impressive lumen performance for elevated fixtures, raised ceilings, and larger egress spaces. Where high performance is a requirement, these emergency driver solutions deliver the non-diminishing illumination that is ideal for these longer distances and wider spreads.

12W Lumen Performance

Patented Constant Power performance means predictable emergency lumens and no lost foot-candles for the full emergency runtime.

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	1200	1200
110 lm/W	1320	1320
120 lm/W	1440	1440
130 lm/W	1560	1560
140 lm/W	1680	1680
150 lm/W	1800	1800

15W Lumen Performance

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	1500	1500
110 lm/W	1650	1650
120 lm/W	1800	1800
130 lm/W	1950	1950
140 lm/W	2100	2100
150 lm/W	2250	2250

20W Lumen Performance

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	2000	2000
110 lm/W	2200	2200
120 lm/W	2400	2400
130 lm/W	2600	2600
140 lm/W	2800	2800
150 lm/W	3000	3000

ILB CP12

The ILB CP12 provides an increased **12W** constant power output in a standard profile enclosure. Available with or without flexible conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 12 Watts (Constant)

Output Current Range: 1.2A (@10VDC) - 0.2A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 13.3 x 2.375 x 1.5 in. (mounting center 12.75 in.)

Weight: 3.5 lbs (no flex), 4.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

ILBSL CP12

The ILBSL CP12 features **12W** performance in a slim profile enclosure designed for integral installation in narrow compartment spaces.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 12 Watts (Constant)

Output Current Range: 1.2A (@10VDC) - 0.2A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 24.17 x 1.2 x 1.2 in. (mounting center 23.78 in.)

Weight: 3.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Auto-Sense Class 2 Compatible with 10-60VDC LED Designs

Available in Different Mounting Configurations

Auto-Sense Class 2 Compatible with 10-60VDC LED Designs

Slim Profile Enclosure

When utilizing emergency drivers in elevated lighting applications, consider the advantages of self-diagnostic functionality to eliminate the need for manual testing on these difficult-to-access luminaires.

ILBLP CP15 HE SD

The ILBLP CP15 provides **15W** of emergency power in a low-profile enclosure with or without flexible conduit. Includes Self-Diagnostics and CA Title 20 performance.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.065A (max)

Output (Forward) Voltage Range: 20-55VDC Class 2 Compliant

Output Power: 15 Watts (Constant)

Output Current Range: 0.75A (@20VDC) - 0.27A (@55VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate, 24 Hour Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 14.68 x 2.34 x 1.18 in. (mounting center 14.12 x 1.1 in.)

Weight: 2.25 lbs (no flex), 3.25 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Compatible with 20-55VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Different Mounting Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

ILBLP CP15 HE SD N

The ILBLP CP15 HE SD N delivers **15W** constant power output in a narrow low-profile enclosure with hardwire connections. Includes Self-Diagnostics and CA Title 20 performance.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.11A (max)

Output (Forward) Voltage Range: 20-55VDC Class 2 Compliant

Output Power: 15 Watts (Constant)

Output Current Range: 0.75A (@20VDC) - 0.27A (@55VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate, 24 Hour Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 22.0 x 1.18 x 1.18 in. (mounting center 21.5 in.)

Weight: 2.0 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Compatible with 20-55VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Slim Profile Enclosure
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

ILB CP20 HE / HE SD

The ILB CP20 offers **20W** constant power performance for increased emergency output. Ideal for high-bay or elevated fixtures. Self-Diagnostic model available.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 5.5 Watts (max)

Output (Forward) Voltage Range: 20-60VDC Class 2 Compliant

Output Power: 20 Watts (Constant)

Output Current Range: 1.0A (@20VDC) - 0.3A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 17.75 x 2.5 x 2.375 in. (mounting center 17.2 in.)

Weight: 5.7 lbs (single flex), 6.0 lbs (dual flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Compatible with 20-60VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Single Flex or Dual Flex Configurations
- Self-Diagnostic Model Available

Emergency Solutions for Non-Class 2 LEDs

"HV" (high-voltage output) emergency drivers produce a higher output voltage to operate LED loads, up to 250 VDC, required by non-class 2 luminaire designs.

CP

20W Lumen Performance

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	2000	2000
110 lm/W	2200	2200
120 lm/W	2400	2400
130 lm/W	2600	2600
140 lm/W	2800	2800
150 lm/W	3000	3000

30W Lumen Performance

Fixture Efficacy	Minute 1	Minute 90
100 lm/W	3000	3000
110 lm/W	3300	3300
120 lm/W	3600	3600
130 lm/W	3900	3900
140 lm/W	4200	4200
150 lm/W	4500	4500

ILB CP20 HE HV

The ILB CP20 offers 20W constant power performance for non-class 2 **50-200VDC** systems. Ideal for high-bay or elevated fixtures.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 5.5 Watts (max)

Output (Forward) Voltage Range:
Non-Class 2 50-200VDC

Output Power: 20 Watts (Constant)

Output Current Range:
0.4A (@50VDC) - 0.1A (@200VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 17.75 x 2.5 x 2.375 in.
(mounting center 17.2 in.)

Weight: 5.7 lbs (single flex), 6.0 lbs (dual flex)

Certifications: UL 924 Listed for U.S. and Canada. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

ILBLP CP20 HE SD HV

The ILBLP CP20 offers 20W constant power performance for non-class 2 **55-200VDC** systems. Features lithium design for reduced size and weight.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.05A (max)

Output (Forward) Voltage Range:
Non-Class 2 55-200VDC

Output Power: 20 Watts (Constant)

Output Current Range:
0.363A (@55VDC) - 0.1A (@200VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate 24 Hr Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 15.17 x 2.26 x 2.05 in.

Weight: 3.6 lbs (single flex), 4.8 lbs (dual flex)

Certifications: UL 924 Listed for U.S. and Canada. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

ILBLP CP30 HE SD HV

The ILBLP CP30 offers **30W** constant power performance for non-class 2 **55-250VDC** systems. Features lithium design for reduced size and weight.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.055A (max)

Output (Forward) Voltage Range:
Non-Class 2 55-250VDC

Output Power: 30 Watts (Constant)

Output Current Range:
0.545A (@55VDC) - 0.12A (@250VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate 24 Hr Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 17.81 x 2.26 x 2.05 in.

Weight: 4.4 lbs (single flex), 5.5 lbs (dual flex)

Certifications: UL 924 Listed for U.S. and Canada. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense High-Voltage Output 50-200VDC
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Single Flex or Dual Flex Configurations

- Auto-Sense High-Voltage Output 55-200VDC
- Advanced Lithium Design for Reduced Size and Weight
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Single Flex or Dual Flex Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

- Auto-Sense High-Voltage Output 55-250VDC
- Advanced Lithium Design for Reduced Size and Weight
- Helps meet CA Title 20 and registered in the MAEDBS database
- Available in Single Flex or Dual Flex Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

347VAC to 480VAC Input Solutions

IOTA's award-winning ILBHI Emergency Drivers accept an input voltage range of 347-480VAC for both Class 2 and non-Class 2 luminaires. The 347-480VAC input eliminates the need for step-transformers or dedicated 120VAC circuits for your emergency driver, while avoiding compatibility concerns with connected 347-480VAC controls on the circuit.

Class 2 Output

ILBHI CP10 HE SD

The ILBHI CP10 provides **10W** emergency performance for **15-55VDC** LEDs operating on a 347-480VAC supply. Self-Diagnostics included.

Input Voltage: 347-480VAC, 50/60Hz

Input Rating: 15.3mA (max)

Output (Forward) Voltage Range: 15-55VDC

Output Power: 10 Watts (Constant)

Output Current Range: 0.18A (@55VDC) - 0.67A (@15VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate 24 Hr Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 13.14 x 2.26 x 1.12 in. (mounting center 12.7 in.)

Weight: 1.65 lbs (no flex), 2.55 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. CSA C22.2 No. 141. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

- High Input Voltage of 347V-480V
- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Output 15-55VDC
- Available in Different Mounting Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

ILBHI CP15 HE SD

The ILBHI CP15 provides **15W** emergency performance for **20-55VDC** LEDs operating on a 347-480VAC supply. Self-Diagnostics included.

Input Voltage: 347-480VAC, 50/60Hz

Input Rating: 16.1mA (max)

Output (Forward) Voltage Range: 20-55VDC

Output Power: 15 Watts (Constant)

Output Current Range: 0.27A (@55VDC) - 0.75A (@20VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate 24 Hr Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 15.7 x 2.26 x 1.12 in. (mounting center 15.26 in.)

Weight: 2.35 lbs (no flex), 3.05 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. CSA C22.2 No. 141. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

- High Input Voltage of 347V-480V
- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense Class 2 Output 20-55VDC
- Available in Different Mounting Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

High Voltage Output

ILBHI CP20 HE SD HV

The ILBHI CP20 HV provides **20W** emergency performance for **55-200VDC** LEDs operating on a 347-480VAC supply. Self-Diagnostics included.

Input Voltage: 347-480VAC, 60Hz

Input Rating: 0.015A (max)

Output (Forward) Voltage Range: 55-200VDC

Output Power: 20 Watts (Constant)

Output Current Range: 0.1A (@200VDC) - 0.363A (@55VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate 24 Hr Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 10.29 x 4.45 x 2.04 in. (mounting center 9.9 in.)

Weight: 4.6 lbs (no flex), 5.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. CSA C22.2 No. 141. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

- High Input Voltage of 347V-480V
- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense High-Voltage Output 55-200VDC
- Available in Different Mounting Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

ILBHI CP30 HE SD HV

The ILBHI CP30 HV provides **30W** emergency performance for **55-250VDC** LEDs operating on a 347-480VAC supply. Self-Diagnostics included.

Input Voltage: 347-480VAC, 60Hz

Input Rating: 0.022A (max)

Output (Forward) Voltage Range: 55-250VDC

Output Power: 30 Watts (Constant)

Output Current Range: 0.12A (@250VDC) - 0.545A (@55VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Lithium Iron-Phosphate 24 Hr Recharge with 5-7 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 10.29 x 4.45 x 2.04 in. (mounting center 9.9 in.)

Weight: 4.85 lbs (no flex), 5.15 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. CSA C22.2 No. 141. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

- High Input Voltage of 347V-480V
- Advanced Lithium Design for Reduced Size and Weight
- Auto-Sense High-Voltage Output 55-250VDC
- Available in Different Mounting Configurations
- Self-Diagnostics Included
- Features AC Activate for simplified Installation

IP66 / NSF Applications

The ILBDW Series brings the powerful capability of IOTA® emergency drivers to luminaires in damp, wet, and food preparation spaces. Featuring a heavy-duty, watertight enclosure and test switch, the ILBDW is IP66 rated and is NSF-certified for safe use in food and beverage applications.

ILBDW CP10 HE SD

Delivers 10W constant power performance in an IP66 / NSF rated enclosure for Class 2 luminaires. Includes Self-Diagnostics and IP-rated PVC conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.053A (max)

Output (Forward) Voltage Range: 15-55VDC Class 2 Compliant

Output Power: 10 Watts (Constant)

Output Current Range: 0.67A (@15VDC) - 0.18A (@55VDC)

Emergency Operation: 90 minutes

Battery: Lithium Iron-Phosphate, 24-Hour Recharge, 5-7 Year Life

Operating Temp: 0° to 48°C

Warranty: 5-year

Dimensions: 15.11 x 3.61 x 3.16 in.

Weight: 4.14 lbs

Certifications: UL 924 Listed for U.S. and Canada. Listed to CSA C22.2 No 141. Class 2 Compliant to UL 1310. NSF Component rated. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Output 15-55VDC
- Self-Diagnostics Included
- Features AC Activate for simplified Installation
- IP66-Rated against moisture, dust, and debris
- Certified for safe use in food and beverage service areas

ILBDW CP15 HE SD

Delivers 15W constant power performance in an IP66 / NSF rated enclosure for Class 2 luminaires. Includes Self-Diagnostics and IP-rated PVC conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.065A (max)

Output (Forward) Voltage Range: 20-55VDC Class 2 Compliant

Output Power: 15 Watts (Constant)

Output Current Range: 0.75A (@20VDC) - 0.27A (@55VDC)

Emergency Operation: 90 minutes

Battery: Lithium Iron-Phosphate, 24-Hour Recharge, 5-7 Year Life

Operating Temp: 0° to 48°C

Warranty: 5-year

Dimensions: 19.78 x 3.61 x 3.16 in.

Weight: 5.66 lbs

Certifications: UL 924 Listed for U.S. and Canada. Listed to CSA C22.2 No 141. Class 2 Compliant to UL 1310. NSF Component rated. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense Class 2 Output 20-55VDC
- Self-Diagnostics Included
- Features AC Activate for simplified Installation
- IP66-Rated against moisture, dust, and debris
- Certified for safe use in food and beverage service areas

ILBDW CP20 HE SD HV

Delivers 20W constant power performance in an IP66 / NSF rated enclosure for non-Class 2 luminaires with 50-200VDC LEDs. Includes Self-Diagnostics and IP-rated PVC conduit.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 0.039A (max)

Output (Forward) Voltage Range: 55-200VDC

Output Power: 20 Watts (Constant)

Output Current Range: 0.1A (@200VDC) - 0.363A (@55VDC)

Emergency Operation: 90 minutes

Battery: Lithium Iron-Phosphate, 24-Hour Recharge, 5-7 Year Life

Operating Temp: 0° to 48°C

Warranty: 5-year

Dimensions: 19.78 x 3.61 x 3.16 in.

Weight: 5.86 lbs

Certifications: UL 924 Listed for U.S. and Canada. Listed to CSA C22.2 No 141. NSF Component rated. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- Auto-Sense High-Voltage Output 55-200VDC
- Self-Diagnostics Included
- Features AC Activate for simplified Installation
- IP66-Rated against moisture, dust, and debris
- Certified for safe use in food and beverage service areas

Specialty Driver Designs

IOTA Specialty Driver designs provide unique compatibility features to match individual fixture and application requirements. For further details on these specialized drivers, refer to the complete product specification sheets online at **www.acuitybrands.com**.

From LITHONIA LIGHTING

ILB CP07 2H

The ILB CP07 2H delivers **7W** of constant power for **120 minutes** to meet 2-hour FEMA runtime requirements.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 3.7 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 7 Watts (Constant)

Output Current Range: 1.0A (@10VDC) - 0.16A (@60VDC)

Emergency Operation: 120 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 13 x 2.2 x 1.25 in. (mounting center 12.6 in.)

Weight: 3.5 lbs (no flex), 4.0 lbs (w/ flex)

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

PoE CP12

The award-winning, patented PoE CP12 provides a 12W constant power emergency solution for **PoE/IoT** fixture designs.

Input Voltage: 37-57VDC (Ethernet)

Input Rating: 4.0 Watts (max)

Output (Forward) Voltage Range: 10-60VDC Class 2 Compliant

Output Power: 12 Watts (Constant)

Output Current Range: 1.2A (@10VDC) - 0.2A (@60VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 15.6 x 2.8 x 1.2 in. (mounting center 15.2 x 1.6 in.)

Weight: 2.7 lbs.

Certifications: UL 924 Listed. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting

ILB CP18 CW

The ILB CP18 CW features an external extended temperature battery system to provide 18W constant power for outdoor, **cold-weather**, IP-rated fixtures.

Input Voltage: 120-277VAC, 50-60Hz

Input Rating: 65mA (max)

Output (Forward) Voltage Range: 20-58VDC Class 2 Compliant

Output Power: 18 Watts (Constant)

Output Current Range: 0.9A (@20VDC) - 0.31A (@58VDC)

Emergency Operation: 90 minutes

Battery: Hi-Temp, maintenance-free Sealed Lead Acid, 24 Hr Recharge

Operating Temp: -20° to 55°C

Warranty: 5-year

Dimensions: (electronics) 9.4 x 1.05 x 2.2 in. (1LA single battery) 3.54 x 4.21 x 2.76 in.

Weight: 6.0 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

LITHONIA LIGHTING LEM SERIES BASICS

Basics™ LEM04 (4W) and LEM08 (8W) provide **initial power** emergency driver options for Class 2 fixtures.

Input Voltage: 120-277VAC, 50-60Hz

Max Input Rating (4W/8W): 65mA / 95mA

Output (Forward) Voltage Range: 20-50VDC Class 2 Compliant

Initial Output Power: 4W (LEM04), 8W (LEM08)

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel Cadmimum, Lead Acid, 24 Hr Recharge

Operating Temp: 0° to 50°C

Warranty: 3-year

Dimensions:
(LEM04 A) 11.0 x 2.38 x 1.55 in.
(LEM04 B) 9.4 x 2.38 x 1.55 in
(LEM08 A and B) 13.35 x 2.38 x 1.55 in.

Weight (4W/8W): 2.5 / 3.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Class 2 Compliant to UL 1310. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

- 2-Hour FEMA Operation
- Auto-Sense Class 2 Compatible with 10-60VDC LED Designs
- Available in Different Mounting Configurations
- Power-over-Ethernet Solution
- Hardwire or RJ45 terminal models.
- Suitable for Extended Temperature Ranges
- Auto-Sense Class 2 Compatible with 20-58VDC LED Designs
- Helps meet CA Title 20 and registered in the MAEDBS database
- Single or Dual Battery Models available
- Auto-Sense Class 2 Compatible with 20-50VDC LED Designs
- Available in Different Mounting Configurations

Performance Reference

Lumen Output Chart

IOTA's patented Constant Power design provides the same wattage to the LED array for the entire emergency runtime, resulting in a constant level of illumination during the entire emergency runtime. To find the optimal wattage ILB CP unit for your luminaire, simply multiply the luminaire efficacy with the wattage output of the ILB CP emergency driver...or use the ILB CP Lumen Reference Chart to the right to see your available IOTA emergency driver options to find options for your desired lumen output.

Luminaire Efficacy (lm/w)	Desired Lumen Output 400	500	600	700	800	900	1000
80	CP05	CP07	CP08	CP10	CP10	CP12	CP15
90	CP05	CP07	CP07	CP08	CP10	CP10	CP12
100	CP05	CP05	CP07	CP07	CP08	CP10	CP10
110	CP05	CP05	CP05	CP07	CP08	CP10	CP10
120	CP05	CP05	CP05	CP07	CP07	CP08	CP10
130	CP05	CP05	CP05	CP07	CP07	CP07	CP08
140	CP05	CP05	CP05	CP05	CP07	CP07	CP08
150	CP05	CP05	CP05	CP05	CP07	CP07	CP07
160	CP05	CP05	CP05	CP05	CP05	CP07	CP07
170	CP05	CP05	CP05	CP05	CP05	CP07	CP07
180	CP05	CP05	CP05	CP05	CP05	CP05	CP07

CP05 - 5-Watt CP07 - 7-Watt CP08 - 8-Watt

Low Profile Designs

IOTA Low Profile Designs use advanced lithium Iron-Phosphate ($LiFePO_4$) battery technology to achieve significant reductions in both weight and size without compromising the emergency performance. Not only do Low Profile options bring emergency solutions to minimal fixture designs, they also include self-diagnostics and high-efficiency performance for CA Title 20 requirements.

Available Low Profile Models

- ILBLP CP10 HE SD
- ILBLP CP10 HE SD N
- ILBLP CP10 HE SD NP
- ILBLP CP15 HE SD
- ILBLP CP15 HE SD N
- ILBLP CP20 HE SD HV
- ILBLP CP30 HE SD HV
- ILBHI CP20 HE SD HV
- ILBHI CP30 HE SD HV

Self-Diagnostics

Self-Diagnostic ("SD") models automatically conduct the monthly and annual tests required by the Life Safety Code and communicate diagnostic issues via the flashing indicator light. Self-Diagnostic units minimize the labor involved in maintaining code-compliance by reducing the monthly testing process to a visual inspection of the unit only.

Available Self-Diagnostic Models

- ILB CP10 HE SD
- ILB CP20 HE SD
- ILBLP CP10 HE SD
- ILBLP CP10 HE SD N
- ILBLP CP10 HE SD NP
- ILBLP CP15 HE SD
- ILBLP CP15 HE SD N
- ILBLP CP20 HE SD HV
- ILBLP CP30 HE SD HV
- ILBHI CP10 HE SD
- ILBHI CP15 HE SD
- ILBHI CP20 HE SD HV
- ILBHI CP30 HE SD HV
- ILBDW CP10 HE SD
- ILBDW CP15 HE SD
- ILBDW CP20 HE SD HV

2-Hour Runtime

FEMA requirements for specific applications may require runtimes greater than the standard 90 minutes. Tornado Safe Rooms, for instance, require a 2-hour runtime for occupants needed to stay in one location for the duration. Read more about FEMA safe room guidelines at www.fema.gov.

Available 2-Hour Drivers

- ILB CP07 2H

For additional FEMA emergency lighting solutions, see "Extended Runtimes for FEMA applications" in the IIS Inverter Section, page 78.

Desired Lumen Output

1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200 to 3600*
CP15	CP15	CP20	CP20	CP20	CP20	n/a	n/a	n/a	n/a	n/a	n/a
CP15	CP15	CP15	CP20	CP20	CP20	CP20	CP20	n/a	n/a	n/a	n/a
CP12	CP12	CP15	CP15	CP15	CP20	CP20	CP20	CP20	CP20	n/a	n/a
CP10	CP12	CP12	CP15	CP15	CP15	CP20	CP20	CP20	CP20	CP20	CP20
CP10	CP10	CP12	CP12	CP15	CP15	CP15	CP15	CP20	CP20	CP20	CP20
CP10	CP10	CP10	CP12	CP12	CP15	CP15	CP15	CP15	CP20	CP20	CP20
CP08	CP10	CP10	CP10	CP12	CP12	CP15	CP15	CP15	CP15	CP15	CP20
CP08	CP08	CP10	CP10	CP10	CP12	CP12	CP12	CP15	CP15	CP15	CP15
CP07	CP08	CP10	CP10	CP10	CP10	CP12	CP12	CP12	CP15	CP15	CP15
CP07	CP08	CP08	CP10	CP10	CP10	CP10	CP12	CP12	CP12	CP15	CP15
CP07	CP07	CP08	CP08	CP10	CP10	CP10	CP10	CP12	CP12	CP12	CP15

CP10 -10-Watt | CP12 - 12-Watt | CP15 - 15-Watt | CP20 - 20-Watt

*Options shown are for 2200 lumen levels. For lumen values above 2200, multiply fixture efficacy by 20 to determine output levels of CP20 model.

CA Title 20

Energy standards by the California Energy Commission (CEC) promote more sustainable utility practices by reducing unnecessary power consumption in lighting systems. Look for the "HE" (high-efficiency) designator to identify IOTA emergency products that are registered in the Modernized Appliance Efficiency DataBase (MAEDBS) as a small battery charger (denoted by the circle 'BC' mark) and are acceptable for use in the state of California.

"HE" High-Efficiency Models

- ILB CP05 HE
- ILB CP07 HE
- ILBSL CP08 HE
- ILB CP10 HE
- ILB CP10 HE SD
- ILBSL CP10 HE
- ILB CP20 HE SD
- ILBLP CP10 HE SD
- ILBLP CP10 HE SD N
- ILBLP CP10 HE SD NP
- ILBLP CP15 HE SD
- ILBLP CP15 HE SD N
- ILBLP CP20 HE SD HV
- ILBLP CP30 HE SD HV
- ILBHI CP10 HE SD
- ILBHI CP15 HE SD
- ILBHI CP20 HE SD HV
- ILBHI CP30 HE SD HV
- ILBDW CP10 HE SD
- ILBDW CP15 HE SD
- ILBDW CP20 HE SD HV
- LEM04
- LEM08

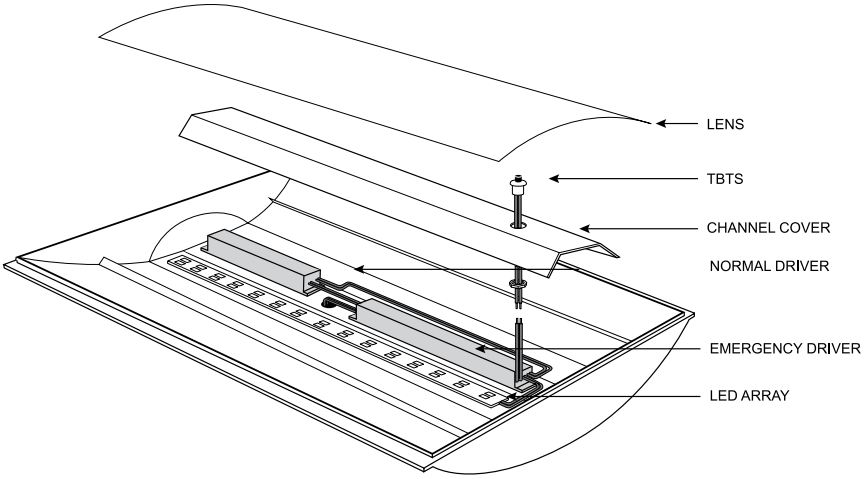
AC Activate

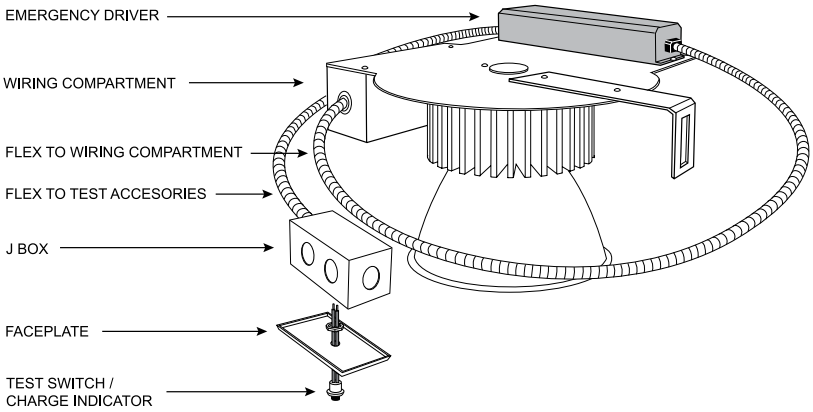
AC Activate provides simpler installation by eliminating the need for manual connection of the battery during initial install. The AC Activate circuitry keeps the unit disconnected before use, preventing the unit from entering the emergency mode and preventing premature discharge of the battery. Once initially connected to AC power, the unit automatically activates the charging circuits without manual connections needing to be made when the emergency-equipped fixture is installed.

Drivers featuring AC Activate

- ILBLP CP10 HE SD N
- ILBLP CP10 HE SD NP
- ILBLP CP15 HE SD
- ILBLP CP15 HE SD N
- ILBLP CP20 HE SD HV
- ILBLP CP30 HE SD HV
- ILBHI CP10 HE SD
- ILBHI CP15 HE SD
- ILBHI CP20 HE SD HV
- ILBHI CP30 HE SD HV
- ILBDW CP10 HE SD
- ILBDW CP15 HE SD
- ILBDW CP20 HE SD HV

Typical Installation





IOTA Emergency Drivers are designed for internal or external installation based on the requirements of the fixture type. For installation *within* the fixture, connections are made in the channel space and the test switch / charge indicator is installed for visibility behind the fixture lens. If the channel space does not permit installation of an emergency driver, the unit can be mounted on top of the fixture with wiring routed into the channel space through the access hole. A top mount cover accessory is available to cover the exposed wiring from the emergency unit entering the fixture.

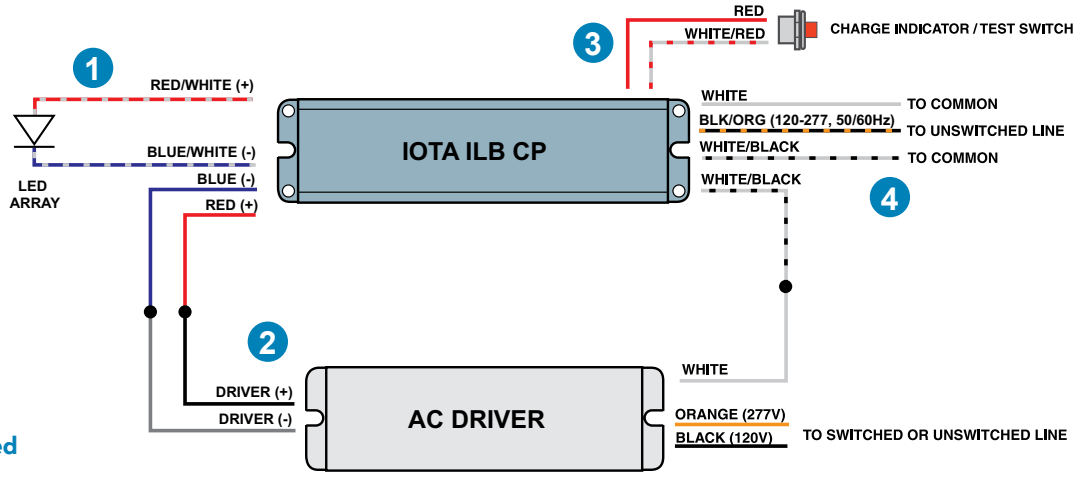
For downlight fixtures, an assortment of flexible conduit configurations allow for running wiring to the fixture's electronics compartment (see opposite page for conduit options.) Test components are then installed next to the fixture or within the reflector as desired.

Additionally, emergency drivers can be mounted remotely up to 50 feet if needed. Refer to individual product specifications for allowable remote distances per model, as well as a selection of useful mounting accessories to accommodate different installation scenarios.

Wiring

The ILB CP unit electrically exists between the normal AC driver and LED load. The emergency unit supplies power to the LED array when normal power is lost to the AC driver. The illustration below shows the basic steps to connecting the emergency driver (wire colors may vary depending on the specific IOTA model.)

1. **Connect the emergency driver to the LED array.**
2. **Connect the normal driver to the emergency driver.**
3. **Install and connect the provided test accessories.**
4. **Wire the emergency driver to an unswitched AC supply.**

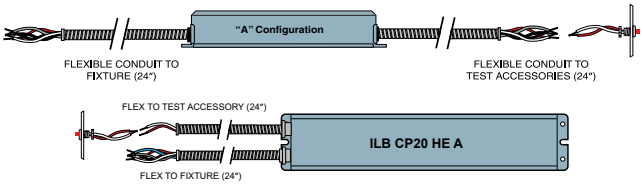


Mounting Configurations

IOTA Emergency Drivers are offered in several mounting configurations in order to meet the requirements of the fixture. Note that some configurations may not be available with specific emergency driver models. Refer to the individual product specification sheet at **www.iotaengineering.com** for details on available configurations per model. A selection of mounting accessories is also available to facilitate specific installation scenarios.

A **Dual Flex**

Provides dual flex for wiring to both the fixture or driver compartment and test accessories.

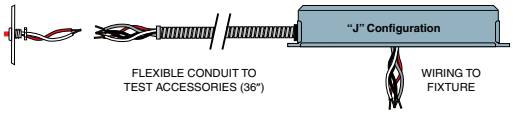


B **Integral Non-Flex**

Allows for integral installation within the driver compartment. May also be mounted atop the fixture when used with a TMK cover accessory.

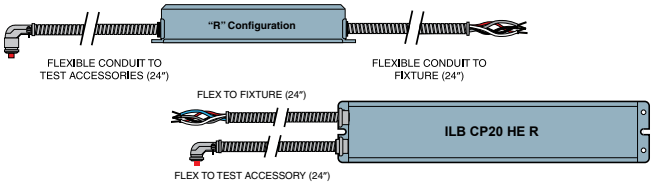
J **Single Flex Junction Box Mount**

Mounts to the junction box and provides flexible conduit for remote mounting of the test accessories.



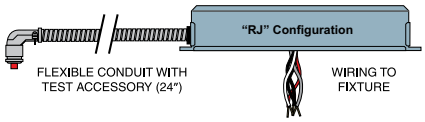
R **Dual Flex w/ Reflector-Mount TBTS**

Provides dual flex for wiring to the fixture. The TBTS test accessory hardware installs directly within the reflector. (Recommended for OEM installation only.)



RJ **Single Flex w/ Reflector-Mount TBTS**

Mounts to the junction box. The TBTS test accessory hardware installs directly within the reflector. (Recommended for OEM installation only.)

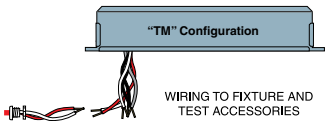


S **Single Flex**

Single conduit that routes all wiring directly to the fixture channel space or junction box.

TM **Top-Mount Non-Flex**

Top-mounting option for running wires directly into the driver compartment. Test accessories are then installed within the fixture.



N **Narrow Profile**

Narrow profile design with hardwire connections for integral installation within compartments with tight space restrictions.

NP **Narrow Profile w/ Poke-In Terminals**

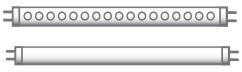
Narrow profile with poke-in connection terminals for integral installation within compartments with tight space restrictions. (10W only)

Emergency Ballasts for Fluorescent and LED Retrofit

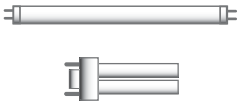
IOTA Emergency Ballasts continue to set the standard both for fluorescent emergency solutions as well as today's leading LED retrofit tube lamp replacements.

IOTA emergency ballasts feature forward-thinking design that helps ensure system compatibility with lamp technology, AC ballast circuitry features, physical fixture requirements, and application and performance criteria.

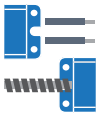
In this Section:



AC output design on select units allows for operation of low-mercury content amalgam fluorescents and many LED retrofit tube replacements types.



Solutions for operating T5 through T8 linear lamps or 4-pin compact lamps and a full range of lamp lengths and wattages.



High lumen output, damp location, enclosed and gasketed fixtures, mounting styles, specialty designs, and self-diagnostic options.

Enhanced protection features for optimal performance with the latest AC ballast technology. Time Delay and Open Circuit Isolation allows the emergency ballast to operate seamlessly with 'end-of-life' and lamp removal safeguards.

c UL US LISTED

UL Listed for both Field and Factory Installation in U.S. and Canada

Life Safety Code Excerpts

Below are pertinent sections of the Life Safety Code concerning the use, maintenance, and testing of emergency lighting equipment. Referencing local state and municipal safety codes is also advised, as these may supersede national requirements.

"7.9.2.1 Emergency illumination shall be provided for a minimum of 1 1/2 hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 ft-candle (10.8 lux) and, at any point, not less than 0.1 ft-candle (1.1 lux), measured along the path of egress at floor level. Illumination levels shall be permitted to decline to not less than an average of 0.6 ft-candle (6.5 lux) and, at any point, not less than 0.06 ft-candle (0.65 lux) at the end of the 1 1/2 hours. A maximum-to-minimum illumination shall not exceed a ratio of 40 to 1."

Periodic Testing of Emergency Lighting Equipment

7.9.3.1.1 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Functional testing shall be conducted monthly, with a minimum of 3 weeks and a maximum of 5 weeks between tests, for not less than 30 seconds, except as otherwise permitted by 7.9.3.1.3.

(2) The test interval shall be permitted to be extended beyond 30 days with the approval of the authority having jurisdiction.

(3) Functional testing shall be conducted annually for a minimum of 1 1/2 hours if the emergency lighting system is battery powered.

(4) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1 (1) and 7.9.3.1.1 (3).

(5) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

Testing of Self-Diagnostic Equipment

7.9.3.1.2 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.

(2) Not less than once every 30 days, self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform a test with a duration of a minimum of 30 seconds and a diagnostic routine.

(3) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.

(4) A visual inspection shall be performed at intervals not exceeding 30 days.

(5) Functional testing shall be conducted annually for a minimum of 1 1/2 hours.

(6) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2 hour test.

(7) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction."

Primary take-aways:	What this means for emergency ballasts:
An emergency fixture must be able to provide no less than 90 minutes of emergency illumination.	All IOTA® emergency ballasts are engineered to run greater than 90 minutes with an included operating margin to account for typical reduced battery performance over the lifetime of the unit.
The emergency illumination must maintain a minimum average level of 1 ft-candle initially, and .6 ft-candles at the end of the 90 minutes.	The amount of lumens required from a fixture in order to meet foot-candle requirements will vary, therefore IOTA offers a wide range of models to deliver the optimal lumens for your lamp type and application.
An emergency battery must have a means to be tested and inspected for system readiness.	All IOTA emergency ballasts include a single-piece test switch and illuminating charge indicator accessory for physical testing of the unit as needed.
Testing must include a 30-second monthly test and a 90-minute annual test.	Testing of IOTA units can be achieved through manual activation of the test switch or through the use of automatic self-testing programming on ISD units.
Written records of these tests must be maintained for reference and inspection as needed.	Self-Testing/Self-Diagnostic emergency ballasts minimize the labor involved in maintaining Life Safety requirements by reducing the monthly physical testing to simply a visual inspection for the written record.

Application Concept

In this example, emergency ballasts are located at strategic points along the interior paths of egress and exit points. Emergency lighting is tailored to meet the both the lighting requirements and the fixture requirements throughout the facility.

Mid-Size Office Building
Approx. 10,000 sq. ft

IOTA's selection of emergency ballast solutions offers a variety of lumen outputs, electrical specifications, and mounting configurations to adapt to most any egress requirement. Using integral battery packs as the primary emergency lighting solution allows the specifier to select the optimal emergency option for each illuminated space.

LED Retrofit Capability

IOTA is the only emergency lighting manufacturer to offer UL Listed solutions for select LED tube lamps, allowing facilities to retrofit their spaces with longer-lasting, higher-efficiency lamps without negatively impacting their emergency lighting requirements.

1 ISD 80

The 4-ft troffer in this raised ceiling uses a single high lumen emergency ballast that offers self-diagnostics for easier compliance.

2 I 320

To help reduce energy costs, the linear fixtures in this cubicle space have been upgraded with state-of-the-art Type A LED retrofit tubes. I 320 emergency ballasts are able to operate the LED lamps with the proper level of illumination along the paths of egress.

3 I 42 A

The I 42 A provides the electrical compatibility for operation of the 4-pin compact lamps and flexible conduit for installation on the downlight fixture.

4 ISL 54

The slim profile ISL 54 installs easily in the streamlined recessed troffers to operate the T5 lamps used in the conference room.

Understanding Lamp Technology

IOTA Emergency Ballasts are designed for confident performance with many common tube lamp designs. Knowing the nature of fluorescent and LED lamps is important in selecting the proper emergency solution. Refer to the information below to determine the lamp designs used in your application and which IOTA emergency solution is needed.

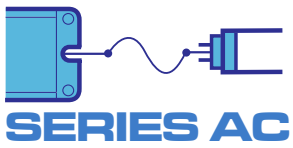
Low-Mercury Content Amalgam Lamps

Low-mercury content amalgam lamps introduced a new fluorescent technology that significantly reduced the levels of mercury used within the lamp, lessening the environmental impact caused by fluorescent lamps at end-of-life. The advent of this lamp technology required a unique emergency ballast that could operate with the sensitive design of the lamp.

Solution: AC Output Performance

IOTA's Series AC emergency ballasts were designed specifically to deliver compatibility with these newer environmentally-friendly lamps. When using 'green' lamp designs, it is recommended that you use AC output emergency ballasts, as prolonged exposure to DC current (typical in common emergency ballasts) can have a detrimental effect on the lamp's normal operation.

The innovative AC output design of AC Series emergency ballasts also offers compatibility with certain LED tube lamp designs. Many IOTA AC Series ballasts have been tested and UL Listed as compatible emergency solutions for several manufacturer LED retrofit lamp designs. See opposite page for details on LED lamp technology and compatible emergency ballast solutions.

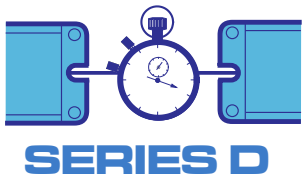


End-of-Lamp-Life Circuitry

End of Lamp Life circuitry within normal AC ballasts is designed to allow the ballast to recognize when a fluorescent lamp is no longer operable. However, the End-of-Lamp-Life circuitry can mistakenly activate (ie. not provide AC voltage) when power switches from an emergency battery pack to the AC supply.

Solution: Time Delay Enhancement

IOTA emergency battery packs provide a brief delay that allows the AC ballast to verify that the lamp is still functioning, eliminating conflicts with testing and operation of the emergency battery pack. Time Delay Enhancement is a standard design feature on all IOTA Series D and Series AC emergency ballasts.

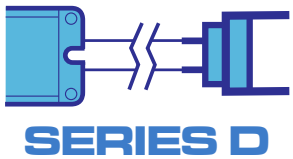


Lamp Replacement

It is not unusual for facility personnel to replace burnt-out fluorescent lamps while the fixture is still energized. However, when power is supplied to a fixture where no lamps are present, the resulting open circuit can cause damage to components in lesser-quality emergency ballasts within the fixture.

Solution: Open Circuit Isolation

IOTA emergency ballasts guard against the dangers of an open circuit caused when either the lamps are burned out or are being replaced. Open Circuit Isolation is a standard design feature on all IOTA Series D and Series AC emergency ballasts.



LED Retrofit Lamps

The innovation of LED tube lamp designs brought long-life, highly-efficient lighting options for existing fluorescent luminaires. However, these lamp types were designed for normal lighting operation and did not take emergency power sources into consideration. LED tube lamp designs may feature very different designs that affect the choice of emergency solution. Before selecting or utilizing an emergency ballast for your fluorescent lamp replacement, determine which type of LED retrofit solution you are using.

Type A - LED Tube Lamps (TLEDs)

LED Tube Lamps are linear, compact, or U-bent LED lights, also known as T-LEDs, which directly replace the fluorescent tubes in the fixture. These lamps convert the AC voltage coming from the fluorescent ballast to DC current to operate the lamp's LED arrays. These T-LEDs allow replacement of the original fluorescent tube without removing or re-wiring the existing AC fluorescent ballast.

Solution: Fluorescent Emergency Ballasts with AC Output

Since these types of lamps are looking for AC power to operate, they will require an **emergency ballast with AC output** to operate in the emergency mode. Since T-LED characteristics vary between manufacturer, IOTA has tested and UL Listed specific Series AC emergency ballasts to work with select T-LEDs from major LED tube manufacturers. Current UL Listed solutions are available at *https://www.iotaengineering.com/resources/emergency-solutions-for-led-retrofit.*

For Fluorescent Emergency Ballasts that are compatible with select T-LED designs, look for this icon next to the model name...

Type B - LED Tube Lamps with Internal Drivers

LED Tube Lamps with Internal Drivers (may include downlight retrofit kits or linear LED lamps) feature built-in drivers that accept *AC line voltage* and replace both the existing fluorescent lamps *and* fluorescent ballast to convert the fixture to LED.

Solution: Emergency Inverter System

Since these LED Lamps are wired directly to the line voltage, an emergency battery pack cannot be introduced between the driver and the lamp. Therefore the emergency lighting solution must deliver line voltage to the LED lamps from an auxiliary supply. This can be done with a generator or an IOTA IIS Series **emergency inverter.** A single IIS Inverter will be capable of running multiple fixtures, regardless of whether they are using LED retrofit lamps or traditional fluorescent tubes. For further details on IOTA IIS Inverter options, refer to Page 71.

LED Retrofit Kits

LED Retrofit Kits include LED tubes or board arrays paired to an LED Driver. The LED lamps and LED driver take the place of the fluorescent lamps and ballast within the fluorescent fixture.

Solution: Emergency LED Driver for Field Installation

When using a retrofit kit, the emergency lighting solution of choice is an **emergency LED driver suitable for field installation.** The emergency LED driver installs between the normal LED driver and LED tubes or arrays provided in the kit, and will operate the LEDs during a power loss situation. Many LED emergency drivers on the market today are UL Recognized Components for factory installation only and therefore are not typically acceptable for retrofit installation. **IOTA ILB CP LED Emergency Drivers** are **UL Listed for field installation,** are fully compatible with retrofit installations, and offer a full line of wattage and mounting styles. Full ILB CP Series details can be found on Page 35.

For Linear Lamp Designs

IOTA's linear fluorescent products provide practical solutions for most linear lamp type fixtures utilizing 2 to 8 ft linear fluorescent lamps

I 32

The I 32 provides a compact, reduced-profile emergency solution for standard ceiling height applications.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 2.5 Watts

Lumen Output:
(1) lamp up to 500 lumens

Lamps Operated:
Most 2'-4' single, bipin T8 thru T12 and 28W T5 fluorescent lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 9.5 x 2.0 x 1.0 in. (mounting center 9.0 in.)

Weight: 1.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum and enclosed & gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 40

The I 40 provides 700 lumen output for **one lamp** in a standard profile enclosure.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 3.5 Watts

Lumen Output:
(1) lamp up to 700 lumens

Lamps Operated:
Most 2'-4' single, bipin T8 thru T12 and 40W long compact lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 9.5 x 2.4 x 1.5 in. (mounting center 9.0 in.)

Weight: 2.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum, damp location, and enclosed & gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 48

The I 48 provides 700 lumen output for **one or two lamps** in a standard profile enclosure.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 3.5 Watts

Lumen Output:
(1) 2'-8' lamp or (2) 2'-4' up to 700 lumens

Lamps Operated:
Most 2'-8' single, bipin T8 thru T12, HO, VHO fluorescent lamps incl. long compacts

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 9.5 x 2.4 x 1.5 in. (mounting center 9.0 in.)

Weight: 2.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum, damp location, and enclosed & gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 320

The I 320 delivers up to 1350 lumen performance in a reduced profile enclosure.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 3.5 Watts

Lumen Output:
(1) lamp up to 1350 lumens

Lamps Operated:
Most 2'-4' single, bipin T8, 2'-4' 14W-54W T5, HO and VHO fluorescent lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 13.0 x 2.2 x 1.25 in. (mounting center 12.6 in.)

Weight: 2.5 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum, damp location, and enclosed and gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 320 HE

The I 320 HE delivers up to 1350 lumen performance and features high-efficiency charging for CA Title 20 requirements.

Input Voltage: 120-277VAC, 50/60Hz

Input Rating: 3.7 Watts

Lumen Output:
(1) lamp up to 1350 lumens

Lamps Operated:
Most 2'-4' single, bipin T8, 2'-4' 14W-54W T5, HO and VHO fluorescent lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 16.35 x 2.3 x 1.2 in. (mounting center 12.6 in.)

Weight: 3.0 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum, damp location, and enclosed and gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

Lamp	Lumens
F17 T8	450
F28 T8	460
F32 T8	475
28W T5	500
F15 T12	375
F20 T12	425
F40 T12	450
40W Long Compact	450
40W Circline	450

Lamp	Lumens
F17 T8	450
F28 T8	630
F32 T8	700
F20 T12	390
F40 T12	660
40W Long Compact	600
20W Circline	625
40W Circline	650

Lamp	Lumens (1 lamp / 2 lamps)
F17 T8	450 / 650
F28 T8	630 / 600
F32 T8	700 / 675
8' T8 (FO96) (59W)	675
F20 T12	390 / 650
F40 T12	660 / 650
8' T12 (F96T12) (60W)	650
40W Long Compact	600
50W Long Compact	625
55W Long Compact	650
20W Circline	390
22W Circline T9	400
22W Circline T5	425
40W Circline T8	650
40W Circline T5	650
55W Circline T5	650

Lamp	Lumens
F17 T8	1125
F25 T8	1200
F28 T8	1215
F32 T8	1350
14W T5	850
21W T5	1150
24W T5	925
28W T5	1050
39W T5	1100
54W T5	1150
13W PL CF 4-pin	935
18W PL CF Quad 4-pin	955
26W PL CF Quad 4-pin	1110
32W PL CF Quad 4-pin	1070
42W PL CF Quad 4-pin	1160

Lamp	Lumens
F17 T8	630
F25 T8	1200
F28 T8	1215
F32 T8	1350
14W T5	745
21W T5	1150
24W T5	815
28W T5	1200
39W T5	1315
54W T5	1150
13W PL CF 4-pin	565
18W PL CF Quad 4-pin	665
26W PL CF Quad 4-pin	915
32W PL CF Quad 4-pin	1115
42W PL CF Quad 4-pin	1030

P Series with Quick-Disconnect

IOTA "P" Series offer unique benefits for popular fluorescent lamp applications, including an easy "Quick Disconnect" harness for simplified replacement and a lamp selector switch on the P320 for easily optimizing emergency performance in specific lamp installations.

P32

The P32 is a practical emergency solution for standard ceiling applications, featuring a **500 lumen output** and quick plug-in harness.

Input Voltage: 120-277VAC, 50/60Hz

Input Rating: 2.5 Watts

Lumen Output: (1) lamp up to 550 lumens

Lamps Operated:
17W-32W 24"-48" T8, 32W U-bend T8 & 18W-40W 4-Pin Long Compact

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 38°C

Warranty: 5-year

Dimensions: 9.5 x 2.25 x 1.25 in. (mounting center 9.0 in.)

Weight: 2.0 lbs

Certifications: UL 924 Listed for U.S. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

P40

The P40 is a practical emergency solution for standard ceiling applications, featuring an increased **700 lumen output** and quick plug-in harness.

Input Voltage: 120-277VAC, 50/60Hz

Input Rating: 3.0 Watts

Lumen Output: (1) lamp up to 700 lumens

Lamps Operated:
17W-32W 24"-48" T8, 32W U-bend T8, 32W-40W 48"-60" T8, & 18W-40W 4-Pin Long Compact

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 38°C

Warranty: 5-year

Dimensions: 9.5 x 2.25 x 1.25 in. (mounting center 9.0 in.)

Weight: 2.0 lbs

Certifications: UL 924 Listed for U.S. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

P320

The P320 offers quick plug-in harness ability with significant **1350 lumen** emergency output for increased egress specifications.

Input Voltage: 120-277VAC, 50/60Hz

Input Rating: 3.3 Watts

Lumen Output: (1) lamp up to 1350 lumens

Lamps Operated:
14W-28W 24"-48" T5, 25W-54W 24"-48" HO T5, 7W-32W 24"-48" T8, 32W-40W 48"-60" T8, 13W-26W 4-pin Quad, Twin Tube, 18W-42W 4-Pin Triple Tube, 18W-40W Long Compact

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 38°C

Warranty: 5-year

Dimensions: 13.25 x 2.25 x 1.25 in. (mounting center 12.75 in.)

Weight: 2.0 lbs

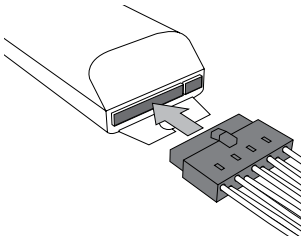
Certifications: UL 924 Listed for United States. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Lamp	Lumens
32W U-Lamp	450-550
17-32W 24" to 48" T8	450-550
18-40W 4-pin Long Compact	450-550

Lamp	Lumens
32W U-Lamp	600-700
17-32W 24" to 48" T8	600-700
32-40W 48" to 60" T8	600-700
18-40W 4-pin Long Compact	600-700

Lamp	Lumens (1 lamp / 2 lamps)
FP14/T5	800
FP245T5/HO	700
FP28T5	1450
FP54T5/HO (49W)	1100
FP54T5/HO (54W)	900
F17T8	850 / 950
F32T8	1450 / 1450
FB31T8	1400 / 1400
CF40	950
FT40DL28W	1050

Specialized Harness Plug and Port Design



The specialized harness of the IOTA P Series emergency ballasts allow for quick connecting and disconnecting of wiring to the lamps and AC ballast. Once wired, the harness securely snaps into the harness port of the P Series ballast. The unit can then be easily removed and upgraded with other P Series emergency ballasts as desired without the need for further wire connections. IOTA P Series ballasts can also be used as direct replacements for Power Sentry PSQ500QD, PS600QD, and PS14000QD fluorescent emergency ballasts.

TSPL Test Switch / Indicator

The Plug-In Port of the IOTA P Series also allows easy connection of the specialized TSPL test switch and indicator light.

For 4-Pin Compact Lamps

IOTA Emergency Ballasts for 4-Pin Compact lamps cover a wide range of lamp wattages, lumen preferences, and lamp designs, including select 4-pin LED retrofit lamps.

LED RETROFIT SOLUTION

LED RETROFIT SOLUTION

LED RETROFIT SOLUTION

I 42

The I 42 is a practical solution for most 4-pin compact lamp applications.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 3.5 Watts

Lumen Output:
(1) lamp up to 650 lumens

Lamps Operated:
10W-42W 4-Pin Rapid Start Twin, Triple, Quad Tube, 2D, Straight Compacts & 18-36W Long Compacts

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 9.5 x 2.4 x 1.5 in. (mounting center 9.0 in.)

Weight: 4.4 lbs (flex), 2.5 lbs (no flex)

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum and enclosed & gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 420

The I 420 provides increased emergency output for 4-pin lamp applications.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 3.5 Watts

Lumen Output:
(1) 10W-57W or (2) 10W-26W up to 1100 lumens

Lamps Operated:
10W-57W 4-Pin Rapid Start Twin, Triple, Quad Tube, 2D, Straight Compact Lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 13.3 x 2.4 x 1.5 in. (mounting center 12.75 in.)

Weight: 5.4 lbs (flex), 3.5 lbs (no flex)

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum, damp location, and enclosed & gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 320 HE

The I 320 HE combines increased lumen output with CA Title 20 performance.

Input Voltage: 120-277VAC, 50/60Hz

Input Rating: 3.7 Watts

Lumen Output:
(1) lamp up to 1350 lumens

Lamps Operated:
Most 2'-4' single, bipin T8, 2'-4' 14W-54W T5, HO and VHO fluorescent lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 55°C

Warranty: 5-year

Dimensions: 16.35 x 2.3 x 1.2 in. (mounting center 12.6 in.)

Weight: 3.5 lbs (flex), 3.0 lbs (no flex)

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum, damp location, and enclosed and gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Certified in CA T20 MAEDBS.

Lamp	Lumens (1 lamp / 2 lamps)
13W PL CF 4-Pin	350 / 400
18W PL CF Quad 4-Pin	350 / 550
26W PL CF Quad 4-Pin	425
32W PL CF Quad 4-Pin	600
42W PL CF Quad 4-Pin	750
F282 D/42 4-Pin	475 / 500
F382 D/42 4-Pin	500 / 650
18W Long Compact	500
24W Long Compact	575
36W Long Compact	650

Lamp	Lumens (1 lamp / 2 lamps)
13W PL CF 4-Pin	570 / 900
18W PL CF Quad 4-Pin	680 / 1010
26W PL CF Quad 4-Pin	810 / 1200
32W PL CF Quad 4-Pin	910
42W PL CF Quad 4-Pin	1040
57W PL CF Quad 4-Pin	1180

Lamp	Lumens
F17 T8	630
F25 T8	1200
F28 T8	1215
F32 T8	1350
14W T5	745
21W T5	1150
24W T5	815
28W T5	1200
39W T5	1315
54W T5	1150
13W PL CF 4-pin	565
18W PL CF Quad 4-pin	665
26W PL CF Quad 4-pin	915
32W PL CF Quad 4-pin	1115
42W PL CF Quad 4-pin	1030

ISL Series Slim Profile for T5 Designs

The ISL Series introduced narrow profile emergency battery designs to the lighting industry. Featuring a slim profile enclosure, the ISL Series is ideal for narrow T5 fixture designs with restrictive channel compartments.

LED RETROFIT SOLUTION

LED RETROFIT SOLUTION

ISL28

The ISL 28 delivers **500 lumens** for 2-4 ft T5 lamps in a slim profile enclosure for fixtures with narrow channel spaces.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 2.5 Watts

Lumen Output:
(1) lamp up to 500 lumens

Lamps Operated:
Most 2'-4' 28W T5 and T8 linear fluorescent lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 14.2 x 1.18 x 1.15 in. (mounting center 13.7 in.)

Weight: 2.0 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Lamp	Lumens
14W T5	375
21W T5	425
24W T5	500
28W T5	500
F17 T8	320
F25 T8	360
F28 T8	380
F32 T8	425

ISL54

The ISL 54 delivers **825 lumens** for 2-4 ft T5 and long compact lamps in a slim profile enclosure for fixtures with narrow channel spaces.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 2.5 Watts

Lumen Output:
(1) lamp up to 825 lumens

Lamps Operated:
Most 2'-4' 14W to 54W T5 or 17W to 30W T6 and T8 lamps including HO and 36W-55W 4-pin long compact lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 17.5 x 1.18 x 1.15 in. (mounting center 17.0 in.)

Weight: 2.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Lamp	Lumens
14W T5	450
21W T5	500
24W T5	450
28W T5	800
39W T5	700
54W T5	825
17W T6	500
27W T6	600
30W T6	650
F17 T8	650
F25 T8	650
F28 T8	630
F32 T8	700
F40 T8	600
36W Long Compact	675
40W Long Compact	675
50W Long Compact	650
55W Long Compact	650
22W Circline T5	425
40W Circline T5	650

ISL540

The ISL 540 delivers **1300 lumens** for 2-4 ft T5 and long compact lamps in a slim profile enclosure for fixtures with narrow channel spaces.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 3.5 Watts

Lumen Output:
(1) lamp up to 1300 lumens

Lamps Operated:
Most 2'-4' 14W to 54W T5 or 17W to 40W T8 lamps including HO and 36W-55W 4-pin long compact lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 21.5 x 1.18 x 1.15 in. (mounting center 21.0 in.)

Weight: 2.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Lamp	Lumens
14W T5	700
21W T5	850
24W T5	700
28W T5	1200
39W T5	1100
54W T5	1300
F17 T8	950
F25 T8	950
F28 T8	990
F32 T8	1100
F40 T8	1150
36W Long Compact	1025
40W Long Compact	1025
50W Long Compact	1000
55W Long Compact	1000

Self-Diagnostics

IOTA's ISD Series self-diagnostic emergency ballasts combine the convenience of automatic testing with the assurance that potential problems can be identified and addressed before an unexpected power loss occurs. The self-testing circuitry of the ISD Series emergency ballast is designed to conduct the required monthly and annual tests and, if a problem is encountered, the unit will emit an alert via a flashing indicator light to communicate the issue.

Automatic Monthly and Annual Testing

The ISD Series emergency ballast will automatically conduct the 90-minute annual test and 30-second monthly tests required by code to determine the status of the emergency system. These tests verify proper operation of the ISD battery and charging circuit, as well as the condition of the designated emergency lamp.

Dual Color Indicator

The ISD units are equipped with a specialized dual-color test accessory that serves as both the test switch and a lit indicator of the unit status. The LED will be lit RED when the unit is charging, and GREEN when the unit is fully charged and in the stand-by mode.

If a problem is discovered, the ISD will communicate the diagnosis by means of a red flashing indicator as follows:

1 FLASH	CHARGE FAILURE
2 FLASHES	BATTERY FAILURE
3 FLASHES	LAMP FAILURE
4 FLASHES	INVERTER FAILURE

LED RETROFIT SOLUTION

ISD 80

The ISD 80 provides automatic self-diagnostics and testing capability and 1100 lumen output for **linear** lamp types.

Input Voltage: Universal 110-277VAC, 50/60Hz

Input Rating: 5 Watts (max)

Lumen Output: (1) lamp up to 1100 lumens

Lamps Operated:
Most 2'-4' bipin T8 and T12 HO or VHO fluorescent lamps including long compact and 2'-4' 14W to 54W T5 lamps

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 13.3 x 2.4 x 1.5 in. (mounting center 12.75 in.)

Weight: 3.6 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

Lamp	Lumens
F14 T8	550
F15 T8	600
F17 T8	780
F25 T8 (3 ft)	980
F25 T8 (4 ft)	1080
F28 T8	1090
F32 T8	1140
14W T5	740
21W T5	990
28W T5	970
35W T5	1100
39W T5	960
54W T5	1190
18W Long Compact	710
24W Long Compact	860
28W Long Compact	1160
36W Long Compact	1120
40W Long Compact	1120
50W Long Compact	1120
55W Long Compact	1100
9W Circline T5	970
12W Circline T5	1100
22W Circline T9	730
55W Circline T5	980

LED RETROFIT SOLUTION

ISD 420 A

The ISD 420 A provides automatic self-diagnostics and testing capability and 1100 lumen output for **4-pin compact** lamp types. Includes flexible conduit.

Input Voltage: Universal 110-277VAC, 50/60Hz

Input Rating: 5 Watts (max)

Lumen Output: (1) lamp up to 1100 lumens

Lamps Operated:
13W-57W 4-pin Rapid Start compact lamps including Twin, Triple, Quad Tube, 2D, and Straight

Emergency Operation: 90 minutes

Battery: Hi-Temp Nickel-Cadmium, 24 Hr Recharge with 7-10 Year Life

Operating Temp: 0° to 50°C

Warranty: 5-year

Dimensions: 13.3 x 2.4 x 1.5 in. (mounting center 12.75 in.)

Weight: 5.6 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for damp location, enclosed and gasketed, and plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

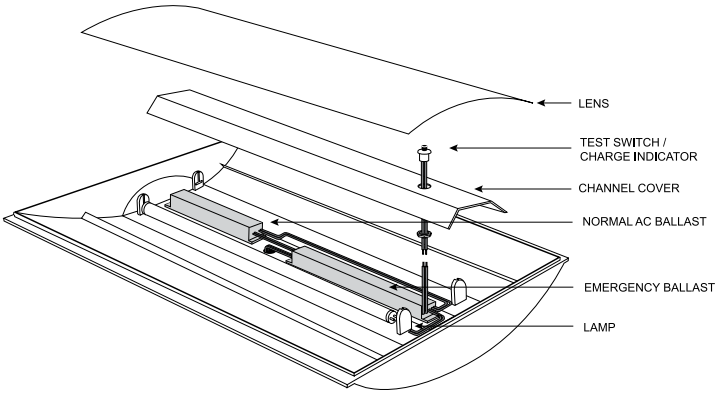
Lamp	Lumens
13W PL CF 4-Pin	740
18W PL CF 4-Pin	780
26W PL CF 4-Pin	1000
32W PL CF 4-Pin	1060
42W PL CF 4-Pin	1060
57W PL CF 4-Pin	1190

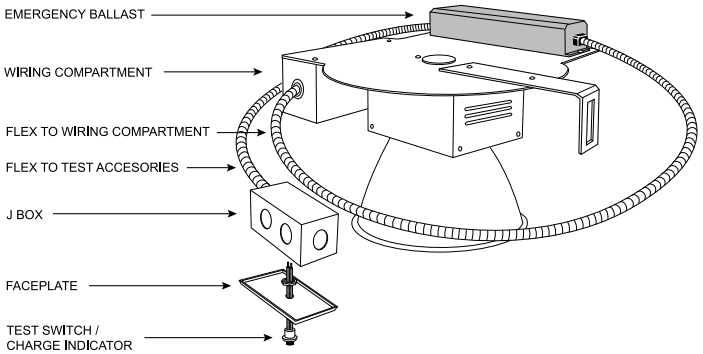
Mounting Configurations

IOTA Emergency Ballasts are designed for internal or external installation based on the requirements of the fixture type. For installation within the fixture, connections are made in the channel space and the test switch / charge indicator is installed for visibility behind the fixture lens. If the channel space does not permit installation of an emergency ballast, the unit can be mounted on top of the fixture with wiring routed into the channel space through the access hole. A top mount cover accessory is available to cover the exposed wiring from the emergency unit entering the fixture.

For downlight fixtures, an assortment of flexible conduit configurations allow for running wiring from the emergency ballast to the fixture's electronics compartment (see opposite page for conduit options.) Test components are then installed next to the fixture or within the reflector as desired.

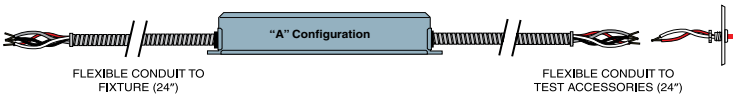
Additionally, emergency ballasts can be mounted remotely up to 50 ft, if needed. Refer to individual product specifications for allowable remote distances per model, as well as a selection of useful mounting accessories to accommodate different installation scenarios.





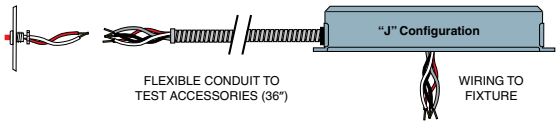
Below are descriptions of the varying mounting styles. Refer to the individual product specification sheet at **www.iotaengineering.com** for details on available configurations per model.

A **Dual Flex**
Provides dual flex for wiring to both the fixture or ballast compartment and test accessories.

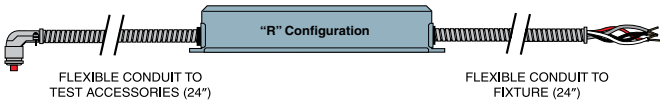


B **Integral Non-Flex**
Allows for integral installation within the ballast compartment. May also be mounted atop the fixture when used with a cover accessory (TMK).

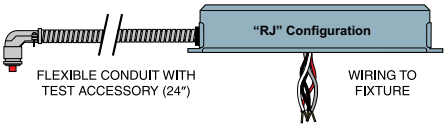
J **Single Flex Junction Box Mount**
Mounts to the junction box and provides flexible conduit for remote mounting of the test accessories.



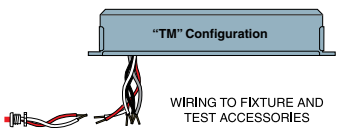
R **Dual Flex w/ Reflector-Mount Test Switch**
Provides dual flex for wiring to the fixture. The test accessory hardware installs directly within the reflector. (Recommended for factory installation only.)



RJ **Single Flex w/ Reflector-Mount TBTS**
Mounts to the junction box. The test accessory hardware installs directly within the reflector. (Recommended for factory installation only.)



TM **Top-Mount Non-Flex**
Top-mounting option for running wires directly into the ballast compartment. Test accessories are then installed within the fixture.



IIS Series Inverter Solutions

IOTA® IIS Inverter Systems offer emergency power solutions for individual fixtures or entire designated emergency circuits. IIS Inverters deliver full AC power to the emergency load during a loss of normal power, operating the fixture(s) at full light output just as they would perform under normal power conditions.

IIS Inverters are offered in a wide selection of load size capability and features, allowing facilities of most any size and type to benefit from inverter system technology.

In this Section:

Deliver full light output for any indoor or outdoor lamp and fixture type from one central supply.

25W ➡ 50kVA

IOTA IIS Inverters offer a comprehensive range of load capabilities, from 25W Micro-inverters to Three-Phase 50kVA Central Systems.

IR

Performance options such as inrush protection, and self-testing diagnostics offer added reliability and cost-saving benefits.

DR

Switched Leads and Dimming Relay Leads allow for occupants to control lighting levels without impacting emergency performance.

c UL US LISTED

UL and cUL Listed models, CA Title 20, NEMA 3R, and OSHPD model selections

Life Safety Code Excerpts

Below are pertinent sections of the Life Safety Code concerning the use, maintenance, and testing of emergency lighting equipment. Referencing local state and municipal safety codes is also advised, as these may supersede national requirements.

"7.9.1.3 Where maintenance of illumination depends upon changing from one energy source to another, a delay of not more than 10 seconds shall be permitted.

7.9.2.1 Emergency illumination shall be provided for a minimum of 1 1/2 hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 ft-candle (10.8 lux) and, at any point, not less than 0.1 ft-candle (1.1 lux), measured along the path of egress at floor level. Illumination levels shall be permitted to decline to not less than an average of 0.6 ft-candle (6.5 lux) and, at any point, not less than 0.06 ft-candle (0.65 lux) at the end of the 1 1/2 hours. A maximum-to-minimum illumination shall not exceed a ratio of 40 to 1."

7.9.2.5 Unit equipment and battery systems for emergency luminaires shall be listed to ANSI/UL 924, Standard for Emergency Lighting and Power Equipment.

Periodic Testing of Emergency Lighting Equipment

7.9.3.1.1 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Functional testing shall be conducted monthly, with a minimum of 3 weeks and a maximum of 5 weeks between tests, for not less than 30 seconds, except as otherwise permitted by 7.9.3.1.3.

(2) The test interval shall be permitted to be extended beyond 30 days with the approval of the authority having jurisdiction.

(3) Functional testing shall be conducted annually for a minimum of 1 1/2 hours if the emergency lighting system is battery powered.

(4) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1 (1) and 7.9.3.1.1 (3).

(5) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

Testing of Self-Diagnostic Equipment

7.9.3.1.2 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

(1) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.

(2) Not less than once every 30 days, self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform a test with a duration of a minimum of 30 seconds and a diagnostic routine.

(3) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.

(4) A visual inspection shall be performed at intervals not exceeding 30 days.

(5) Functional testing shall be conducted annually for a minimum of 1 1/2 hours.

(6) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2 hour test.

(7) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction."

Primary take-aways:	What this means for inverter systems:
Transfer time of the emergency supply must not exceed 10 seconds.	IIS Series Inverters offer transfer times from less than 2 milliseconds (Fast Transfer) or nominal 50 milliseconds (Standard Transfer) depending on load requirements. In no circumstances does transfer time exceed Life Safety maximum allowances.
Emergency illumination must be provided for no less than 90 minutes.	IIS Emergency Inverters are sized to allow for operation of the rated load for the required runtime. If load sizes are less than the capacity of the inverter, then the IIS inverter will operate the load for greater than 90 minutes.
Emergency illumination must maintain a minimum average level of 1 ft-candle initially, and .6 ft-candles at the end of the 90 minutes.	IIS Inverter Systems will operate the designated fixture(s) at full light output with no degradation for the duration of the runtime. This ensures that foot-candles requirements are met for the full runtime.
An emergency system must have a means to be tested and inspected for system readiness.	IIS Fixture Level and Circuit Level solutions include test switch and charge indicators for physical testing of the unit as needed. Larger building-level solutions feature advanced interface technology for testing and inspection of the auxiliary system.
Testing must include a 30-second monthly test and a 90-minute annual test.	Testing of IOTA units can be achieved through manual activation of the test switch or through the use of automatic self-testing programming available on larger IIS systems.
Written records of these tests must be maintained for reference and inspection as needed.	Self-testing diagnostics on larger central inverter systems maintain electronic logs of system tests for reference and review by facility managers, inspectors, and Authorities Having Jurisdiction.

Application Concept

The example below demonstrates how different types of inverters provide emergency illumination within a facility. Note that it is not typical for each type of inverter (fixture-level, circuit-level, central) to be present within a facility, but rather that one inverter type is used. Regardless of type, the inverter provides AC power for the designated fixtures to operate at full output for the entire emergency runtime.

1 IIS 35 Micro-Inverter

Micro-Inverters operate a single fixture in the emergency mode. The 35W capacity and full light output is ideal for generating the needed footcandles from the elevated fixtures in the lobby, providing substantial egress lighting for the full area.

2 IIS 375 Mini-Inverter

In this scenario, a 375W mini-inverter installs inside a maintenance room and operates multiple fixtures on the designated emergency circuit throughout the facility, including lights along the outdoor paths of egress.

3 IIS Central Inverter

A properly-sized central inverter system can operate some or all of the fixtures within the facility. Depending on the lighting types, a central inverter with a fast transfer speed (less than 2ms) may be ideal to ensure optimal operation of all fixtures in the building. IIS Central Inverters are available for either interior or exterior installation if needed.

Remote Mounting Distances

The distance at which the IIS Inverter will operate a load is determined by a combination of the voltage, load wattage, and wire gauge. This table will help determine the maximum remote mounting distance (in feet), allowing for a 3% voltage drop. For distances with inverters greater than 750W, consult Technical Services.

	120V			277V
Watts	**14 gauge**	**12 gauge**	**10 gauge**	**14 gauge**
50W	1600 ft	2468 ft	4084 ft	8623 ft
100W	809 ft	1249 ft	2066 ft	4311 ft
125W	646 ft	997 ft	1649 ft	3445 ft
150W	537 ft	829 ft	1372 ft	2874 ft
200W	404 ft	624 ft	1033 ft	2155 ft
250W	323 ft	493 ft	827 ft	1722 ft
300W	268 ft	414 ft	686 ft	1437 ft
350W	230 ft	356 ft	589 ft	1230 ft
375W	214 ft	331 ft	548 ft	1146 ft
550W	146 ft	226 ft	374 ft	779 ft
750W	107 ft	166 ft	274 ft	571 ft

Micro Inverters

Micro Inverters are fixture-level solutions, providing AC emergency power and full light output to individual luminaires up to 50 watts.

IIS 25

The IIS 25 delivers 25W of 120/277VAC power for LED, fluorescent, and incandescent fixture types.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 32 Watts

Output VAC: 120/277Vac, 60Hz. Slide Switch Selectable

Output Power: 25 Watts

Load Types: LED (per NEMA 410), fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 0° to 50° C

Battery: High-temp rechargeable, nickel-cadmium

Dimensions: 17.77" x 3.0" x 2.75" (mounting center 17.25")

Weight: 6.5 lbs

Warranty: 5-year

Certifications: UL 924 Listed for U.S. and Canada. CSA C22 No. 141 Unit Equipment for Emergency Lighting. Damp Location Rated. RoHS Compliant.

IIS 35

The IIS 35 delivers 35W of 120/277VAC power for LED, fluorescent, and incandescent fixture types.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 44 Watts

Output VAC: 120/277Vac, 60Hz. Slide Switch Selectable

Output Power: 35 Watts

Load Types: LED (per NEMA 410), fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 0° to 50° C

Battery: High-temp rechargeable, nickel-cadmium

Dimensions: 17.77" x 3.0" x 2.75" (mounting center 17.25")

Weight: 6.5 lbs

Warranty: 5-year

Certifications: UL 924 Listed for U.S. and Canada. CSA C22 No. 141 Unit Equipment for Emergency Lighting. Damp Location Rated. RoHS Compliant.

IIS 35 HE

The IIS 35 HE delivers 35W of 120/277VAC power for LED, fluorescent, and incandescent fixtures. High-Efficiency design meets CA Title 20 requirements.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 43 Watts

Output VAC: 120/277Vac, 60Hz. Slide Switch Selectable

Output Power: 35 Watts

Load Types: LED (per NEMA 410), fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 0° to 50° C

Battery: High-temp rechargeable nickel-cadmium

Dimensions: 19.94" x 2.88" x 2.75" (mounting center 19.4")

Weight: 6.5 lbs

Warranty: 5-year

Certifications: UL 924 Listed. CSA C22 No. 141 Unit Equipment for Emergency Lighting. Damp Location Rated. RoHS Compliant. Certified in CA T20 MAEDBS.

IIS 50

The IIS 50 delivers 50W of 120/277VAC power for LED, fluorescent, and incandescent fixture types.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 60 Watts

Output VAC: 120/277Vac, 60Hz. Slide Switch Selectable

Output Power: 50 Watts

Load Types: LED (per NEMA 410), fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 0° to 50° C

Battery: High-temp rechargeable, nickel-cadmium

Dimensions: 22.5" x 3.0" x 2.75" (mounting center 22.0")

Weight: 9.0 lbs

Warranty: 5-year

Certifications: UL 924 Listed for U.S. and Canada. CSA C22 No. 141 Unit Equipment for Emergency Lighting. Damp Location Rated. RoHS Compliant.

25W **25W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

35W **35W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

35W **35W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

Helps meet CA Title 20 and registered in the MAEDBS database

50W **50W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

125W Mini Inverters

125W Mini Inverters operate multiple fixtures on the designated emergency circuit. The moderate load size and small mounting enclosures make the IIS 125 ideal for small offices and commercial space requirements.

IIS 125 CG

The IIS 125 CG delivers 125W of 120/277VAC power for LED, fluorescent, and incandescent fixture types in a **grid-ceiling** mount cabinet.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk):150 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 125 Watts

Load Types: LED, fluorescent, incandescent

Emergency Operation: 90 minutes

Transfer Time: < 50 milliseconds

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.75" x 6.625" x 8.5" (including mounting brackets and flange: 23.375" x 8.0" x 8.5")

Weight: 42.5 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S. and Canada.

125W 125W Load Capability

IR Inrush Rated to NEMA 410 Standards

DR Dimming Relay Option

IIS 125 SM

The IIS 125 SM delivers 125W of 120/277VAC power for LED, fluorescent, and incandescent fixture types in a **surface-mount** cabinet.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk):150 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 125 Watts

Load Types: LED, fluorescent, incandescent

Emergency Operation: 90 minutes

Transfer Time: < 50 milliseconds

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-r egulated lead-acid (VRLA)

Dimensions: 23.15" x 11.71" x 4.5"

Weight: 46.0 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S. and Canada.

125W 125W Load Capability

IR Inrush Rated to NEMA 410 Standards

DR Dimming Relay Option

IIS 125 HE CG

The IIS 125 HE CG delivers 125W of 120/277VAC power for LED, fluorescent, and incandescent fixture types in a **grid-ceiling** mount cabinet. High-efficiency design helps meet CA Title 20 requirements

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk):180 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 125 Watts

Load Types: LED, fluorescent, incandescent

Emergency Operation: 90 minutes

Transfer Time: < 1 second

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.75" x 6.625" x 8.5" (including mounting brackets and flange: 23.375" x 8.0" x 8.5")

Weight: 42.5 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S. Certified in CA T20 MAEDBS.

125W 125W Load Capability

Helps meet CA Title 20 and registered in the MAEDBS database

DR Dimming Relay Included

IIS 125 HE SM

The IIS 125 HE SM delivers 125W of 120/277VAC power for LED, fluorescent, and incandescent fixture types in a **surface-mount** cabinet. High-efficiency design helps meet CA Title 20 requirements

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk):180 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 125 Watts

Load Types: LED, fluorescent, incandescent

Emergency Operation: 90 minutes

Transfer Time: < 1 second

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.15" x 11.71" x 4.5"

Weight: 46.0 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S. Certified in CA T20 MAEDBS.

125W 125W Load Capability

Helps meet CA Title 20 and registered in the MAEDBS database

DR Dimming Relay Included

IOTA

250 and 375 Watt Mini Inverters

IOTA 250-watt and 375 watt inverters provide increased load size capability with optional performance features. DR dimming relays enable the use of 0-10VDC dimming signals, inrush protection eliminates the need for de-rating, and high-efficiency "HE" models meet CA Title 20 requirements and provide significant energy-savings in the standby mode.

IIS 250 HE DR

The IIS 250 delivers 250W of 120/277VAC power for LED, fluorescent, and incandescent loads. Rated to NEMA 410 standards and **includes 0-10V dimming relay.**

Input VAC: Universal, 2-wire 120-277VAC, 60 Hz

Input Watts (bulk): 305 Watts

Output VAC: (auto-detect) 120/277Vac, 60Hz.

Output Power: 250 Watts (@0.9 leading to 0.9 lagging Power Factor)

Transfer Time: <1 second

Load Types: LED, fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 19.15" x 11.6" x 7.64"

Weight: 65.5 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S. and Canada. Certified in CA T20 MAEDBS.

IIS 375 I

The IIS 375 delivers 375W of 120/277VAC power for LED, fluorescent, and incandescent fixture types.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 500 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 375 Watts (@0.9 leading to 0.9 lagging Power Factor)

Transfer Time: <50 milliseconds

Load Types: LED*, fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.0" x 17.83" x 8.2"

Weight: 114.0 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S.

IIS 375 LED

The IIS 375 LED features increased inrush protection to operate LED, fixture types up to the fully-rated 375W per NEMA 410.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 500 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 375 Watts (@0.9 leading to 0.9 lagging Power Factor)

Transfer Time: <50 milliseconds

Load Types: LED loads per NEMA 410

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.0" x 17.83" x 8.2"

Weight: 114.0 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S.

250W **250W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

DR **Dimming Relay Included**

TITLE 20 **Helps meet CA Title 20 and registered in the MAEDBS database**

375W **375W Load Capability**

375W **375W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

DR **Dimming Relay Option**

*Units not rated to NEMA 410 require a 25% de-rating for LED applications

550 and 750 Watt Mini Inverters

550W and 750W inverter models provide larger load capability. Take advantage of the added capabilities of the IIS 750 such as 0-10V dimming override, self-diagnostics, and versatile 3-zone emergency power.

IIS 550 I

The IIS 550 delivers 550W of 120/277VAC power for LED, fluorescent, and incandescent fixture types.

Input VAC: Dual 120/277Vac, 60Hz

Input Watts (bulk): 675 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 550 Watts (@0.9 leading to 0.9 lagging Power Factor)

Transfer Time: <50 milliseconds

Load Types: LED*, fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.0" x 17.83" x 8.2"

Weight: 145.0 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S.

550W **550W Load Capability**

DR **Dimming Relay Option**

IIS 550 HE

The IIS 550 delivers fully-rated 550W of 120/277VAC power for LED, fluorescent, and incandescent fixture types. **Includes 0-10V dimming relay. Meets CA Title 20.**

Input VAC: Universal, 2-wire 120-277VAC, 60 Hz

Input Watts (bulk): 750 Watts

Output VAC: 120/277Vac, 60Hz.

Output Power: 550 Watts (@0.9 leading to 0.9 lagging Power Factor)

Transfer Time: <1 second

Load Types: LED (per NEMA 410), fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 22.0" x 19.75" x 11"

Weight: 163.0 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S.
Certified in CA T20 MAEDBS.

550W **550W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

CERTIFIED IN TITLE 20 **Helps meet CA Title 20 and registered in the MAEDBS database**

DR **Dimming Relay Included**

IIS 750

The IIS 750 delivers fully-rated 750W of 120/277VAC power for LED, fluorescent, and incandescent fixture types. **Includes self-diagnostics, 3 zone output, and 0-10V dimming relays. Meets CA Title 20.**

Input VAC: Universal, 2-wire 120-277VAC, 60 Hz

Input Rating (max): 835VA

Output VAC: (auto-detect) 120/277Vac, 60Hz.

Output Power: 750 Watts / 835VA

Transfer Time: <1.3 seconds

Load Types: LED (per NEMA 410), fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 24.64" x 22.1" x 9.8"

Weight: 232.0 lbs

Warranty: 3-year

Certifications:
UL 924 Listed for U.S. and Canada
Certified in CA T20 MAEDBS.

750W **750W Load Capability**

1 2 3 **Allows delivery of emergency power to three separate zones**

Automatically Conducts Monthly and Annual Tests

IR **Inrush Rated to NEMA 410 Standards**

CERTIFIED IN TITLE 20 **Helps meet CA Title 20 and registered in the MAEDBS database**

DR **Includes 3 Dimming Relays**

IOTA

1000W+ Single Phase and Three Phase Inverters

1.0 to 16.7kVA single phase inverters and 4.8kVA to 50kVA three phase inverters deliver the capability to service most any facility's emergency lighting requirements.

IIS 1100

The IIS 1100 delivers 1100W of 120/277VAC power for LED, fluorescent, and incandescent fixture types.

Input VAC: Single Phase 2-wire 120/277VAC, 60 Hz

Input Watts (bulk): 1375 Watts

Output VAC: Single Phase 2-wire 120/277VAC, 60 Hz

Output Power: 1100 Watts (@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2-10 milliseconds

Load Types: LED, fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free VRLA

Dimensions: 26.0" x 25.3" x 10.125"

Weight: 245.0 lbs

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.

IISC

The IISC features a compact cabinet design that offers 1000, 1600, 2200, or 2800 wattage options with minimal mounting footprint.

Input: Single-Phase 120/208/240/277VAC, 60Hz

Output: Single-Phase 120/208/240/277VAC, 60Hz

Output Power: 1100 / 1600 / 2200 / 2800 watts (@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2 milliseconds

Load Types: All lighting load types

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free VRLA

Dimensions: 24.25" x 27.25" x 10.5" (1100W)
24.25" x 43.25" x 10.5" (1600W)
24.25" x 43.25" x 10.5" (2200W)
24.25" x 55.0" x 10.5" (2800W)

Weight: Varies per model. Refer to spec sheet.

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.

IIS Single Phase

IIS Single Phase Central Inverters provide emergency power from 1.5kVA to 16.7kVA in a single steel cabinet.

Input VAC: Single Phase 120/208/240/277/347VAC, 60Hz

Output VAC: Single Phase 120/208/240/277/347VAC, 60Hz

Output Power: 10 Models available from 1.5kVA to 16.7kVA
(@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2 milliseconds (FT model), 50 milliseconds (ST model)

Load Types: Fast Transfer model: All lighting load types

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free VRLA

Dimensions:
30" x 47" x 25" (1.5kVA to 5.0kVA)
48" x 76" x 25" (6.0kVA to 16.7kVA)

Weight: Varies per model. Refer to spec sheet.

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.

IIS3P Three Phase

IIS3P Series are three-phase inverter systems that provide increased power capability from 4.8kVA to 50kVA.

Input VAC: 3-Phase 120/208 or 277/480VAC 4-wire Wye configuration, 60Hz

Output VAC: 3-Phase 120/208 or 277/480VAC 4-wire Wye or Delta configuration, 60Hz

Output Power: 10 Models available from 4.8kVA to 50kVA
(@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2 milliseconds

Load Types: All lighting load types

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free VRLA

Dimensions:
30" x 47" x 25" (1.5kVA to 5.0kVA)
44" x 72" x 31" (6.0kVA to 16.7kVA)
Additional battery cabinets may be required depending on model.

Weight: Varies per model. Refer to spec sheet

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.

1100W **1100W Load Capability**

DR **Dimming Relay Option**

Includes Self-Diagnostics

Compact cabinet allows up to 2800W performance with minimal space requirements

Fast Transfer speed operates all lighting load types.

Includes Self-Diagnostics

Standard or Fast Transfer models available

Includes Self-Diagnostics

Three-phase power delivers up to 50kVA of emergency power

Fast Transfer speed operates all lighting load types.

Includes Self-Diagnostics

*Units not rated to NEMA 410 require a 25% de-rating for LED applications

Outdoor and Seismic Applications

IIS EXT and IIS SZ models provide confident performance in demanding applications. IIS EXT models feature a NEMA 3R drip-tight, locking cabinet. IIS SZ models are designed with reinforced, durable enclosures and undergo shaker-table withstand testing to an SDS level of 2.5g.

IIS EXT and IIS3P EXT

IIS EXT and IIS3P EXT are single phase and three phase inverter solutions for outdoor installation. EXT units feature a locking NEMA 3R steel enclosure for protection against moisture, dust, and debris.

Input VAC: (Single Phase) 120/208/240/277VAC 60 Hz
(3-Phase) 120/208 or 277/480VAC 4-wire Wye 60Hz

Output VAC: (Single Phase) 120/208/240/277VAC 60 Hz
(3-Phase) 120/208 or 277/480VAC 4-wire Wye/Delta 60Hz

Output Power: 3kVA to 8kVA (Single Phase)
4kVA to 10kVA (3-Phase)
(@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2 milliseconds

Load Types: All lighting load types

Emergency Operation: 90 min.

Operating Temp: 10° to 40° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 48" x 76" x 30"

Weight: Cabinet weight varies depending on model. Refer to product specification page for weight per model.

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U. S. NEMA 3R

IIS EXT 1750

IIS EXT 1750 is a single phase inverter solution for outdoor installation. Features a compact locking NEMA 3R steel enclosure for protection against moisture, dust, and debris.

Input VAC: 120/208/277VAC 60 Hz

Output VAC: 120/277VAC 60 Hz

Output Power: 1750W
(@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2 milliseconds

Load Types: All lighting load types

Emergency Operation: 90 min.

Operating Temp: 0° to 50° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 19" x 50.75" x 14.375"

Weight: 596 lbs

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.
NEMA 3R

IIS SZ and IIS3P SZ

IIS SZ and IIS3P SZ are single phase and three phase inverter solutions designed for seismic applications. SZ units are designed and tested to withstand SDS levels up to 2.5g.

Input VAC: (Single Phase) 120/208/240/277/347 VAC 60 Hz
(3-Phase) 120/208 or 277/480VAC 4-wire Wye 60Hz

Output VAC: (Single Phase) 120/208/240/277/347 VAC 60 Hz
(3-Phase) 120/208 or 277/480VAC 4-wire Wye/Delta 60Hz

Output Power: 1.5kVA to 16.7kVA (Single Phase)
4.8kVA to 50kVA (3-Phase)
(@0.5 leading to 0.5 lagging Power Factor)

Transfer Time: 2 milliseconds

Load Types: All lighting load types

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: Varies depending on model. Refer to product specification pages for dimensions per model.

Weight: Varies depending on model. Refer to product specification pages for weight per model.

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U. S.

NEMA 3R Drip-Tight Enclosure

Single or Three Phase models

Fast Transfer speed operates all lighting load types.

Includes Self-Diagnostics

NEMA 3R drip-tight enclosure

Fast Transfer speed operates all lighting load types.

Includes Self-Diagnostics

Shaker-Table Tested to Industry Seismic Specifications

Single or Three Phase models

Fast Transfer speed operates all lighting load types.

Includes Self-Diagnostics

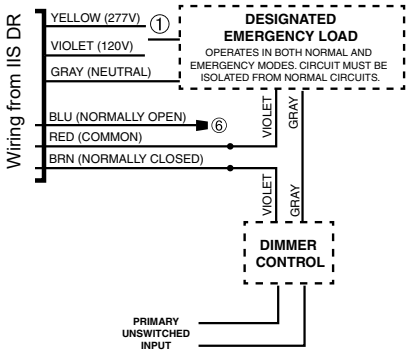
*Units not rated to NEMA 410 require a 25% de-rating for LED applications

Inverter Load Considerations

Dimming Relay

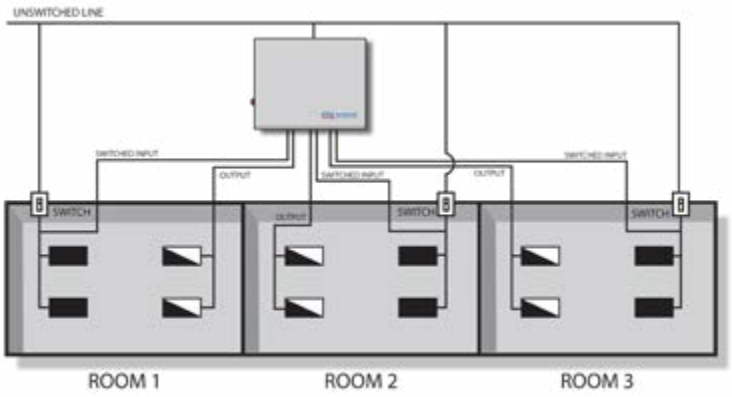
The **"DR" Dimming Relay** option provides additional capability when used with dimming controls. The DR option interfaces with 0-10V leads to allow for the use of dimming settings without interfering with the emergency lighting function. The Dimming Relay contacts provide electrical continuity during normal power conditions, allowing your dimming signal to operate the luminaire in the desired, dimmed state. When the inverter transfers to the emergency mode, the dimming relay contacts electrically open the 0-10 dimming reference signal and force the luminaire to operate at full lumen output regardless of the dimmer setting.

Typical Dimmer Bypass Application



3-Zone Emergency Power (IIS 750)

The IIS 750 features a unique zone output feature that allows the normal lighting to operate independently from one another across three zones, if desired. In the event of a loss of power, the IIS 750 will deliver emergency power to each zone, regardless of local control settings. Emergency circuits can be sized as desired, meaning users can deliver all 750 watts of emergency power to a single zone or divided among the three zones as needed. Additionally, the IIS 750 features three dimming relay inputs that accommodate any 0-10V dimming signal present in the different zones.



Extended Runtimes

Emergency lighting for Tornado Safe Rooms require a two hour minimum of emergency operation to meet FEMA requirements. While IOTA IIS Inverters are typically used for 90-minute run-times per the Life Safety Code, they can fulfill the FEMA requirement by balancing the load demand with the battery capacity. Refer to the chart on the right for sizing the IIS load to achieve two hour operation. For de-rating of inverters greater than 550W, consult IOTA Technical Services.

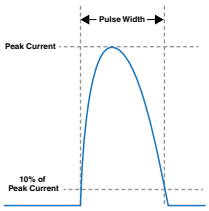
For more information regarding IOTA products for FEMA applications, contact our Customer Service team or visit the FEMA website at **www.fema.gov**.

IIS Model	90 Minute Capacity	120 Minute Capacity
IIS 25	25W	18W
IIS 35	35W	25W
IIS 50	50W	35W
IIS 125	125W	90W
IIS 250	250W	185W
IIS 375	375W	280W
IIS 550	550W	410W
IIS 750	750W	560W

Inrush Current

Inrush current is the maximum, instantaneous input current drawn from electrical devices when first turned on and which is greater than the input current generated during normal operation. Inrush is a prevalent condition in LED technology. Where inverters are concerned, the design must be capable of handling the combined draw of all equipment on the circuit without triggering over-current protection features. Inrush is calculated by using the expression I^2t where I equals the maximum Peak Current and t is the Pulse Width duration (ms). The combined I^2t values of all devices on the circuit will provide the total inrush value.

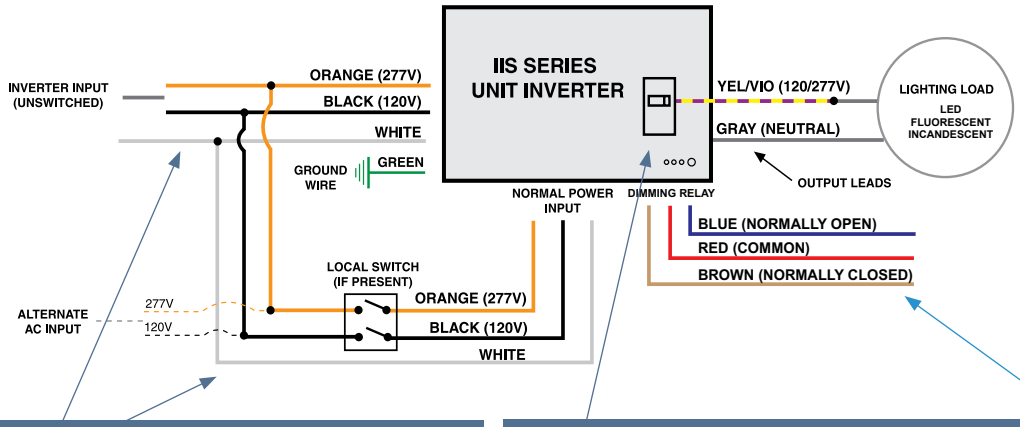
A recommended industry practice is to de-rate inverters by 25% when used with LED loads to account for inrush, however select IOTA IIS models are **NEMA 410 rated** to accommodate the full rated capacity, including inrush, meaning no de-rating is required.



NEMA standards recommended a 25% de-rating of equipment for accommodating cumulative inrush.

IIS Models Rated to NEMA 410 (no de-rating required)	
IIS 25	25 Watt
IIS 35 and IIS 35 HE	35 Watt
IIS 50	50 Watt
IIS 125 and IIS 125 HE	125 Watt
IIS 250	250 Watt
IIS 375 LED	375 Watt
IIS 550 HE	550 Watt
IIS 750	750 Watt

Typical Wiring - 125W to 550W



Wiring of the IIS Inverter may vary depending on the specific model. Always refer to the product specification sheet or installation manual for specific wiring details or call IOTA Technical Services.

AC Input Leads

IIS Inverters utilize two sets of input leads: one to provide unswitched power to the inverter system and a second to serve as a normal power input to the lighting circuit. Since the inverter input for charging the battery also serves as a 'power sense' so typically an ALCR device like the ETS DR is not required, but can be used to bypass a secondary control if needed.

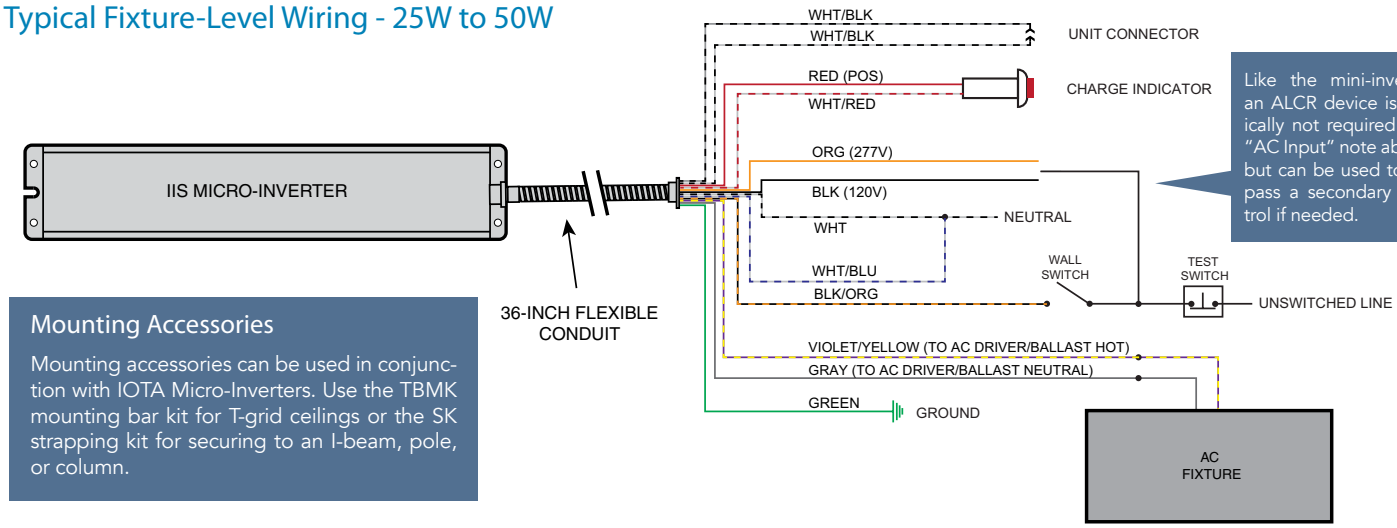
Internal Circuit Breaker

The internal circuit breaker protects the inverter from overload on the output side of the unit. Internally, the appropriate voltage lead is selected for connection to the line side of the circuit breaker and the designated emergency load connects to the single Yellow/Violet 120/277V hot lead. *Note: circuit breaker wiring may vary depending on model.*

Dimming Relay (optional)

Dimming Relay options are available on select models for accommodating energy-saving control settings. See the **DR Dimming Relay** section on the opposite page for details.

Typical Fixture-Level Wiring - 25W to 50W



Like the mini-inverter, an ALCR device is typically not required (see "AC Input" note above) but can be used to bypass a secondary control if needed.

Mounting Accessories

Mounting accessories can be used in conjunction with IOTA Micro-Inverters. Use the TBMK mounting bar kit for T-grid ceilings or the SK strapping kit for securing to an I-beam, pole, or column.

Factory Start-Up for Inverters 1000W and Up

Installation and wiring for IIS Central Inverters (1000W and greater) will vary depending on model and application. For these products, IOTA offers a Factory Start-Up and Training option that ensures proper installation, an introduction to the use of the equipment, and provides extended warranty benefits.

IOTA's IIS Inverter Factory Startup program provides the confidence and reliability of expert installation. A qualified IIS Technician will visit the job site to oversee the startup and initial testing of your IIS Inverter and ensure it performs to factory specifications. Should any problems be detected, the IIS Technician will take corrective action to repair the affected components.

ALCR Solutions

ALCR (Automatic Load Control Relay) devices enable the use of controls on designated fixtures or circuits connected to an auxiliary power supply, such as a generator or inverter system. This capability allows facility owners to apply local switching or dimming controls on these emergency fixtures without compromising their ability to operate in the event of a power loss.

Networked and non-networked ALCR solutions mean any auxiliary supply application can reap the benefits of enhanced control for emergency lighting.

In this Section:

Life Safety Code requirements as pertaining to ALCR devices.

Understanding ALCR Operation

IOTA ETS and ETS 20 models and Application

nLight ER and EM Emergency Control Solutions and Applications

Decreases power consumption by eliminating the need for Always On fixtures or 24/7 night lights connected to auxiliary generators or inverters.

Dimming relays expand control of designated emergency fixtures and circuits by allowing use of 0-10V dimming signals.

DUAL | ZONE
DIMMING CONTROL

Dual Zone Dimming capability bypasses up to two different dimming control settings during a loss of normal power.

Use a secondary device such as a fire alarm to automatically override control settings on the designated emergency fixtures.

Wired and wireless solutions within the nLight platform.

Life Safety Code Excerpts

Below are pertinent sections of the Life Safety Code concerning the application of ALCR emergency lighting equipment. Referencing local state and municipal safety codes is also advised, as these may supersede national requirements.

"A.7.9.2.3.Where emergency lighting is provided by automatic transfer between normal power service and an emergency generator, it is the intent to prohibit the installation, for any reason, of a single switch that can interrupt both energy sources."

Primary take-away:

To avoid a light switch in the OFF position from preventing a generator or inverter supplying power to an emergency fixture, generators or inverters must not have a means of being completely cut off from the designated load.

What this means for emergency lighting:

Typically, any fixture that is on the designated emergency circuit is not switched, but instead is utilized as a 'nightlight' or ALWAYS ON fixture. This practice does satisfy the intent of the code, but results in wasted power consumption and potentially undesirable lighting conditions in the occupied space. ALCR (automatic load control relays) allow for the use of controls on emergency circuits without impacting the emergency function.

ALCR Operation

ALCR devices themselves do not supply emergency power to a fixture, but allow an auxiliary inverter or generator to provide the power, regardless of control settings on the circuit. ALCR devices make it possible for occupants to turn lights off when not needed - such as during a screen presentation - but will bypass the setting if a loss of normal power is detected and allow the auxiliary supply to provide emergency lighting. Controls are not limited to wall switches, but can also include other devices such as occupancy sensors, photocells, or dimming controls.

Types of ALCR devices

Fixture Level (non-networked) - Fixture-level ALCR devices embed within a single fixture, providing local control for the individual light. Any type of lighting technology (incandescent, LED, fluorescent, etc.) is generally acceptable for use with an ALCR device, provided that the input current does not exceed the rating of the relay in the ALCR.

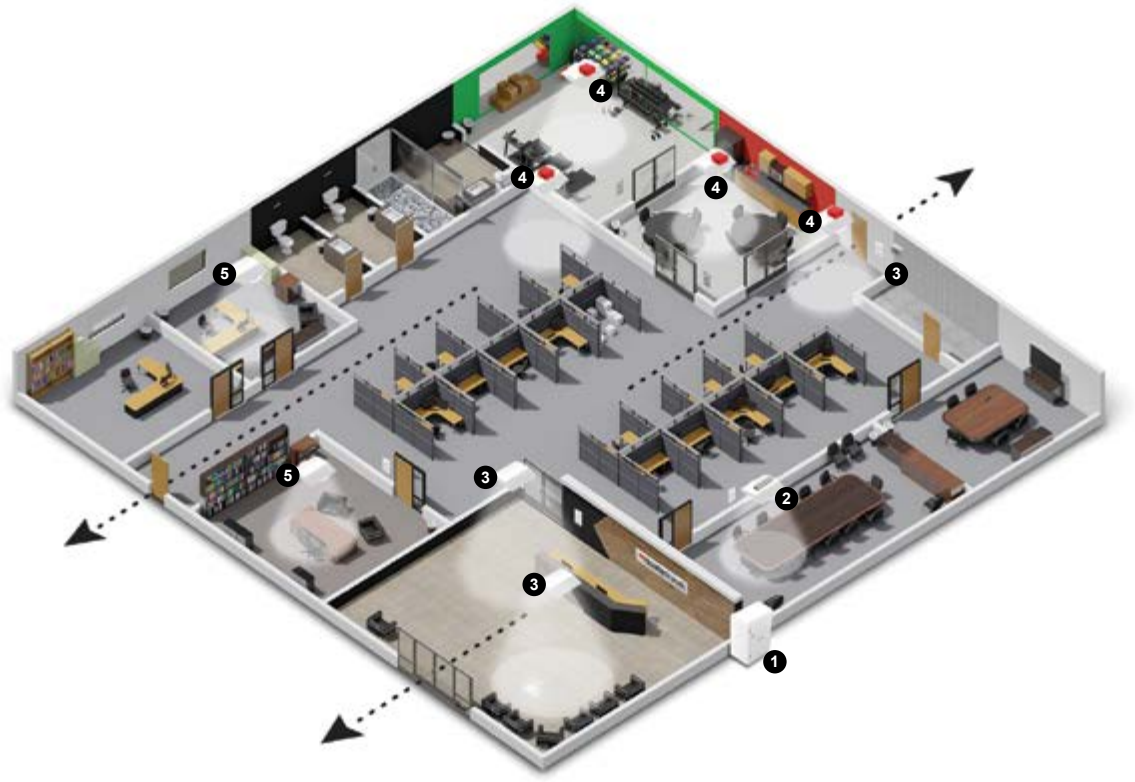
Circuit Level (non-networked) - A circuit-level ALCR device allows control on an entire emergency circuit. Like the fixture-level solution, the light fixtures on the circuit can be comprised of any lamp type, as long as the combined ratings of the load are within the operating specifications of the ALCR.

Networked Controls - ALCR solutions for the nLight platform function in primarily the same manner as non-networked ALCR devices, with the added benefit of networked lighting control. If a loss of normal power is detected, the nLight ALCR overrides control within the fixture. When communication is received regarding the return of normal power, or a time limit of 90 minutes is exhausted, the device restores the fixture to normal operation.

Model	Operation	Application	Description
ETS DR	Senses Loss of Normal Power	Not Networked	Fixture Level ALCR
ETS 20	Senses Loss of Normal Power	Not Networked	Circuit Level ALCR
nLight ER	Senses Loss of Normal Power via Wired Connection	Networked	Fixture or circuit level ALCR
nLight EM	Senses Loss of Normal Power via Wireless Communication with Nearby Devices on Normal Power	Networked	Fixture or circuit level ALCR. No wiring to Normal Power required.

Application Concept

ALCR devices work in conjunction with an auxiliary emergency supply. In this example, an inverter supplies the emergency power. Different ALCR solutions are applied based on the needs of the space, occupant behavior, and the implemented control technology.



Transfer Speed and ALCRs

Transfer Speed is a reference to how quickly the auxiliary supply (inverter or generator) is able to deliver emergency power. Generators tend to have a slower transfer speed, while inverters provide options for fast transfer speeds (less than 2ms) or standard transfer speeds (greater than 30ms.) Choose the desired transfer speed when specifying the inverter solution.Often, fast transfer speeds are chosen for optimal performance of the electrical load. These ALCR solutions are designed to accommodate all levels of transfer speed.

ALCR Device	Transfer Speed Compatibility
ETS DR ETS 20 / ETS 20 DR nLight "ER"	Interruptible (no transfer time), Fast Transfer, or Standard Transfer speeds
nLight Air "EM" (Standalone)	Interruptible (no transfer time), Fast Transfer, or Standard Transfer speeds
nLight Air "EM" (Fixture Embedded)	Interruptible (no transfer time), Fast Transfer, or Standard Transfer speeds

1 IIS Central Inverter

In this facility, an IIS Central Inverter is capable of operating the designated emergency circuits in the emergency mode. Since it is not desirable that the designated fixtures be illuminated at all times ("Always On" or Unswitched), select ALCR devices are also used.

2 ETS DR

In this presentation room, which is frequently dimmed, an ETS DR is installed. The ETS DR connects to both the normal and emergency power inputs. If the ETS DR senses a loss of normal power, it shunts power around the dimming control to allow the inverter to operate the fixture at full brightness.

3 ETS 20 DR

The lighting circuit of the lobby is monitored by the ETS 20 DR. For aesthetics and energy savings, a portion of the room is often dimmed low while other fixtures remain at slightly higher light output to create a welcoming environment. During a power loss, the ETS 20 DR overrides both dim levels to allow 100% operation.

4 nPP16 ER / rPP20 ER

In the larger common areas, the nPP16 ER or rPP20 ER resides on the emergency circuit, with a connection to the normal circuit. If the ER device senses a loss of normal power, the relay closes and 0-10V dimming is set to high end trim, allowing the fixture to operate at full brightness while other control commands are ignored.

5 rES7 EM

In the private offices, the rES7 EM is embedded in a fixture with an emergency power connection. When the fixture's EldoLED driver detects a transfer of power at the inverter, it communicates with the control device, which in turn commands a fixture to full brightness while other control commands are ignored.

ETS and ETS 20 Control Devices

IOTA offers two types of ALCR solutions: a fixture-level (ETS DR) and circuit-level solution (ETS 20 and ETS 20 DR.) The ETS DR installs within a single fixture to allow use of lighting controls, such as wall switch or occupancy sensor, with additional dimming relay leads to connect to a 0-10V dimming signal. Circuit-level ETS 20 and ETS 20 DR models accomplish the same purpose, but allow use of controls on an entire circuit.

ETS DR

The ETS DR is a fixture-level ALCR that will shunt power around the fixture's local control to enable operation from the emergency supply. Includes 0-10V dimming relay

Input Voltage: Dual 120/277VAC, 60Hz

Maximum Load Ratings
3 Amps @ 120VAC
3 Amps @ 277VAC

Operation:
The ETS DR allows any properly-rated fixture to be operated by an auxiliary supply regardless of local control settings.

Dimming Capability:
Can be used in 0-10 volt dimming circuits up to 100mA

Operating Temp
-20° to 65° C (-4° to 149° F)

Approval
UL 924 Listed for U.S. and Canada.
Rated for use in plenum applications.

Dimensions
8.0" x 1.18" x 1.125"
(mounting center: 7.5")

Weight 1.0 lbs

ETS 20

The ETS 20 is a circuit-level ALCR that will shunt power around the local control to allow operation of fixtures from an auxiliary supply in the event of a loss of normal power

Input Voltage: Dual 120/277VAC, 50/60Hz

Maximum Load Ratings
LED Driver: 8A@120Vac, 50/60Hz per NEMA 410
LED Driver: 8A@277Vac 50/60Hz per NEMA 410
Ballast: 20A@120/277Vac, 50/60Hz
Incandescent: 10A@120Vac, 50/60Hz

Operation:
The ETS 20 will shunt power to the designated emergency load to operate at full brightness as long as the emergency supply is present.

Operating Temp
-20° to 65° C (-4° to 149° F)

Approval
UL 924 Listed for U.S. and Canada.
Rated for damp location and
plenum applications.

Dimensions
4.625" x 2.25" x 2.25"
Threaded Coupling: 1" with 0.5 diam.

Weight 1.0 lbs

ETS 20 DR

The ETS 20 DR performs like the ETS 20, but with two dimming relays to allow the use of up to two 0-10V different dimming signals on the circuit without compromising the emergency function.

Input Voltage: Dual 120/277VAC, 50/60Hz

Maximum Load Ratings
LED Driver: 8A@120Vac, 50/60Hz per NEMA 410
LED Driver: 8A@277Vac 50/60Hz per NEMA 410
Ballast: 20A@120/277Vac, 50/60Hz
Incandescent: 10A@120Vac, 50/60Hz

Operation:
The ETS 20 will shunt power to the designated emergency load to operate at full brightness as long as the emergency supply is present.

Operating Temp
-20° to 65° C (-4° to 149° F)

Approval
UL 924 Listed for U.S. and Canada.
Rated for damp location and
plenum applications.

Dimensions
4.625" x 2.25" x 2.25"
Threaded Coupling: 1" with 0.5 diam.

Weight: 1.0 lbs

- **Dimming Relay Included**
- **Integral and Flex Models Available**
- **Inrush Rated to NEMA 410 Standards**
- **Extended Temperature Performance**

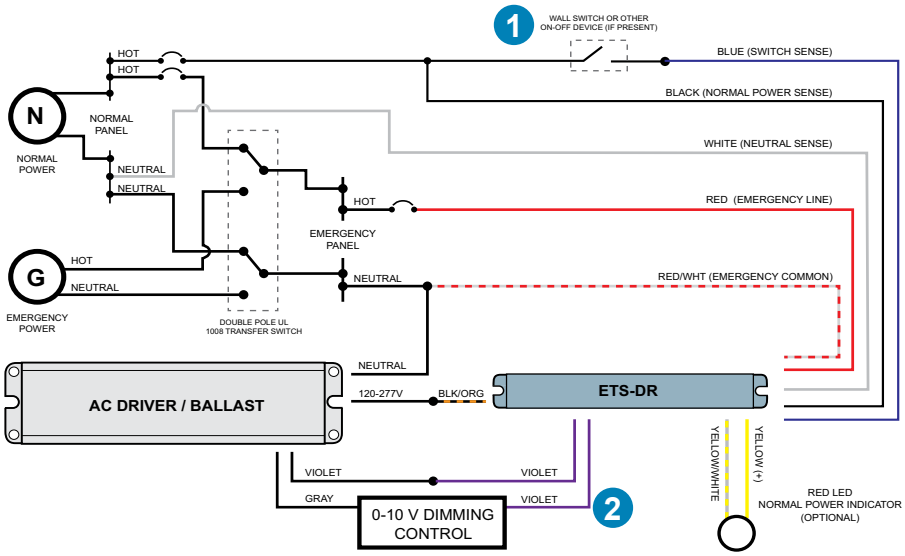
- **Optional Trigger Capability with Blue Jumper Leads**
- **Inrush Rated to NEMA 410 Standards**

- **Allows for Dual Zoning Dimming**
- **Optional Trigger Capability with Blue Jumper Leads**
- **Inrush Rated to NEMA 410 Standards**

Application Notes:

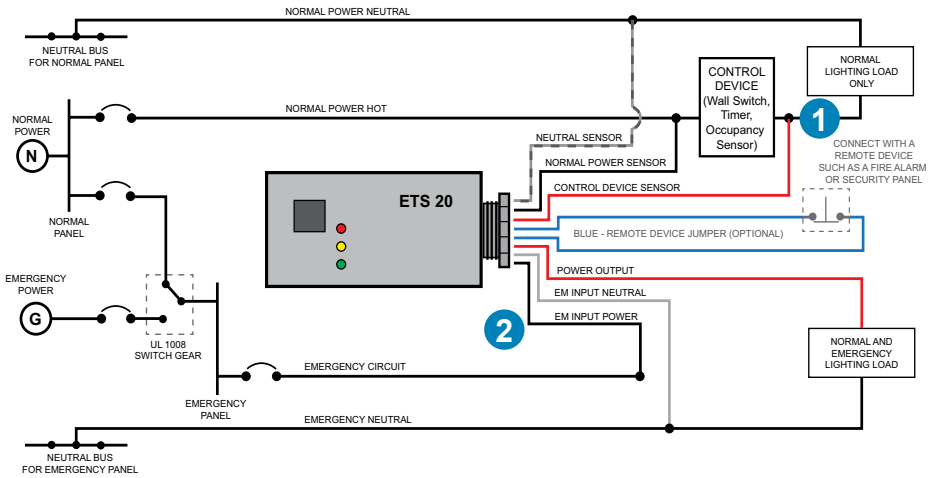
An ALCR's primary application is for large inverters and generators. Typically, IIS micro-inverters and mini-inverters do not need an ETS device since the inverter has input leads that already bypass the local controls. However, an ETS device can be used to bypass a secondary control, such as an occ sensor or photo-sensor, if present/desired.

Fixture-Level ALCR Wiring (ETS DR)



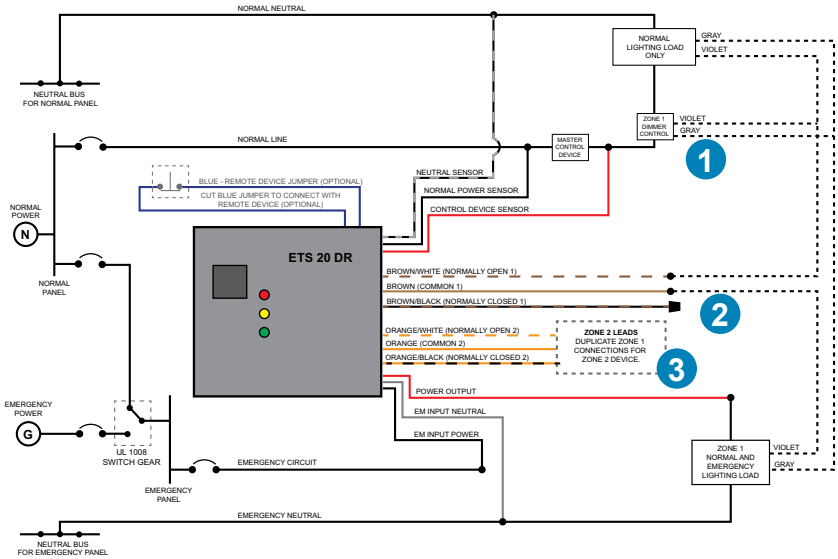
The **ETS DR** has two leads connected to either side of the local control: one senses the presence of normal power, and the other senses the switch setting (1). If the **ETS DR** senses that power is lost ahead of the switch, the unit allows power from the unswitched generator to the driver or ballast and operates the fixture. The dimming relay leads operate in much the same manner, allowing the dimming signal to pass to the lighting load during normal operation (2). During a power loss, the relay is opened, forcing the fixture to operate at full brightness.

Circuit-Level ALCR Wiring (ETS 20)



The **ETS 20** operates under the same principle as the ETS DR, but works with a full lighting circuit instead of a single fixture. The primary difference is that the **ETS 20** coordinates between the lighting load on the normal circuit and the lighting load on the designated emergency circuit. The **ETS 20** passes the signal from the control on the normal circuit (1) to the fixtures on the emergency circuit. If power is lost, the **ETS 20** allows the emergency supply to power the designated fixtures (2) regardless of the control setting.

Circuit-Level ALCR Wiring with Dimming (ETS 20 DR)



To accommodate 0-10V dimming signals on the emergency fixtures, use the **ETS 20 DR**. Two sets of dimming relays are supplied to allow two different dimmed "zones."

1. The first relay leads connect to the dimming control for Zone 1. The dimming signal is passed through the **ETS 20 DR** to the load. During a power loss, the dimming signal is bypassed and full power is given to the EM load.

2. For this application, the unused relay lead is capped. However, this lead can be connected to another control device (such as an alternative dimmer) to accept a signal other than full output while in the EM mode.

3. Duplicate the connections for the second set of relays to the second dimming zone.

nLight ER Power Sense Detection

nLight® "ER" Power Packs provide power sensing between normal line power and emergency circuits, automatically overriding nLight control settings for full output operation of the connected load from the auxiliary emergency supply.

Line Voltage Designs

nPP16 ER

The nPP16 ER controls luminaires powered via an emergency circuit for nLight wired applications.

Input Voltages: 120-277VAC, 50/60Hz
120-347VAC, 50/60Hz

Output Ratings: 120-347VAC 50/60Hz, 16A - Tungsten, standard ballast, electronic ballast, general purpose; 120VAC, 50/60Hz, 1/2 HP - Motor.

Operation: The nPP16 ER commands circuited luminaires to full light output and ignores local control commands if there is no line voltage detected on the normal power circuit sensing leads.

Control Connection: RJ-45 nLight Network Ports (2)

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 100mA

Operating Temp
-10° to 50° C (14° to 122° F)
-20° to 50° C (4° to 122° F) option available

Approval
UL 924 Listed for U.S. and Canada.
Rated for use in plenum applications.

Dimensions
3.38" x 2.53" x 1.83" with 0.5" chase nipple

Warranty: 5-year limited warranty.

nPS 80 EZ ER

The nPS 80 EZ ER controls LED luminaires with EldoLED 0-10V drivers by activating the 0.3mV "sleep" mode for emergency circuits in nLight wired applications.

Input Voltages: 120-277VAC, 50/60Hz
120-347VAC, 50/60Hz

Output Ratings: 75mA, 0-10VDC
Dimming sink current

Operation: The nPS 80 EZ ER commands luminaires with eldoLED drivers to full light output and ignores local control commands if there is no line voltage detected on the normal power circuit sensing leads.

Control Connection: RJ-45 nLight Network Ports (2)

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 75mA

Operating Temp
-10° to 50° C (14° to 122° F)

Approval
UL 924 Listed for U.S. and Canada.
Rated for use in plenum applications.

Dimensions
3.38" x 2.53" x 1.83" with 0.5" chase nipple

Warranty: 5-year limited warranty.

rPP20 ER

The rPP20 ER controls luminaires powered via an emergency circuit for nLight AIR wireless applications.

Input Voltages: 120-277VAC, 50/60Hz
120-480VAC, 50/60Hz

Output Ratings: 120-347VAC 50/60Hz, 20A - Tungsten, standard ballast, general purpose; 16A - Electronic ballast; 480VAC 50/60Hz 5A.

Operation: The rPP20 ER commands circuited luminaires to full light output and ignores local control commands if there is no line voltage detected on the normal power circuit sensing leads.

Control Connection: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 150mA

Operating Temp
-10° to 50° C (14° to 122° F)

Approval
UL 924 Listed for U.S. and Canada. Rated for use in plenum applications. FCC Compliant.

Dimensions
3.5" x 3.52" x 1.82" (120-277VAC)
4.725" x 4.8" x 1.865" (120-248VAC)

Warranty: 5-year limited warranty.

Low Voltage Designs

nIO EZ ER

nIO EZ ER units are fixture-embedded devices that operate with LED drivers. While the luminaire is powered via the emergency circuit, normal power is sensed from the bus power through CAT-5e control cable.

Input: Powered via CAT-5e cable from nLight zone with adequate normal bus power.

Operation: The nIO EZ ER commands the luminaire to full light output and ignores local control commands if there is no bus power through the CAT-5e control cable.

Control Connection: RJ45 nLight Network Ports (2)

Dimming Capability:
The nIO EZDCL ER delivers natural flicker-free high-performance dimming via eldoLED bi-directional 2-wire interface. The nIO EZ PH ER delivers 0-10V dimming via LED drivers.

Operating Temp
0° to 60° C (32° to 140° F)

Approval
UL 924 Listed for U.S. and Canada.

Dimensions
2.54" x 1.98" x 1.0"

Warranty: 5-year limited warranty.

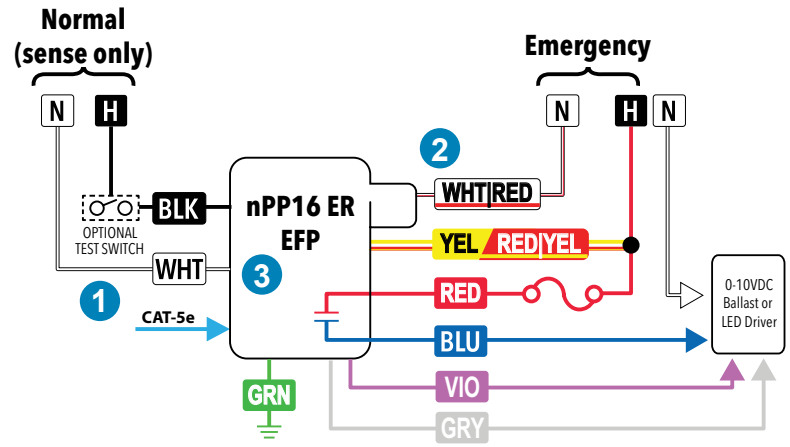
- Compatible with nLight wired controls
- Allows 0-10V Dimming (Class 1 or Class 2)
- Suitable for Standard or Fast Transfer Systems
- Optional Activation from Fire Alarm Panel
- Low Temperature Performance

- Compatible with nLight wired controls
- Compatible with eldoLED "Sleep" Mode
- Suitable for Standard or Fast Transfer Systems
- Allows 0-10V Dimming (Class 1 or Class 2)
- Optional Activation from Fire Alarm Panel

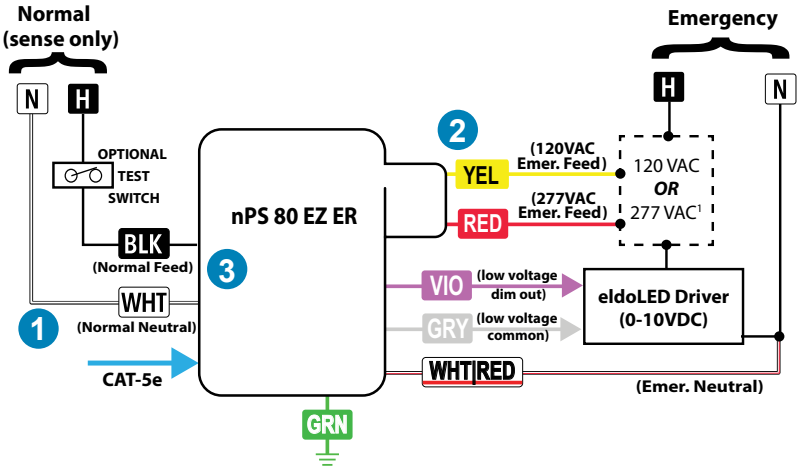
- Compatible with nLight wireless controls
- Suitable for Standard or Fast Transfer Systems
- Allows 0-10V Dimming (Class 1 or Class 2)

- Compatible with nLight wired controls
- Suitable for Standard or Fast Transfer Systems
- Accommodates additional LEDcode-based occupancy or daylight sensor

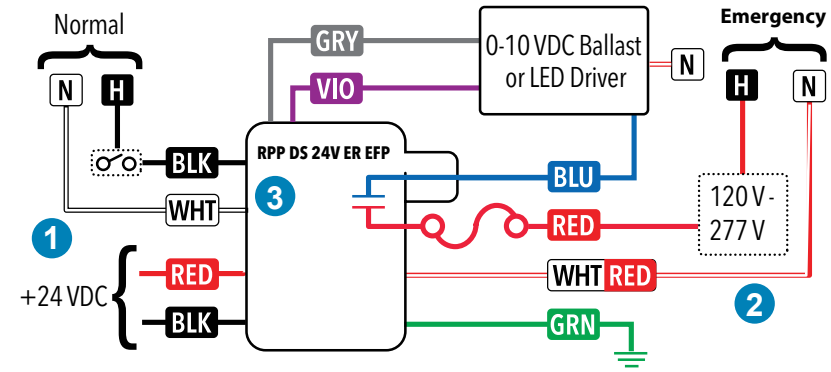
Stand-Alone nPP16 ER Wiring



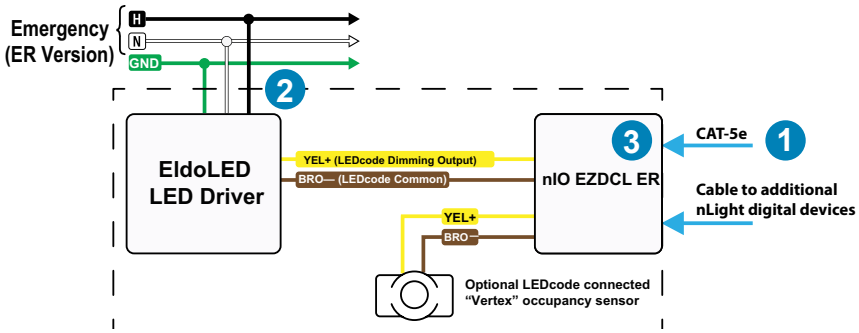
Stand-Alone nPS 80 EZ ER Wiring



Stand-Alone rPP20 ER Wiring



Fixture-Embedded nIO EZDCL ER Wiring[1]



ER Egress Mode Sequence of Operations

The UL924 nLight line voltage ER Light Controllers are designed to drive the controlled luminaires to full light output (relay closed, dimming output at maximum trim setting) if there is no line voltage detected on the normal power circuit sensing leads. This operation is referred to as "Egress Mode," during which the control device ignores both manual and automatic dimming/ occupancy/daylight control signals.

1 Normal Condition

AC line voltage is detected across normal hot and normal neutral (controller black and white wires).

Controller can dim and turn off the load as normal, in response to automatic and manual control.

2 Emergency Condition

Whether due to failure of utility power or opening of normal hot circuit breaker, the ER controller detects loss of AC voltage on the normal power circuit sensing leads.

ER controller ignores all automatic and manual control commands and controls the driver or ballast to its fully tuned light output: the relay is closed and the 0-10V dimming signal is set at the maximum trim level (default 9.1 VDC, user programmable).

3 Restoration of Normal Power:

ER controller resumes normally programmed manual and automatic control sequences when AC voltage is restored to the normal power circuit sensing leads.

1. For nIO EZ ER devices, normal power is detected across the CAT5-e connection to other normal powered devices.
2. When the normal power is lost, the ER contoller ignores all automatic and manual control commands and controls the driver to its maximum trim level.
3. The ER controller resumes normally programmed control sequences when normal power returns to the CAT5-e connection.

[1]For nIO EZ PH ER wiring, refer to the product specification sheet

nLight EM Power Interruption Detection - Line Voltage Devices

The nLight AIR line voltage "EM" models provide simple installation, not requiring a wiring connection to normal power. nLight AIR EM devices wirelessly communicate with devices connected to normal power to know when normal power is available.

rPP20 EM

The rPP20 EM controls luminaires powered via an emergency circuit for nLight AIR wireless applications.

Emergency Voltages: 120-277VAC, 50/60Hz
120-480VAC, 50/60Hz

Output Ratings: 120-347VAC 50/60Hz, 20A - Tungsten, standard ballast, general purpose; 16A - Electronic ballast; 480VAC 50/60Hz 5A

Operation: The rPP20 ER commands circuited luminaires to full light output and ignores local control commands if a power interruption is sensed due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Control Connection: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 150mA

Operating Temp: -10° to 50° C (14° to 122° F)

Approval
UL 924 Listed for U.S. and Canada. Rated for use in plenum applications. FCC Compliant.

Dimensions
3.5" x 3.52" x 1.82" (120-277VAC)
4.725" x 4.8" x 1.865" (120-248VAC)

Warranty: 5-year limited warranty.

rLSXR EM

The rLSXR EM is a combination sensor/control device that controls luminaires powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: 120-277VAC, 50/60Hz

Operation: The rLSXR EM commands a luminaire to full light output and ignores local control commands if a power interruption is sensed due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Sensor: 100% Digital Passive Infrared (PIR) with 40-ft max. mounting height

Control Connection: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 10mA

Operating Temp
-40° to 65° C (-40° to 149° F)

Approval
UL 924 Listed for U.S. and Canada.
FCC Compliant.

Dimensions
3.88" x 3.75" x 4.15"

Warranty: 5-year limited warranty.

rSBOR EM

The rSBOR EM is an outdoor rated combination sensor/control device that controls luminaires powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: 120-277VAC, 50/60Hz

Operation: The rSBOR EM commands a luminaire to full light output and ignores local control commands if a power interruption is sensed due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Sensor: 100% Digital Passive Infrared (PIR) with 40-ft max. mounting height

Control Connection: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 10mA

Operating Temp
-40° to 65° C (-40° to 149° F)

Approval
UL 924 Listed for U.S. and Canada. IP66 Rated. FCC Compliant.

Dimensions
4.06" x 3.51" x 3.75" (varies with bracket)

Warranty: 5-year limited warranty.

rSDGR EM

The rSDGR EM is an outdoor rated fixture embedded combination sensor/control device that controls luminaires powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: 120-277VAC, 50/60Hz

Operation: The rSDGR EM commands a luminaire to full light output and ignores local control commands if a power interruption is sensed due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Sensor: 100% Digital Passive Infrared (PIR) with 40-ft max. mounting height

Control Connection: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Dimming Capability:
Can be used for 0-10 volt dimming circuits (Class 1 or Class 2) up to 6mA

Operating Temp
-40° to 65° C (-40° to 149° F)

Approval
UL 924 Listed for U.S. and Canada. IP65 Rated. FCC Compliant.

Dimensions
5.0" x 5.0" x 2.0"

Warranty: 5-year limited warranty.

Compatible with nLight AIR wireless controls

Allows 0-10V Dimming (Class 1 or Class 2)

Compatible with nLight AIR wireless controls

Occupancy/ Daylight Sensor with Interchangeable Lenses

Extended Temperature Performance

Compatible with nLight AIR wireless controls

IP66 Outdoor Rated

Extended Temperature Performance

Compatible with nLight AIR wireless controls

IP65 Outdoor Rated

Extended Temperature Performance

nLight EM Power Interruption Detection - Low Voltage Devices

The nLight AIR low voltage "EM" models are embedded solutions that, when paired with an appropriate eldoLED driver or zero-to-ten (ZT) driver, do not require a wiring connection to normal power. Instead, these devices communicate with nLight AIR devices connected to normal power to wirelessly know when normal power is available.

rIO EM

The rIO EM is a fixture embedded control-only device that provides control of a luminaire powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: DC voltage from an eldoLED driver connected to emergency power.

Operation: The rIO EM commands the connected luminaire to full light output and ignores local control commands if a power interruption is sensed by the EldoLED driver due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Dimming Capability: Digital dimming via LEDcode.

Control Connections: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Operating Temp
-40° to 85° C (-40° to 185° F)

Approval
UL 924 Listed for U.S. and Canada.
FCC Compliant.

Dimensions: 1.18" x 2.617" x 1.335"

Warranty: 5-year limited warranty.

- Compatible with nLight AIR wireless controls
- Extended Temperature Performance

rES7 EM

The rES7 EM is a fixture embedded combination sensor/control device that provides control of a luminaire powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: DC voltage from an eldoLED driver connected to emergency power.

Operation: The rES7 EM commands the connected luminaire to full light output and ignores local control commands if a power interruption is sensed by the EldoLED driver due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Sensor: 100% Digital Passive Infrared (PIR) with 40-ft max. mounting height

Dimming Capability: Digital dimming via LEDcode.

Control Connections: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Operating Temp
-20° to 85° C (-4° to 185° F)

Approval
UL 924 Listed for U.S. and Canada.
FCC Compliant.

Dimensions: 1.18" x 2.617" x 1.335"

Warranty: 5-year limited warranty

- Compatible with nLight AIR wireless controls
- Includes occupancy/ daylight sensing
- Extended Temperature Performance

rSBG EM

The rSBG EM is an IP rated fixture embedded combination sensor/control device with a large coverage radius that provides control of a luminaire powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: DC voltage from an eldoLED driver connected to emergency power.

Operation: The rSBG EM commands the connected luminaire to full light output and ignores local control commands if a power interruption is sensed by the EldoLED driver due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Sensor: 100% Digital Passive Infrared (PIR) with 40-ft max. mounting height

Dimming Capability: Digital dimming via LEDcode.

Control Connections: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Operating Temp
-40° to 70° C (-40° to 158° F)

Approval
UL 924 Listed for U.S. and Canada.
IP66 Rated. FCC Compliant.

Dimensions: 3.40" x 3.40" x 1.4"

Warranty: 5-year limited warranty.

- Compatible with nLight AIR wireless controls
- Includes occupancy/ daylight sensing with wide coverage
- IP66 Outdoor Rated
- Extended Temperature Performance

rMSOD EM

The rMSOD EM is an IP rated fixture embedded combination sensor/control device that provides control of a luminaire powered via an emergency circuit for nLight AIR wireless applications.

Emergency Input: DC voltage from an eldoLED driver connected to emergency power.

The rMSOD EM commands the connected luminaire to full light output and ignores local control commands if a power interruption is sensed by the EldoLED driver due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available.

Sensor: 100% Digital Passive Infrared (PIR) with 40-ft max. mounting height

Dimming Capability: Digital dimming via LEDcode.

Control Connections: Wireless 900Mhz up to 20dBM, IEEE 802.15.4-based.

Operating Temp
-40° to 85° C (-40° to 185° F)

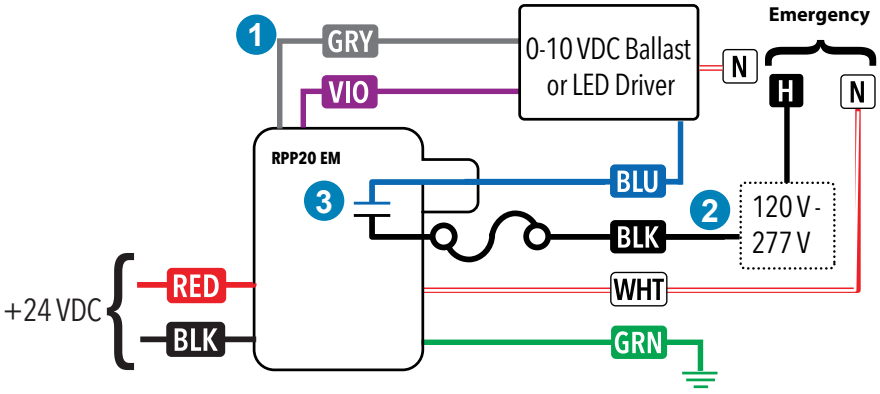
Approval
UL 924 Listed for U.S. and Canada. IP66 Rated.
FCC Compliant.

Dimensions: 1.180" x 2.617" x 1.335"

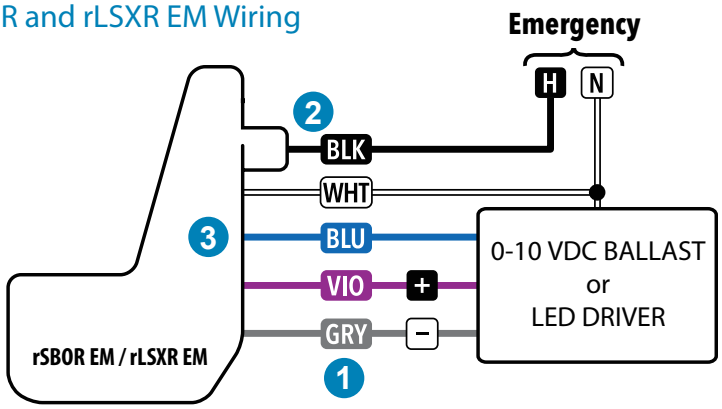
Warranty: 5-year limited warranty.

- Compatible with nLight AIR wireless controls
- Includes occupancy/ daylight sensing
- IP66 Outdoor Rated
- Extended Temperature Performance

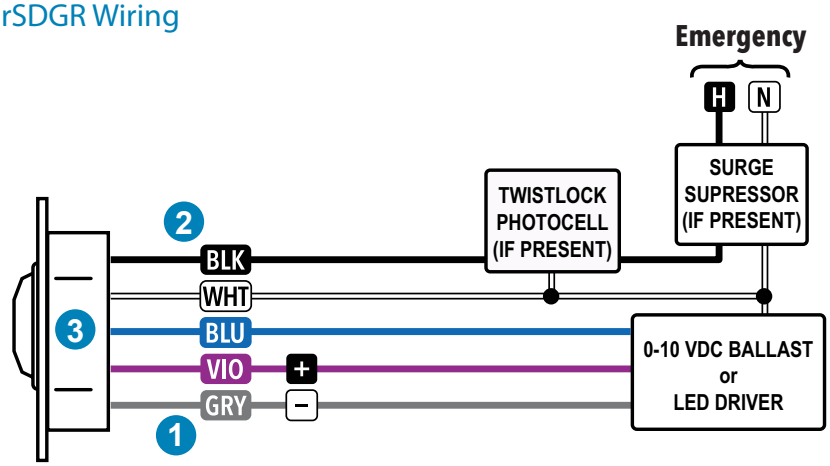
Stand-Alone rPP20 EM Wiring



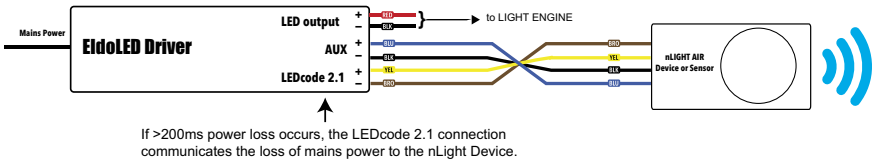
rSBOR and rLSXR EM Wiring



rSDGR Wiring



Low Voltage Sensor and eldoLED Driver



*NOTE: The following devices will not trigger an exit of the EM mode: Other nLight AIR "EM" Devices (rPP20 EM, rLSXR EM, rSBOR EM, rSDGR EM, rIO EM, rES7 EM, rMSOD EM, rSBG EM), Ceiling Mount Sensors (rCMS, rCMSB), Wall Switches (rPODB, rPODL), nLight Air Adapter (nECYD), and legacy nLight AIR devices.

EM Egress Mode Sequence of Operations

The UL924 nLight AIR EM Light Controllers are designed to drive the controlled luminaires to full light output (relay closed, dimming output at maximum trim setting) if a power interruption on normal power is sensed due to the transfer from normal to emergency power at the backup power source or if an nLight AIR device connected to normal power stops announcing that normal power is available. This operation is referred to as "Egress Mode," during which the control device ignores both manual and automatic dimming/occupancy/daylight control signals. The EM Egress Mode Sequence of Operations is as follows:

1 Normal Condition

Controller can dim and turn off the load as normal, in response to automatic and manual control.

2 Emergency Condition

Utility power fails, and controller loses power.

Backup power source activates, transfer switch moves the emergency circuit powering the controller onto the backup source, and controller regains power.

The EM Controller detects AC voltage interruption under the following conditions:

- >30 milliseconds interrupt for the line voltage controller versions.
- >200 milliseconds interrupt to the eldoLED driver for the low voltage controller versions.

Additionally, the EM controller senses the availability of normal power by monitoring broadcasts from nLight AIR devices connected to normal power. Regardless as to if the EM device detects AC voltage interruption, if normal power broadcasts stop, the EM controller responds accordingly.

If normal power is lost, the EM controller ignores all automatic and manual commands and controls the driver or ballast to its fully tuned light output: the relay is closed and the 0-10V dimming signal is set at the maximum trim level (default 9.3 VDC, user programmable).

The EM controller resumes normally programmed manual and automatic control sequences after receiving an "exit EM" command.

3 Restoration of Normal Power:

Utility power recovers, transfer switch moves the emergency circuit powering the controller onto the normal source.

If another nLight AIR device in the nLight AIR group (as defined by CLAIRITY+) is on normal power, and has its power restored prior to the 90-minute timeout, the "EM" device will exit this override state and return to normal operation. This is accomplished by having a normal power device* send an "exit EM" message to the "EM" device within seconds of normal power applied.

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