LITHONIA LIGHTING®

IOTA®

nLIGHT®

Life Safety
SOLUTIONS

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

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** (1 foot-candle initially) 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.) Numerically, these values differ in that *lumens* are measured in terms of square meters and *foot-candles* in square feet. While the two concepts cannot be neatly equated, it is commonly accepted 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 19**

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 27**

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 35 and Page 53**

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 71**

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 81**

nLight® networked ALCR solutions detect a loss in normal power to enable emergency lighting for networked control applications. **Page 86**

LITHONIA LIGHTING®

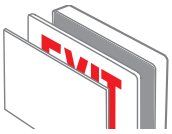
Exit Signs

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.

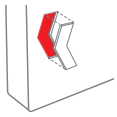
Models include popular, readily available commercial design, specification-grade solutions for demanding environments, combination units for added functionality, and performance options like internal battery power or self-testing capability.

In this Section:

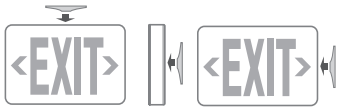
Red or Green Lettering Selections with 100-ft viewing distance



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

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.

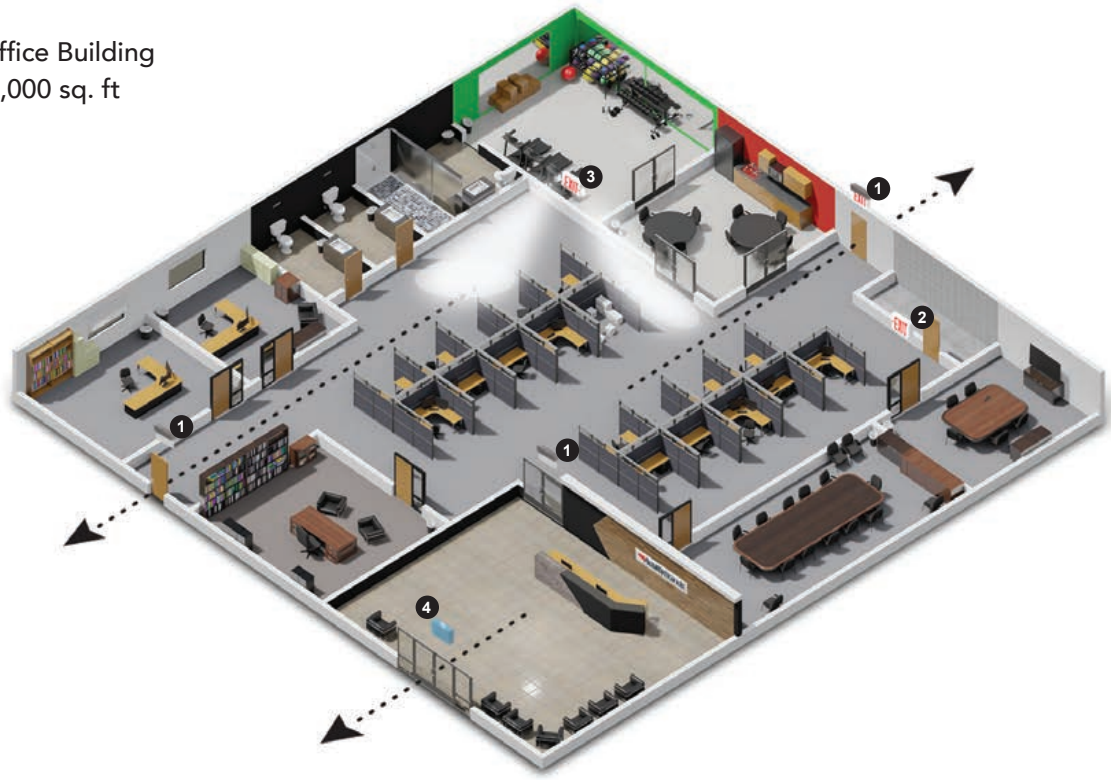
(5) The directional indicator shall be located at the end of the sign for the direction indicated."

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 LE Recessed Exit Sign

To blend with the visual aesthetics of the lobby, the LE 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 LE make it easier to comply with the Life Safety requirements.

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.

EXR LED / EXG LED

EXR LED and EXG LED exit signs are practical, functional options for general-purpose signage 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 or Ni-Cad backup battery options

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

Voltage: 120/277VAC input

Warranty: 2-year (limited)

Dimensions: 11.63 x 1.63 x 7.2 in

Weight: 2.1 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.

ECR / ECG

The ECR Series combines exit signage and emergency lighting functionality into a single, general-purpose solution.

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. HO options available

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

Voltage: 120/277VAC input

Warranty: 2-year (limited)

Dimensions: 20 x 4.5 x 9 in

Weight: 3.6 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed.

ECC

ECC Series combines exit signage and emergency lighting functionality into a single, general-purpose solution. Unobtrusive LED lamp heads provide up to a 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 Ni-Cad backup battery.

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

Voltage: 120/277VAC input

Warranty: 2-year (limited)

Dimensions: 11.63 x 1.63 x 7.2 in

Weight: 2.15 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. CA Title 20. UL Damp Location Listed.

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)

Dimensions: 12.63 x 1.875 x 9.125 in

Weight: 2.1 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed.

Contractor Select models available

Combination Exit / Emergency Light

Single Unit Lighting Spread Up to 10-ft

Remote Head Capability

Contractor Select models available

Combination Exit / Emergency Light

Single Unit Lighting Spread Up to 14-ft

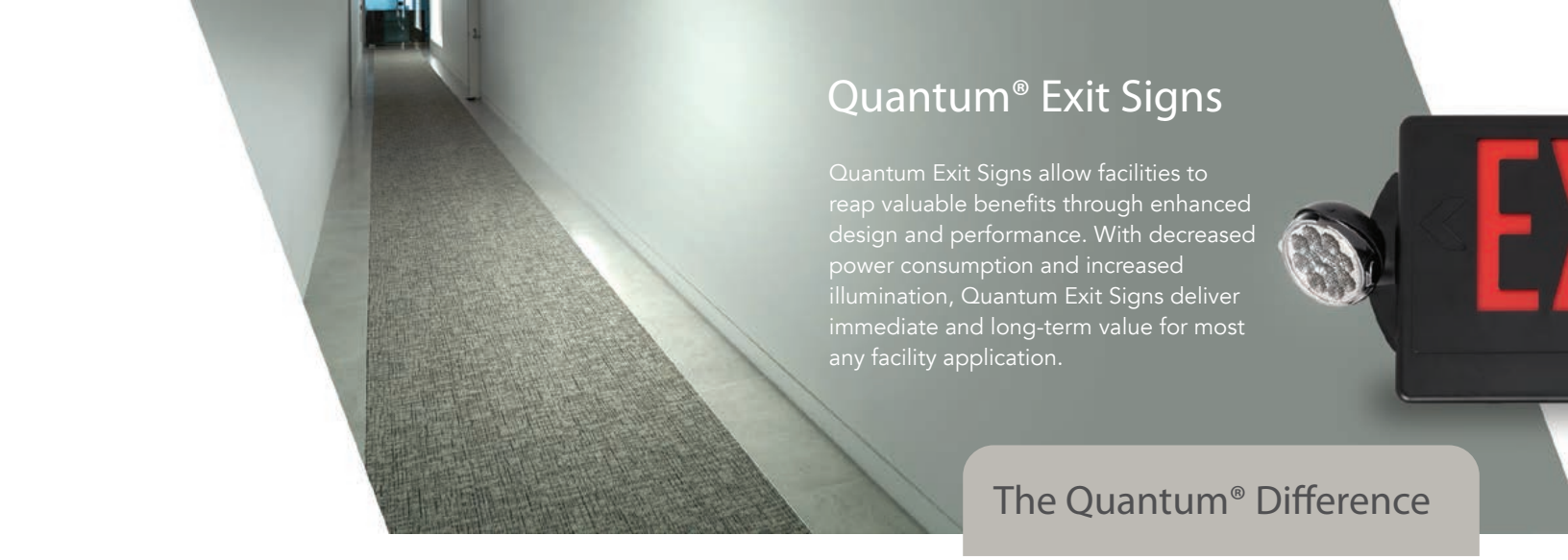
Remote Head Capability

Contractor Select models available

Combination Exit / Emergency Light

Sleek, discreet swivel-design lamp

Remote Head Capability



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)

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.

LHQM

The LQHM 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)

Dimensions: 12 x 4.75 x 9 in

Weight: 3.6 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed. NOM Certified Option.

- Exceptionally Low Power Consumption
- Contractor Select models available

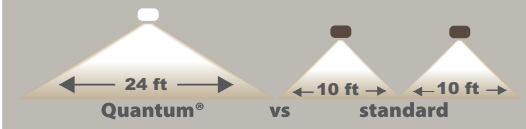
- Combination Exit / Emergency Light
- Exceptionally Low Power Consumption
- Single Unit Lighting Spread Up to 24-ft
- Remote Head Capability
- Contractor Select models available

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 LQHM 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.

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)

Dimensions: 11.75 x 2.0 x 8.25 in.

Weight: 4.5 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed.

Brushed Aluminum or White Finish

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)

Dimensions: 11.875 x 0.875 x 7.75 in.

Weight: 3.0 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed.

Brushed Aluminum or White Finish

Unobtrusive Thin Profile

Exceptionally Low Power Consumption

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)

Dimensions: 11.375 x 1.75 x 7.875 in. (wall or ceiling)
12.94 x 9.47 in. (recessed face)

Weight: 5.0 lbs (with battery) 4.0 lbs (no battery)

Mounting: top/back/end/recessed wall

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards.
UL Damp Location Listed.

Brushed Aluminum, Bronze, Black or White Finish

Recessed Wall Mounting Option

Exceptionally Low Power Consumption

Self-Diagnostics Option

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)

Dimensions: 13.0 x 1.75 x 8.0 in.

Weight: 4 lbs (surface mount) 8.1 lbs (recessed)

Mounting: top/back/end/recessed ceiling

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed.

- **Brushed Aluminum or White Canopy Finish**
- **Recessed Mounting Options**
- **Exceptionally Low Power Consumption**
- **Self-Diagnostics Option**

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)

Dimensions: 13.25 x 1.25 x 8.0 in.

Weight: 5 lbs (panel) 5.8 lbs (rough-in section)

Mounting: recessed top / recessed back/ recessed end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. Non-IC recessed mounting. Certified in CA T20 MAEDBS.

- **Brushed Aluminum, Bronze, Black, Brass, or White Finish**
- **Wedge Panel Design for Superior Illumination**
- **Unobtrusive Recessed Mounting**
- **Exceptionally Low Power Consumption**

SOLO

SOLO Exit Signs feature organically-shaped panels and mounting canopy for minimal visual disruption in the installed space.

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

Panels: Single-face / double-face with mirror or clear options.

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

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

Voltage: 120/277VAC input

Warranty: 5-year (limited)

Dimensions: 14.25 x 0.375 x 11.875 in.

Weight: 8.75 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. Non-IC recessed mounting. UL Damp Location Listed.

- **Nickel, Bronze, Black, or White Finish**
- **Exceptionally Low Power Consumption**
- **Self-Diagnostics Option**

LITHONIA LIGHTING®

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)

Dimensions: 12.5 x 2.0 x 7.875 in.

Weight: 5.5 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed. Certified in CA T20 MAEDBS.

Exceptionally Low Power Consumption

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)

Dimensions: 14.625 x 2.0 x 10.625 in.

Weight: 8.4 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. Certified in CA T20 MAEDBS.

NYC Approved

Exceptionally Low Power Consumption

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)

Dimensions: 12.375 x 2.375 x 11.25 in.

Weight: 7.8 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed. City of Chicago Approved.

White or Black Housing Options

City of Chicago Approved

Exceptionally Low Power Consumption

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)

Dimensions: 12.375 x 5.875 x 16.5 in.

Weight: 14.34 lbs

Mounting: top/back

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Damp Location Listed. FCC Title 47, Part 15, Subpart B. City of Chicago Approved.

Combination Exit / Emergency Light

Single Unit Lighting Spread Up to 62-ft

White or Black Housing Options

City of Chicago Approved

Exceptionally Low Power Consumption

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)

Dimensions: 12.5 x 2.5 x 8.125 in.

Weight: 4.1 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Wet Location Listed.

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)

Dimensions: 12.88 x 5.94 x 13.69 in.

Weight: 9.8 lbs

Mounting: top/back/end

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. UL Wet Location Listed.

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)

Dimensions: 13.875 x 4.25 x 8.5 in.

Weight: 11 lbs

Mounting: back (standard)/Universal mounting optional

Certifications: UL 924 listed. Meets or exceeds NFPA 101, NFPA 70, IBC and OSHA illumination standards. Damp /Wet/ NEMA 4X/NSF certified options.

LZ / LHZ

Designed for hazardous location applications. Available as an exit sign (LZ) or exit/light combination unit (LHZ)

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

Panels: Single-face

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

Temp: 19° to 30°C indoor

Voltage: 120/277VAC input

Warranty: 3-year (limited)

Dimensions: 13.25 x 6.625 x 11.25 in. 13.25 x 6.625 x 17.5 in. (LHZ)

Weight: 12 lbs (AC only) 20 lbs (w/ Ni-Cad battery)

Mounting: back

Certifications: UL 924 and UL 844 Listed. UL Listed for Class I and Class II, Div 2 areas. NFPA 101, NFPA 70-NEC and OSHA illumination standards.

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)

Dimensions: 12.75 x 2.75 x 8.25 in.

Weight: 11 lbs

Mounting: top/back/end

Certifications: UL 924 Listed. Meets NFPA 101, NFPA 70-NEC and OSHA illumination standards. Class I, Div I, Groups C & D model available.

WLTE

- Wet Location
- White, Black or Gray Housing Options
- Exceptionally Low Power Consumption
- Self-Diagnostics Option

WLTC

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

LV

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

LZ / LHZ

- Hazardous Location
- Self-Diagnostics Option

D

- Self-Luminous (no electricity required)
- Plastic or Anodized Aluminum Frame

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.

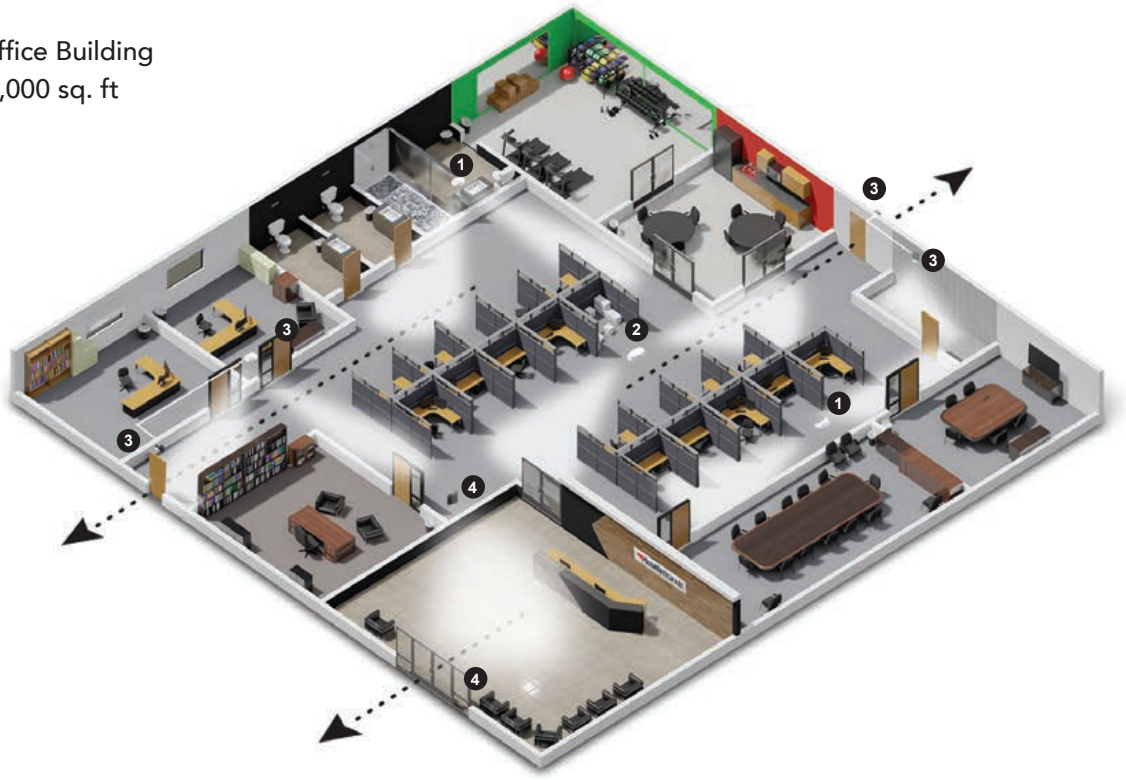
(7) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction."

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.

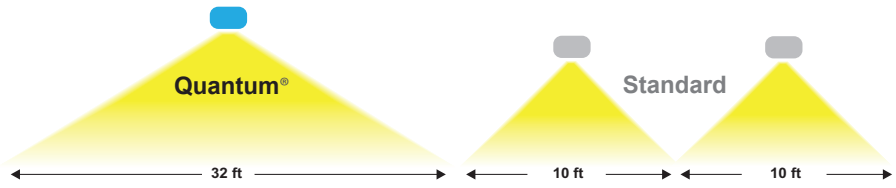
The wet location listed ELM6L is also used in the maintenance room, protecting the emergency equipment from moisture during typical area use. Additionally, the ELM6L remotely powers an outdoor ELMRW above the building's rear exit point.

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.

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)

Dimensions: 14.625 x 4 x 3.75 in

Weight: 1.7 lbs

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. Certified in CA T20 MAEDBS.

- 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)

Dimensions: 8 x 4.5 x 2.75 in

Weight: 0.7 lbs

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. Certified in CA T20 MAEDBS.

- 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)

Dimensions: 9.72 x 4.68 x 3.1 in

Weight: 1.3 lbs

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10. Certified in CA T20 MAEDBS.

- Single Unit Lighting Spread Up to 32-ft
- Exceptionally Low Power Consumption
- Remote Head Capability
- Self-Diagnostics and Remote Test Option
- Contractor Select models available

ELM4L / ELM6L

The Quantum® ELM4L and ELM6L deliver exceptional lighting output to meet footcandle 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

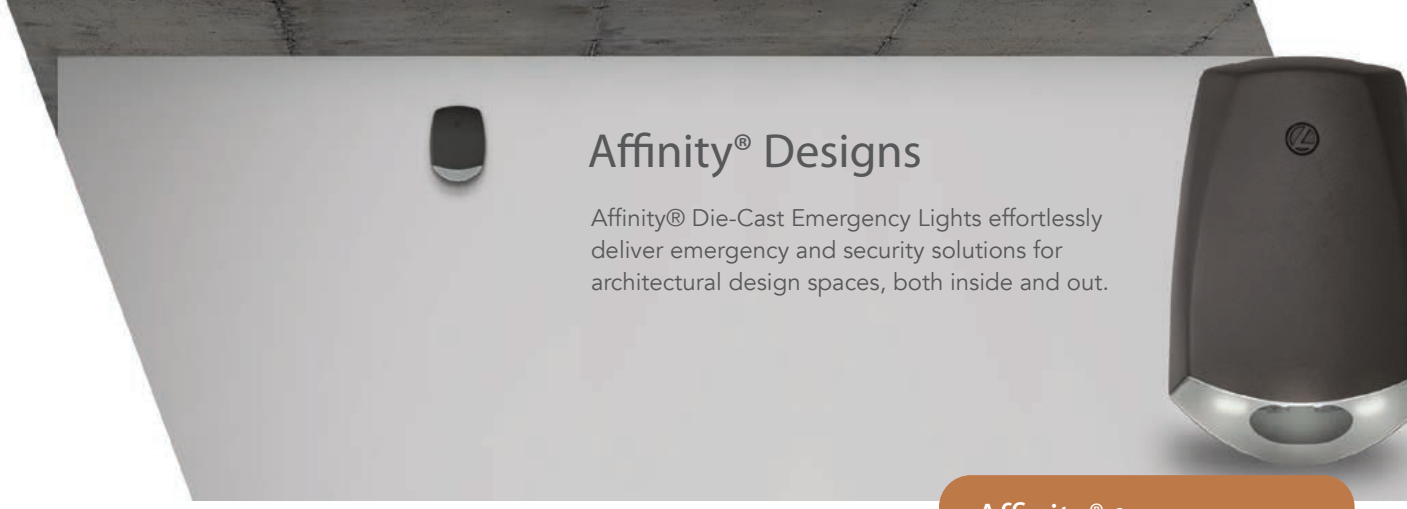
Warranty: 5-year (limited)

Dimensions: 13.37 x 5.93 x 3.7 in

Weight: 3.0 lbs and 3.75 lbs (HO models)

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10. Certified in CA T20 MAEDBS.

- Single Unit Lighting Spread Up to 60 to 76-ft
- Up to 24 ft Mounting Height
- Exceptionally Low Power Consumption
- Remote Head Capability
- Self-Diagnostics and Remote Test Option
- Contractor Select models available



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)

Dimensions: 7.3 x 3.15 x 10 in.

Weight: 3.5 lbs

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10. Certified in CA T20 MAEDBS.

- Single Unit Lighting Spread Up to 26-ft
- Exceptionally Low Power Consumption
- Self-Diagnostics and Remote Test Option
- Remote Head Capability
- Photocell Function Options
- Cold Weather 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)

Dimensions: 6.5 x 3.75 x 10.5 in.

Weight: 4.4 lbs

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10. Certified in CA T20 MAEDBS.

- Single Unit Lighting Spread Up to 26-ft
- Exceptionally Low Power Consumption
- Self-Diagnostics Option
- 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)

Dimensions: 6.5 x 3.27 x 10.02 in

Weight: 3.5 lbs

Certifications: UL 924 Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10. Certified in CA T20 MAEDBS.

- Single Unit Lighting Spread Up to 62-ft
- Exceptionally Low Power Consumption
- Self-Diagnostics and Remote Test Option
- Remote Head Capability
- Photocell Function Options
- Cold Weather 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.

LITHONIA LIGHTING®

Industrial Performance

For emergency lighting in more demanding environments, Lithonia Lighting provides steel cabinet, wet-location rated, Class I Div 2 designs that deliver added protection and impressive illumination options.

ELT

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

Optics: Incandescent and halogen lamp options ranging 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)

Dimensions:
11.625 x 4.75 x 14 in. (16W - 50W)
18 x 9 x 16.75 in. (125W to 275W)

Weight: 12.8 lbs (16W) to 61.5 lbs (275W)

Certifications: UL 924 Listed. Meets NFPA 101, NEC, and OSHA illumination standards. NOM and Certified in CA T20 MAEDBS options.

WLTU

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)

Dimensions:
8.375 x 6 x 12.875 in. (SLA)
8 x 3.625 x 12.25 (Ni-Cad)

Weight: 12.5 lbs (SLA), 3.6 lbs (Ni-Cad)

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, NEC, and OSHA illumination standards.

Z

Use the Z Emergency Unit for emergency lighting in Class I, Div 2 hazardous locations.

Optics: Sealed-beam (up to 25W) incandescent or halogen (up to 12W) lamp options

Mounting: Wall Mount

Construction: Gray impact-resistant, fiberglass reinforced polyester with steel hardware.

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

Temp: T3C Temp. Class Rating 160°C

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

Warranty: 3-year

Dimensions: 13.25 x 7.125 x 21.438 in.

Weight: 25 to 33 lbs (SLA)
25 to 41 lbs (Ni-Cad)

Certifications: UL Listed for Class I and Class II, Div 2 areas. Meets NFPA 101, NEC, and OSHA illumination standards.

ZX

The ZX is a cast-aluminum housing designed to contain potential explosions generated by an internal arc. Emergency lighting is provided by ELA-ZX remote heads (ordered separately.)

Optics: Halogen or fluorescent options (lamp heads ordered separately)

Mounting: Wall Mount

Construction: Copper-free cast aluminum with three threaded 3/4" openings.

Battery: Maintenance-free Ni-Cad battery options provide 90 minute operation.

Temp: 0° to 37.8°C

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

Warranty: 3-year

Dimensions: 12 x 8.75 x 15 in.

Weight: 67 lbs.

Certifications: UL Listed for Class I, Div 1 areas. Meets NFPA 101, NEC, and OSHA illumination standards.

16W to 275W Brightness Options

Single Unit Lighting Spread Up to 20-ft

Wet Location

Remote Head Capability

Hazardous Location (CLASS 1 DIV 2)

Hazardous Location (CLASS 1 DIV 1)

For use with ELA ZX Remote Heads

Indura®

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

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 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)

Dimensions: 13.04 x 6.31 x 9.75 in.

Weight: 4.9 lbs and 7.0 lbs (2200 lumen model)

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, NEC, and OSHA illumination standards. NOM Certified. Certified in CA T20 MAEDBS.

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 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)

Dimensions: 13.94 x 6.42 x 10.42 in.

Weight: 5.55 lbs and 7.65 lbs (2200 lumen model)

Certifications: UL 924 Wet Location Listed. NEMA 4X, IP66 and NSF Listed. Meets NFPA 101, NEC, and OSHA illumination standards. NOM Certified. Certified in CA T20 MAEDBS.

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

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

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.

Round Head Remotes

Round lamp-head options deliver an unobtrusive, organic low profile design for interior emergency lighting. 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)

Dimensions: 5.54 x 2.05 x 4.9 in. (single)
5.54 x 2.03 x 4.9 in. (twin)

Weight: 0.55 lbs (single), 0.60 lbs (twin)

Certifications: UL 924 Listed with approved Lithonia Products. Meets NFPA 101, NEC, OSHA, Local/State Codes.

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

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)

Dimensions: 4.51 x 1.74 x 4.46 in. (single)
6.73 x 1.74 x 4.946 in. (twin)

Weight: 0.75 lbs (single), 1.0 lbs (twin)

Certifications: UL 924 Wet Location Listed with approved Lithonia Products. Meets NFPA 101, NEC, OSHA, Local/State Codes.

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

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)

Dimensions: 6.87 x 3.53 x 4.67 in.

Weight: 0.75 lbs (single), 0.8 lbs (twin)

Certifications: UL 924 Listed. Meets NFPA 101, NEC, OSHA, Local and State Codes. C22.2 CSA. NOM.

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

Dimensions: 6.87 x 3.69 x 4.67 in.

Weight: 1.55 lbs (single), 1.65 lbs (twin)

Certifications: UL 924 Listed. Meets NFPA 101, NEC, OSHA, Local and State Codes. C22.2 CSA. NOM.

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

Fully-Adjustable Lamp Head Function

Fully-Adjustable Lamp Head Function

Outdoor / Wet Location Rated

Lamp Head Design for Linear Lighting Pattern

Fully-Adjustable Lamp Head Function

Fixed Lamp Head Option

Self-Diagnostic Compatible

Lamp Head Design for Spotlight Pattern

Fully-Adjustable Lamp Head Function

Self-Diagnostic Compatible

Square Head Remotes

ERE square-head designs deliver increased emergency lumen over their respective roundhead counterparts. Single and twin head options feature fully-articulating lamps to adjust to path of egress requirements.

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)

Dimensions: 5.875 x 4.875 x 5.875 in. (single)
5.875 x 4.875 x 8.625 in. (twin)

Weight: 0.55 lbs (single), 0.60 lbs (twin)

Certifications: UL 924 Listed with approved Lithonia Products. Meets NFPA 101, NEC, OSHA, Local/State Codes. CSA

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

Fully-Adjustable Lamp Head Function

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)

Dimensions: 4.25 x 2.25 x 6.62 in. (single)
10.38 x 2.25 6.8 in. (twin)

Weight: 0.65 lbs (single),1.3 lbs (twin)

Certifications: UL 924 Listed with approved Lithonia Products. Meets NFPA 101, NEC, OSHA, Local/State Codes. CSA

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

Fully-Adjustable Lamp Head Function

Outdoor / Wet Location Rated

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)

Dimensions: 4.13 x 3.24 x 4.13 in. (single)
6.66 X 2.69 X 4.13 in. (twin)

Weight: 0.7 lbs (single), 1.0 lbs (twin)

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, NEC, OSHA, Local/State Codes. C22.2 CSA. FCC Title 47 Part 15, Subpart B. NOM.

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)

Dimensions: 4.13 x 3.24 x 4.13 in. (single)
6.66 X 2.69 X 4.13 in. (twin)

Weight: 0.7 lbs (single), 1.0 lbs (twin)

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, NEC, OSHA, Local/State Codes. C22.2 CSA. FCC Title 47 Part 15, Subpart B. NOM.

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

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

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)

Dimensions: 6.5 x 3.27 x 10.02 in.

Weight: 3.0 lbs

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10.

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

- **Outdoor / Wet Location Rated**
- **Self-Diagnostic Compatible**

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)

Dimensions: 7.3 x 3.15 x 10 in.

Weight: 3.0 lbs

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10.

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

- **Outdoor / Wet Location Rated**
- **Self-Diagnostic Compatible**

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)

Dimensions: 11.76 x 4.63 x 7.02 in.

Weight: 3.65 lbs

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10.

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

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)

Dimensions: 11.76 x 4.63 x 7.02 in.

Weight: 3.65 lbs

Certifications: UL 924 Wet Location Listed. Meets NFPA 101, FCC Title 47, Part 15, Subpart B, NFPA 70-NEC, and OSHA illumination standards. NOM. Listed to Canadian Standards C22.2 No. 141-10. NEMA 4X, IP66 and NDF Listed.

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

ELA ZX

The ELA ZX provides emergency lighting in Class I, Div 1 and Div 2 hazardous locations.

Optics: 12W halogen lamps, 6V or 12V or compact fluorescent (6V)

Mounting: top, wall, or side mount

Construction: Copper-free cast aluminum with corrosion-resistant epoxy powder coat finish and access for 3/4 inch rigid conduit.

DC Voltage Compatibility: 6 or 12VDC

Temp: 0° to 40°C

Warranty: 3-year (limited)

Dimensions: 14.375 x 7.25 x 7.25 in. 14.375 x 7.375 x 10.5 (wall mount

Weight: 15 lbs

Certifications: UL 924 Listed. Suitable for use in Class I Div 1, Class I Div 2, Class II Div 1, Class II Div 2 and Class III areas.

Designed for
• ELA ZX

ELA ZCD

The ELA ZCD provides emergency lighting in Class II and Class III, Div 1 hazardous locations.

Optics: 12W halogen lamps, 6V or 12V

Mounting: top, wall, or side mount

Construction: Corrosion-resistant, cast aluminum ally with epoxy polyester finish, with access for 3/4 inch rigid conduit.

DC Voltage Compatibility: 6VDC, 12VDC

Temp: 0° to 40°C

Warranty: 3-year (limited)

Dimensions: 9.75 x 5.38 x 5.38 in.

Weight: 18 lbs

Certifications: UL 924 Listed for Class II, and Class III, Div 1 areas. Meets UL 924, 844, and 1203 illumination standards.

Designed for
• ELA ZX

Outdoor / Wet Location Rated

Self-Diagnostic Compatible

NEMA 4X Protection against moisture and debris

Self-Diagnostic Compatible

CLASS 1 DIV 2 **Hazardous Location**

CLASS II, III DIV 1 **Hazardous Location**

LITHONIA LIGHTING®

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.

ERE Round Single Lamp[1]

ERE Round Twin Lamp[1]

ERE Square Single Lamp[1]

ERE Square Twin Lamp[1]

		ERE Round Single Lamp[1]	ERE Round Twin Lamp[1]	ERE Square Single Lamp[1]	ERE Square Twin Lamp[1]
Exit Signs					
ECR / ECG	ECR LED HO			ERE SGL SQ (1)	ERE T SQ (1)
	ECG LED HO			ERE SGL SQ (1)	ERE T SQ (1)
ECC	ECC REM	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			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				
AFB	AFB				
AFF	AFF				
WLTO	WLTO			ERE SGL SQ (1)	ERE T SQ (1)
ZX	ZX				
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				

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

ERE WP Round Single Lamp[1]

ERE WP Round Twin Lamp[1]

ERE WP Square Single Lamp[1]

ERE WP Square Twin Lamp[1]

ELMRE Round Single Lamp[1]

ELMRE Round Twin Lamp[1]

AFB OELR

AFF OELR

ELA ZX

INDRE / EXTLRE SP640L

INDRE / EXTLRE SP1100L

INDRE / EXTLRE SP2200L

ELMRE SGL (1)	ELMRE T (1)						

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

ELMRW Round Single Lamp[1]

ELMRW Round Twin Lamp[1]

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

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

Emergency LED 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.

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.
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.

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...

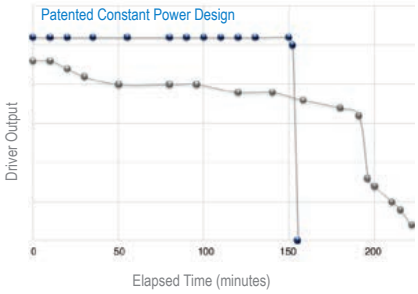
Insert the wattage of your IOTA ILB CP unit...

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.*



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.

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.**

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) 10V 60V

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 55V 250V

"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 is reduced by half for every 10°C above normal ambient temperature. Having just one component over-stressed by excessive temperatures within the fixture or ceiling space jeopardizes Life Safety functionality. Careful engineering goes into IOTA emergency drivers 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.

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 Lighting

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 CP05 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, and include the added 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 Superior Egress Lighting

IOTA 12W to 20W emergency drivers deliver impressive lumen performance for elevated fixtures, raised ceilings, and larger egress spaces.

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

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.

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

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
- Slim Profile Enclosure

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

Emergency Solutions for Non-Class 2 LEDs

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

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

HV 50V 250V

High Voltage Output "HV" Emergency Drivers for Non-Class 2 Systems (50-250VDC)

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 12.75 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.

- 20V 60V **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**

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 12.75 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.

- HV 50V 200V **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**

ILBLP CP20 HE SD HV

The ILB 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.

- HV 55V 200V **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**

ILBLP CP30 HE SD HV

The ILB 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 (@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: 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.

- HV 55V 250V **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

ILBHI Series for High Voltage Input

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

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

High Power Performance

The ILBHI Series brings Constant Power performance to High Voltage Input 347-480VAC / High Voltage Output 55-250VDC luminaire designs with impressive 20W and 30W emergency power.

Non-Class 2 Output

The "HV" output is compatible with 55-250VDC LED loads. The emergency driver automatically senses the required forward DC voltage and operates the LED load accordingly.

Low Profile Design

The ILBHI features lithium battery technology for minimal size and weight, allowing for integral installation if needed. Models equipped with flexible conduit for external mounting are also available.

Self-Diagnostic

All ILBHI models feature self-testing/self-diagnostics and automatically conduct monthly and annual tests to help ensure system readiness. Diagnostic errors are communicated via flashing of the included three-color charge indicator and test switch.

Maximized Efficiency

The ILBHI Series uses IOTA's microprocessor-controlled high-efficiency charging design to minimizes power consumption while in the standby maintenance mode.

ILBHI CP20 HE SD HV

The ILBHI CP20 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. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Meets Certified in CA T20 MAEDBS.

- 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 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. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting. Meets Certified in CA T20 MAEDBS.

- 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

Specialty Driver Designs

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

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.

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. (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.

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

OPEN BOARD and EXTERNAL BATTERY

A variety of ILB CP models are offered as either open board ("L" model) or external battery designs with electronics enclosed in a steel enclosure ("LC" model) for adaptable factory installation.

Available Wattage Models:
ILB CP10 L (10 Watt)
ILB CP10 LC (10 Watt)
ILBLP CP10 HE SD LC (10 Watt)
ILBLP CP15 HE SD LC (15 Watt)

For Output and Input Ratings, Weight and Dimensions, and other electrical specifications, refer to the Product Specification Sheet per model.

Emergency Operation: 90 minutes

Operating Temp: 0° to 55°C

Warranty: 5-year

Certifications: UL 924 Component Recognized for Factory Installation. Class 2 Compliant to UL 1310.

- **2-Hour FEMA Operation**
- **Auto-Sense Class 2 Compatible with 10-60VDC LED Designs**
- **Available in Different Mounting Configurations**
- **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**
- **Power-over-Ethernet Solution**
- **Hardwire or RJ45 terminal models.**
- **Auto-Sense Class 2 Compatible with 10-60VDC LED Designs**

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 CP20 HE SD HV
- ILBHI CP30 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 CP20 HE SD HV
- ILBHI CP30 HE SD HV

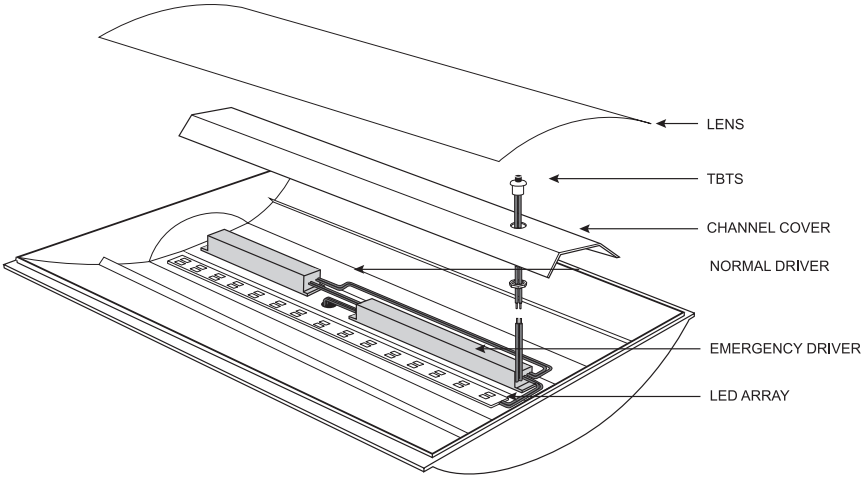
AC Activate

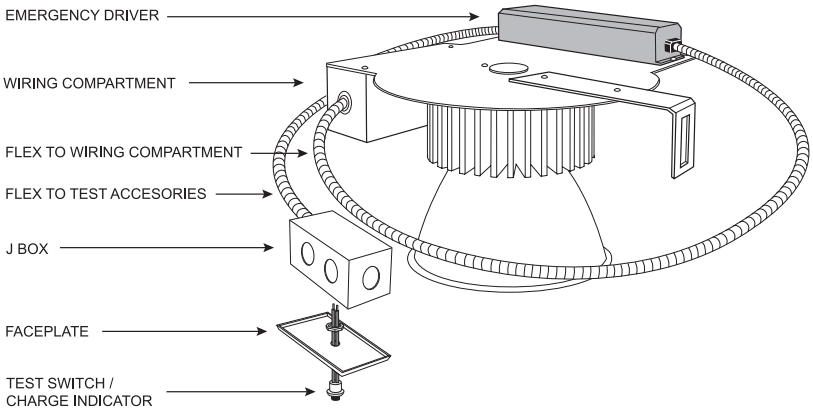
AC Activate provides simpler installation by eliminating the need for manual connection of the battery during initial install. The AC Activate circuitry keeps the unit disconnected before use, preventing the unit from entering the emergency mode and preventing premature discharge of the battery. Once 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 CP20 HE SD HV
- ILBHI CP30 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.

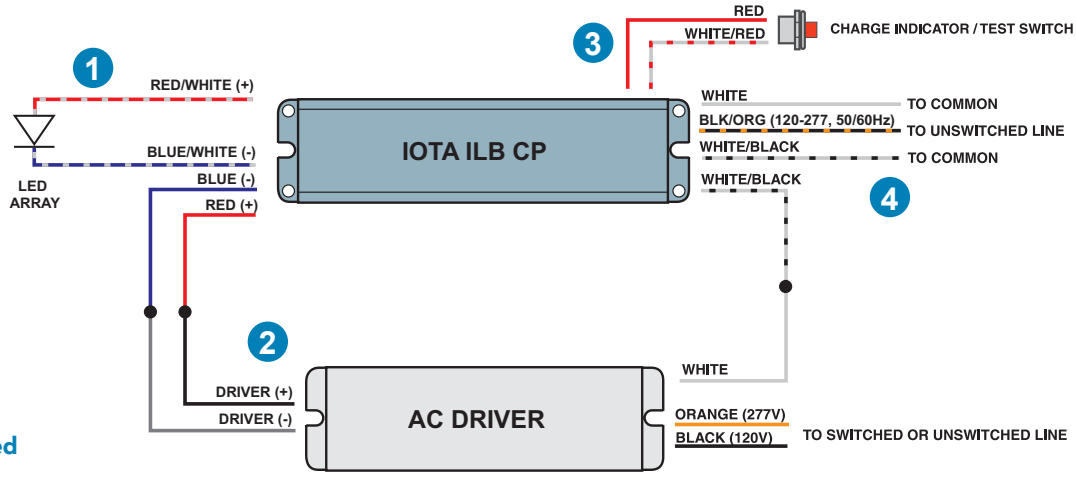
For downlight fixtures, an assortment of flexible conduit configurations allow for running wiring to the fixture's electronics compartment (see opposite page for conduit options.) Test components are then installed next to the fixture or within the reflector as desired.

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.**

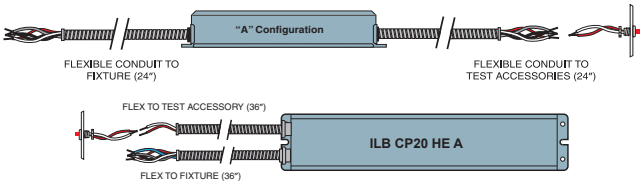


Mounting Configurations

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.

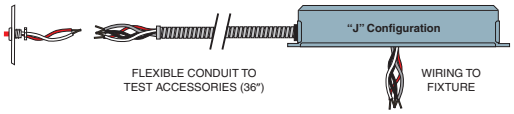


B **Integral Non-Flex**

Allows for integral installation within the driver compartment. May also be mounted atop the fixture when used with a TMK cover accessory.

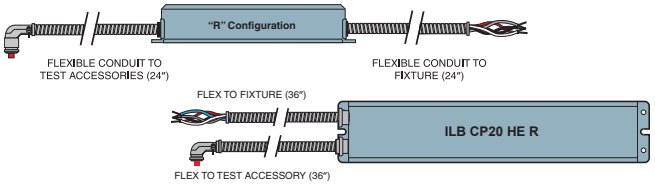
J **Single Flex Junction Box Mount**

Mounts to the junction box and provides flexible conduit for remote mounting of the test accessories.



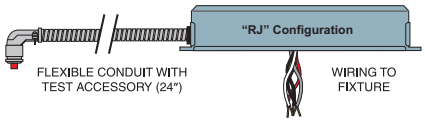
R **Dual Flex w/ Reflector-Mount TBTS**

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.)

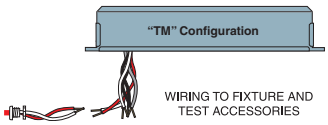


S **Single Flex (20W unit only)**

Single conduit that routes all wiring directly to the fixture channel space or junction box.

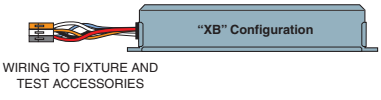
TM **Top-Mount Non-Flex**

Top-mounting option for running wires directly into the driver compartment. Test accessories are then installed within the fixture.



XB **Integral Non-Flex with Push-In Connectors**

The XB provides an integral no-flex design with integrated push-in ports for quicker connection to the LED array, test components, and AC power inputs (select models only.)



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**

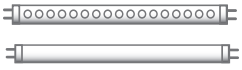
Narrow profile with poke-in connection terminals for integral installation within compartments with tight space restrictions. (10W only)

Emergency Ballasts for Fluorescent and LED Retrofit

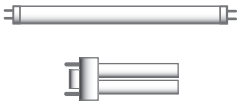
IOTA Emergency Ballasts continue to set the standard both for fluorescent emergency solutions as well as today's leading LED retrofit tube lamp replacements.

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.

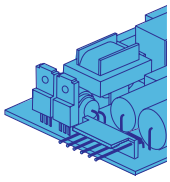
In this Section:



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, open board designs, parallel operation, 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.

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 I 160

The 4-ft troffer in this raised ceiling uses a single 3000 lumen emergency ballast to provide sufficient illumination for the full lobby.

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.

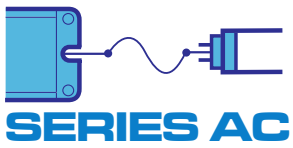
Low-Mercury Content Amalgam Lamps

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.

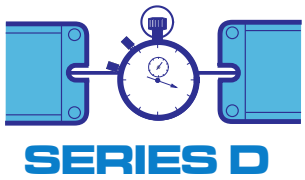


End-of-Lamp-Life Circuitry

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.

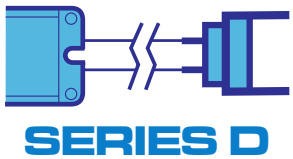


Lamp Replacement

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

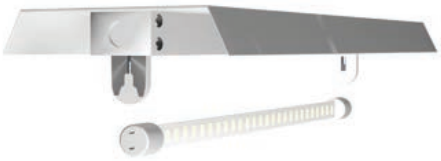
IOTA emergency ballasts guard against the dangers of an open circuit caused when either the lamps are burned out or are being replaced. Open Circuit Isolation is a standard design feature on all IOTA Series D and Series AC emergency ballasts.



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

LED RETROFIT SOLUTION

LED RETROFIT SOLUTION

I 32

The I 32 provides a compact, practical 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.

Reduced Profile Enclosure

8 FT Operates 8-ft Lamps

AC Output Design

Reduced Profile Enclosure

AC Output Design

Reduced Profile Enclosure

Helps meet CA Title 20 and registered in the MAEDBS database

Different Mounting Configurations Available

Parallel Operation and Maximized Lumens

Increased emergency illumination and additional safety features are beneficial assets to projects such as municipal facilities, retirement communities, schools, and daycares. These IOTA units deliver unique advantages to critical emergency egress applications.

LED RETROFIT SOLUTION

LED RETROFIT SOLUTION

I 232

The I 232 provides **parallel lamp operation**, enabling the fixture to illuminate in the emergency mode even if one lamp in the series is inoperable.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 4 Watts

Lumen Output:
(2) lamps up to 1400 lumens
(700 lumens per lamp)

Lamps Operated:
(2) 2'-4' single, bipin T8 thru T12 HO and VHO fluorescent lamps in parallel

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 plenum and enclosed & gasketed fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 880

The I 880 provides significant **2000 lumens** emergency performance in an integral profile enclosure.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 4.5 Watts

Lumen Output:
(1) 2'-8' lamp or (2) 2'-4'
up to 2000 lumens

Lamps Operated:
Most 2'-8' single, bipin T8 thru T12, HO & VHO fluorescent lamps incl. long compacts, 2'-4' 28W & 54W T5

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: 18.6 x 2.4 x 1.5 in. (mounting center 18.1 in.)

Weight: 4.4 lbs

Certifications: UL 924 Listed for U.S. and Canada. Suitable for plenum fixtures. Meets all NEC, IBC, Life Safety Code requirements for Emergency Lighting.

I 160

The I 160 delivers a maximum lumen output of **3000 lumens** for more demanding emergency requirements.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 4.5 Watts

Lumen Output:
(1) 2'-8' lamp or (2) 17W, T8, 26W 4-pin up to 3000 lumens

Lamps Operated:
Most 2'-4' single, bipin T8 and T5 and 18 to 70W 4-pin compact 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: 16.375 x 3.0 x 3.0 in. (mounting center 15.875 in.)

Weight: 7.5 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.

I 162

The I 162 combines **3000 lumen** output with the advantages of **parallel lamp operation**.

Input Voltage: 120/277VAC, 60Hz

Input Rating: 4.5 Watts

Lumen Output:
(2) 2'-4' lamps up to 3000 lumens
(1500 lumens per lamp)

Lamps Operated:
(2) 2'-4' single, bipin T8 thru T12, 28W & 54W T5, 24W-50W long compacts in parallel

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: 16.375 x 3.0 x 3.0 in. (mounting center 15.875 in.)

Weight: 7.5 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.

Parallel Operation ensures illumination even if one lamp is inoperable

Integral Profile Design

High Lumen Output

AC Output Design

Parallel Operation ensures illumination even if one lamp is inoperable

High Lumen Output

AC Output Design

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

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.

AC Output Design

Different Mounting Configurations Available

Adaptable Open Board Option

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.

AC Output Design

Different Mounting Configurations Available

I 320 HE

The I 320 HE combines increased emergency output with high-efficiency 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.

AC Output Design

Helps meet CA Title 20 and registered in the MAEDBS database

Different Mounting Configurations Available

I4PT A

The I4PT A is specifically engineered for operating **4-pin T-LED** retrofit lamps.

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

Input Rating: 20mA (max)

Lumen Output:
250-400 lumens

Lamps Operated:
Select 4-Pin LED retrofit replacement 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: 9.5 x 2.4 x 1.5 in. (mounting center 9.0 in.)

Weight: 3.0 lbs

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

Helps meet CA Title 20 and registered in the MAEDBS database

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.

Slim Profile Enclosure

ISL 54

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.

Slim Profile Enclosure

AC Output Design

ISL 540

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.

Slim Profile Enclosure

AC Output Design

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.

Automatically Conducts Monthly and Annual Tests

AC Output Design

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.

Automatically Conducts Monthly and Annual Tests

AC Output Design

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 United States. 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 United States. 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.

Quick Disconnect Port for Easy Replacement

Reduced Profile Enclosure

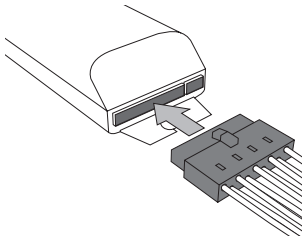
Quick Disconnect Port for Easy Replacement

Reduced Profile Enclosure

Quick Disconnect Port for Easy Replacement

Reduced Profile Enclosure

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.

Lumen Reference Chart for IOTA Emergency Ballasts

The Lumen Reference Chart is your guide in selecting the right IOTA emergency ballast for your designated lamp type and desired output level. Many IOTA units feature lamp selector leads which will optimize the lumen output of the designated lamp(s) when operating during an emergency. Refer to the installation instructions of the specific IOTA unit to determine if the selector leads should be connected or disconnected to achieve the best performance. Looking for a solution for a specific lamp? Contact IOTA Customer Service regarding other lamp options.

REDUCED PROFILES

For shallow compartments

SELF-DIAGNOSTICS

Automatic Monthly and Annual Testing

PARALLEL OPERATION

Emergency illumination even if one lamp is inoperable.

IOTA MODEL / LAMP (# OF LAMPS)	I 32	I 40	I 48	I 320	ISD 80	I 232	I 880	I 160	I 162	ISL 28	ISL 54	ISL 540	P 32	P 40	P 320	I 42	I 420	ISD 420
F16 T8 (1)																		
F16 T8 (2)																		
F17 T8 (1)	450	450	450	1125	780			1600		320	650	950	500	650	850			
F17 T8 (2)			650			1000		2420						650	950			
F25 T8 (1)				1200	1080					360	650	950	500	650				
F25 T8 (2)														650				
F28 T8 (1)	460	630	630	1215	1090		1800			380	630	990	500	650				
F28 T8 (2)			600			1260	1665		2700					650				
F32 T8 (1)	475	700	700	1350	1140		2000	3060		425	700	1100	500	650	1450			
F32 T8 (2)			675			1400	1850		3000					650	1450			
F40 T8 (1)											600	1150						
F59 T8 (1)								2835										
FO96 T8 (1)			675				1650											
14W T5 (1)				850	740					375	450	700		650	800			
21W T5 (1)				1150	990					425	500	850		650				
24W T5 (1)				925	900			1750		500	450	700		650	700			
28W T5 (1)	500			1050	970		1450	2965		500	800	1200		650	1450			
28W T5 (2)									2400									
35W T5 (1)					1100									650				
39W T5 (1)				1100	960			2240			700	1100		650				
47W T5 (1)								2650						650				
54W T5 (1)				1150	1190		1600	2630			825	1300		650	1100			
54W T5 (2)									2500									
95W T5 (1)								2935										
17W T6 (1)											500							
27W T6 (1)											600							
30W T6 (1)											650							
F15 T12	375																	
F20 T12 (1)	425	390	390		650								500	650	1300			
F20 T12 (2)			650			900								650	1300			
F40 T12 (1)	450	660	660		1030		1600						500	650	1300			
F40 T12 (2)			650			1200	1575		2675					650	1300			
F48 T12 (1)														650	1300			
F96 T12 (1)			650				1575	2850										

FOR QUESTIONS REGARDING LAMP OR LUMEN INFORMATION, CONTACT CUSTOMER SERVICE.

Lumen Reference Chart for IOTA Emergency Ballasts

SLIM PROFILE

For narrow ballast compartments

REDUCED PROFILES

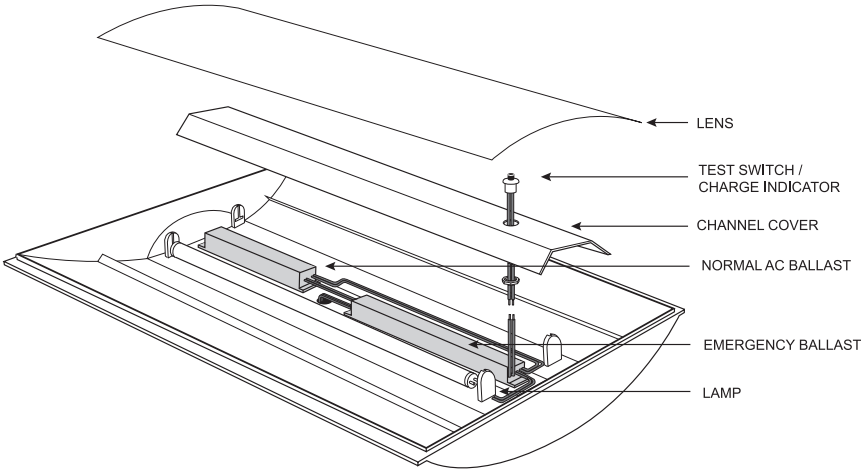
For shallow compartments

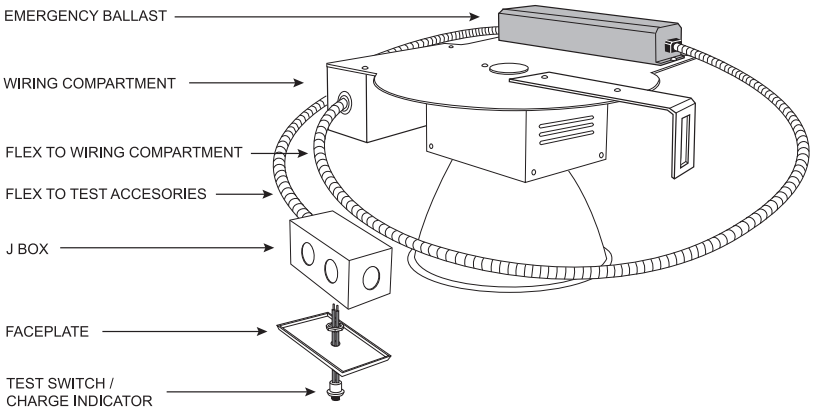
SELF-DIAGNOSTICS

Automatic Monthly and Annual Testing

IOTA MODEL	I 32	I 40	I 48	I 320	ISD 80	I 232	I 880	I 160	I 162	ISL 28	ISL 54	ISL 540	P 32	P 40	P 320	I 42	I 420	ISD 420
LAMP (# OF LAMPS)																		
18W Long Compact (1)					710											500		
24W Long Compact (1)					860											575		
24W Long Compact (2)									1120									
25W Long Compact (1)								2300										
25W Long Compact (2)									1485									
28W Long Compact (1)					1160													
30W Long Compact (1)								2300										
36W Long Compact (1)					1120						675	1025				650		
39W Long Compact (2)									1450									
40W Long Compact (1)	450	600	600		1120		1500				675	1025			950			
40W Long Compact (2)									1900									
50W Long Compact (1)			625		1120		1525				650	1000						
50W Long Compact (2)								2300	1900									
55W Long Compact (1)			650		1100		1600				650	1000						
13W PL CF 4-Pin (1)				935												350	570	740
13W PL CF 4-Pin (2)																400	900	
18W PL CF 4-Pin (1)				955												350	680	780
18W PL CF 4-Pin (2)								1125								550	1010	
26W PL CF 4-Pin (1)				1110				1800								425	810	1000
26W PL CF 4-Pin (2)								1275									1200	
32W PL CF 4 Pin (1)				1070				1500								600	910	1060
32W PL CF 4 Pin (2)								1550										
42W PL CF 4 Pin (1)				1160												750	1040	1060
42W PL CF 4 Pin (2)								1750										
57W PL CF 4 Pin (1)							1600										1180	1190
70W PL CF 4 Pin (1)							1680											
9W Circline (T5)					970			1725						650	1300			
12W Circline (T5)					1100													
20W Circline (1)		625	390															
22W Circline T9 (1)			400		730													
22W Circline T5 (1)			425								425							
40W Circline T8 (1)	450	650	650															
40W Circline T5 (1)			650								650							
55W Circline T5 (1)			650		980													
F282 D/42 (1)																475		
F282 D/42 (2)																500		
F382 D/42 (1)																500		
F382 D/42 (2)																650		

Typical Installation





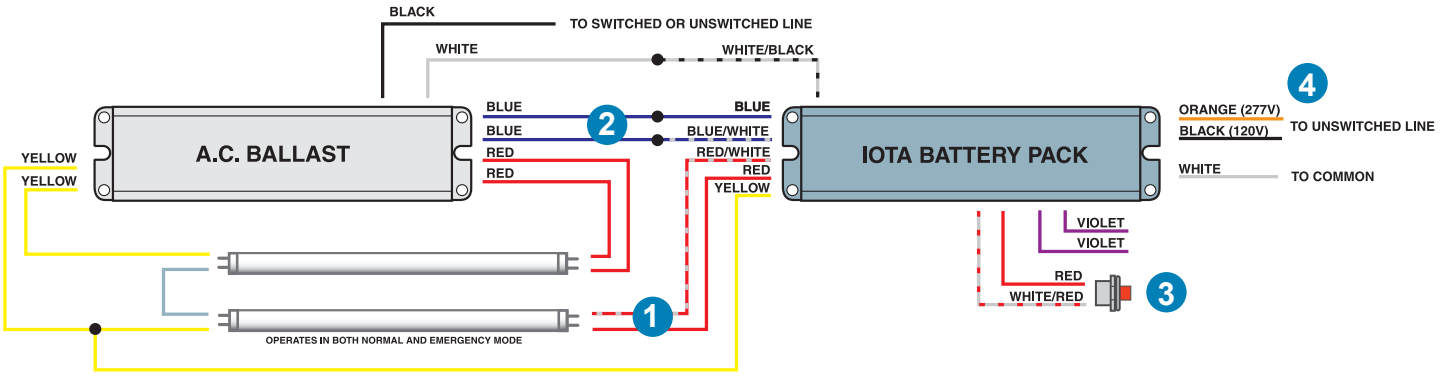
IOTA Emergency Ballasts are designed for internal or external installation based on the requirements of the fixture type. For installation within the fixture, connections are made in the channel space and the test switch / charge indicator is installed for visibility behind the fixture lens. If the channel 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.

Wiring

The IOTA Emergency Ballast wires in conjunction with the normal AC ballast. The emergency unit supplies power to the designated lamp when normal power is lost. The illustration below shows the basic steps to connecting the emergency ballast (wire connections and colors may vary depending on the AC ballast, number of lamps, and specific IOTA emergency ballast model. Refer to the emergency ballast installation manual for details on other fixture applications.)



1 **Connect the emergency ballast to the lamp designated for emergency operation.**

2 **Connect the normal AC ballast to the emergency ballast.**

3 **Install and connect the provided test accessories.**

4 **Wire the emergency ballast to an unswitched AC supply.**

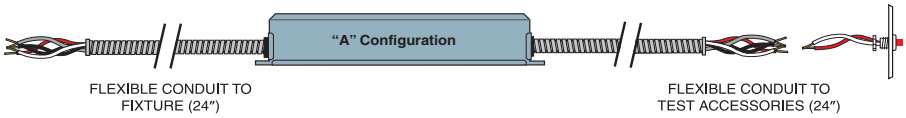
Mounting Configurations

IOTA Emergency Ballasts 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 ballast 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 ballast compartment and test accessories.



B

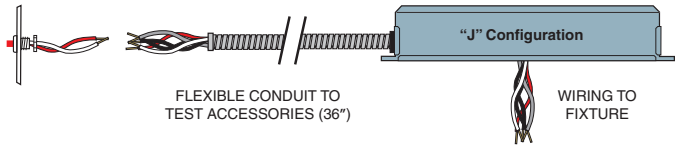
Integral Non-Flex

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

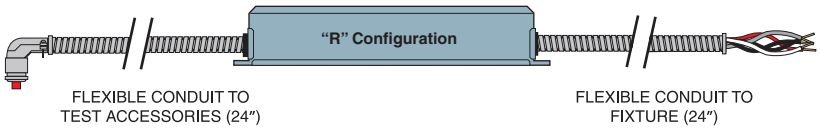
Mounts to the junction box and provides flexible conduit for remote mounting of the test accessories.



R

Dual Flex w/ Reflector-Mount Test Switch

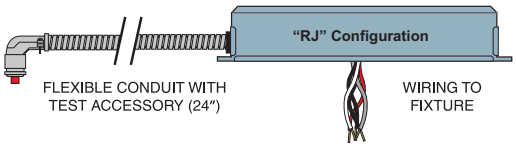
Provides dual flex for wiring to the fixture. The test accessory hardware installs directly within the reflector. (Recommended for OEM installation only.)



RJ

Single Flex w/ Reflector-Mount TBTS

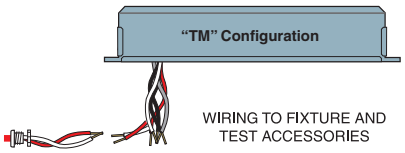
Mounts to the junction box. The test accessory hardware installs directly within the reflector. (Recommended for OEM installation only.)



TM

Top-Mount Non-Flex

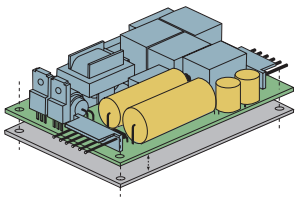
Top-mounting option for running wires directly into the ballast compartment. Test accessories are then installed within the fixture.

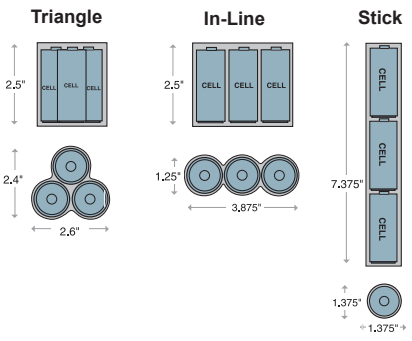


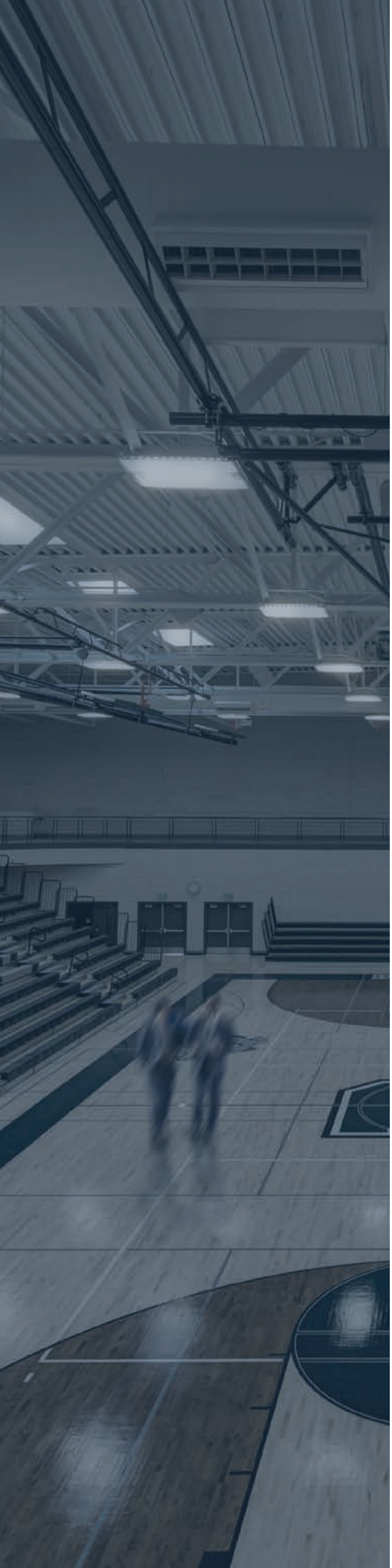
L

Open Board and Battery (I 42L Only)

Open Board emergency ballast kits include the circuit board with inverter and charger and separate battery pack. These kits are designed for installation within sconces, wall packs and other unusually shaped fixtures. The battery packs are available in three configurations to accommodate the available fixture space.







IIS Series Inverter Solutions

IOTA® IIS Inverter Systems offer emergency supply 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-diagnostics offerings add 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 4X, 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.

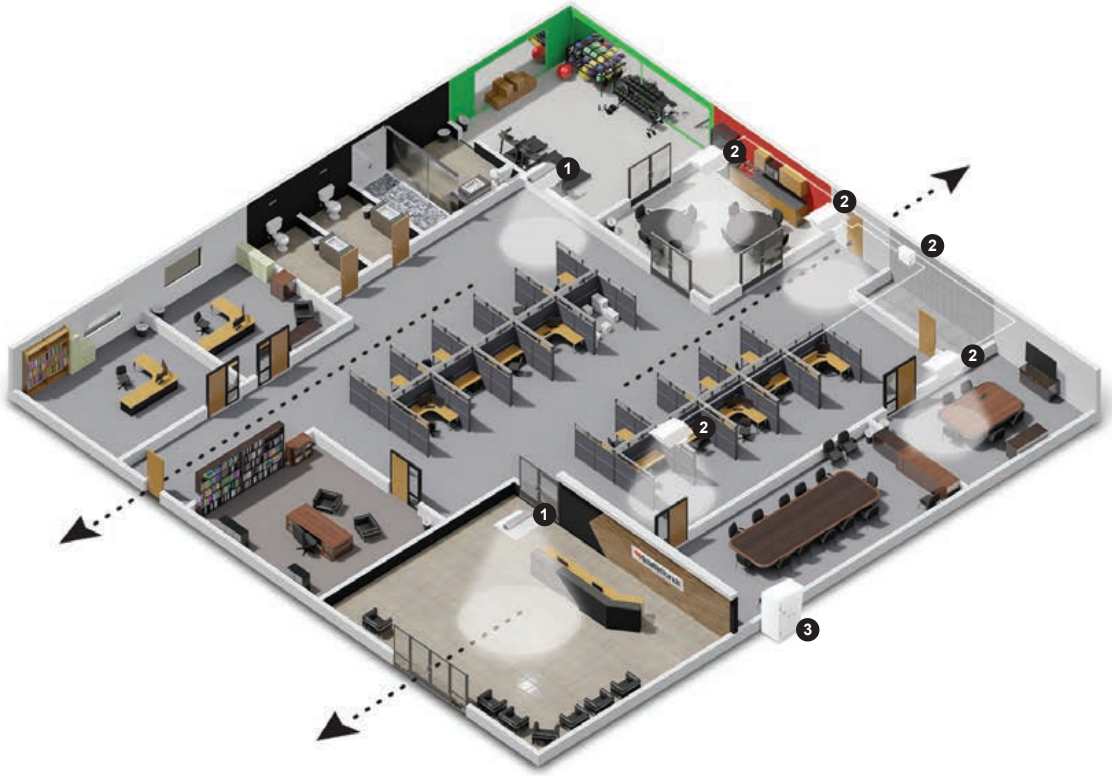
(6) Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the 1 1/2 hour test.

(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 greater (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 diminishing for the duration of the runtime. This ensures that foot-candles requirements are met from Minute 1 to Minute 90.
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-Diagnostic on building-level 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 550W, 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

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, replaceable 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, replaceable 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, replaceable 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**

TITLE 20 **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 min.

Transfer Time: < 50 milliseconds

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 23.75" x 6.5" x 7.625" (including mounting brackets and flange: 23.375 x 8.0")

Weight: 42.5 lbs

Warranty: 3-year

Certifications: UL 924 Listed for U.S.

125W **125W Load Capability**

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 min.

Transfer Time: < 50 milliseconds

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

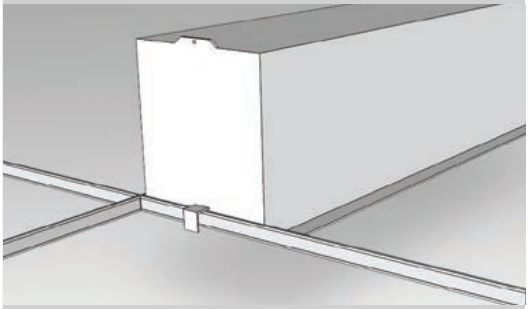
Certifications: UL 924 Listed for U.S.

125W **125W Load Capability**

DR **Dimming Relay Option**

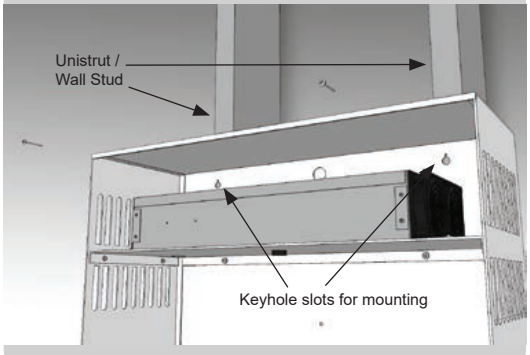
Ceiling Grid Mounting

The ceiling grid model (IIS 125 CG) mounts across the 2-ft T-bars of a grid ceiling. Support wires are connected to the mounting tabs at the top of the unit and secured to the building framework. Knock-outs are located on one end of the unit for connecting conduit containing the AC supply and fixture leads. The 1.25-inch flange on either side provides support for the re-sized ceiling tile.



Surface Mounting

Surface mount models install directly to the wall. Keyhole slots at the back of the unit are spaced for secure mounting to the wall's unistrut or studs. Knockouts provide rear or side access for connection of wiring conduit. An additional hole is provided to prevent inadvertent lifting of the unit from the keyholes.



*Units not rated to NEMA 410 require a 25% de-rating for LED applications

375W / 550W Mini Inverters

IIS 375W and 550W 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 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.

375W **375W Load Capability**

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.

375W **375W Load Capability**

IR **Inrush Rated to NEMA 410 Standards**

DR **Dimming Relay Option**

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.
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**

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

DR **Dimming Relay Option**

*Units not rated to NEMA 410 require a 25% de-rating for LED applications

1000W+ Central Inverters

These IIS inverters combine the benefits of increased inverter-supplied power with compact enclosure solutions to accommodate moderate-sized applications. Includes self-diagnostics and a wide range of selectable features per model.

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 valve-regulated lead-acid (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 VAC: Single Phase 120/208/240/277VAC, 60Hz

Output VAC: 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 valve-regulated lead-acid (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: 121 lbs (1100W)
165 lbs (1600W)
174 lbs (2200W)
203 lbs (2800W)

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.

IISM

The IISM features a modular design that allows for versatile installation and for potential load size expansion in the field.

Input VAC: Single Phase 120/277VAC, 60Hz

Output VAC: Single Phase 120/277VAC, 60Hz

Output Power: 1000 / 1500 / 2000 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 valve-regulated lead-acid (VRLA)

Dimensions: 26" x 10" x 10" (individual cabinet)
1000W = 2 cabinets (electronics 1, batteries 1)
1500W = 3 cabinets (electronics 1, batteries 2)
2000W = 4 cabinets (electronics 1, batteries 3)

Weight: 405 lbs (1000W)
494 lbs (1500W)
603 lbs (2000W)

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

Modular cabinet design for added versatility

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

Single Phase and Three Phase Inverters

1.5 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 Single Phase

IIS Single Phase Central Inverters provide emergency power from 1.5kVA to 16.7kVA in a single steel cabinet. Select between standard transfer speed (50 milliseconds) or fast transfer speed (2 milliseconds) based on your load requirements.

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
Standard Transfer model: LED, fluorescent, incandescent

Emergency Operation: 90 min.

Operating Temp: 20° to 30° C

Battery: Maintenance-free valve-regulated lead-acid (VRLA)

Dimensions: 30" x 47" x 25" (1.5kVA to 5.0kVA)
48" x 76" x 25" (6.0kVA to 16.7kVA)

Weight: Total cabinet weight varies depending on model. Refer to product specification page for combined electronic and battery weight per model.

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 over standard single-phase systems. Fast 2-millisecond transfer time operates any load type. Output power sizes range 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 valve-regulated lead-acid (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: Total cabinet weight varies depending on model. Refer to product specification page for combined electronic and battery weight per model.

Warranty: 1-year (extendable w/ Factory Startup)

Certifications: UL 924 Listed for U.S.

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

Transfer Speed

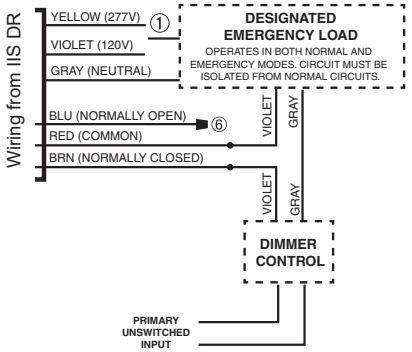
Transfer speed is the measurement of time needed for the inverter system to switch the designated load from the normal AC supply to the emergency supply. Most lighting loads (LED, fluorescent, incandescent) are indifferent to the time needed to switch power supplies, however, some lighting technologies (HID for example) require a 'warm-up' time to reach full brightness if the electrical arc is ever extinguished. For this reason, these types of lamps must have an '*uninterrupted*' or sufficient **'fast transfer' speed (less than 2 milliseconds)** to maintain the electrical arc in order to be used for emergency lighting purposes. If no HID or similarly sensitive lamp is on the circuit, an 'interruptible' or **'standard transfer' speed (50 milliseconds or greater)** is usually sufficient for the lighting load.

Fast Transfer or 'Uninterrupted'	Standard Transfer or 'Interruptible'
< 2 ms	> 50 ms
Suitable for all lighting load types	Suitable for LED, fluorescent, incandescent loads

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



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.

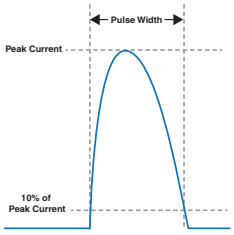
For more information regarding IOTA products for FEMA applications, contact our Customer Service team or visit the FEMA website at **www.fema.gov**.

IIS Model	90 Minute Capacity	120 Minute Capacity
IIS 25	25W	20W
IIS 35	35W	26W
IIS 50	50W	40W
IIS 125	125W	100W
IIS 375	375W	300W
IIS 550	550W	440W

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.

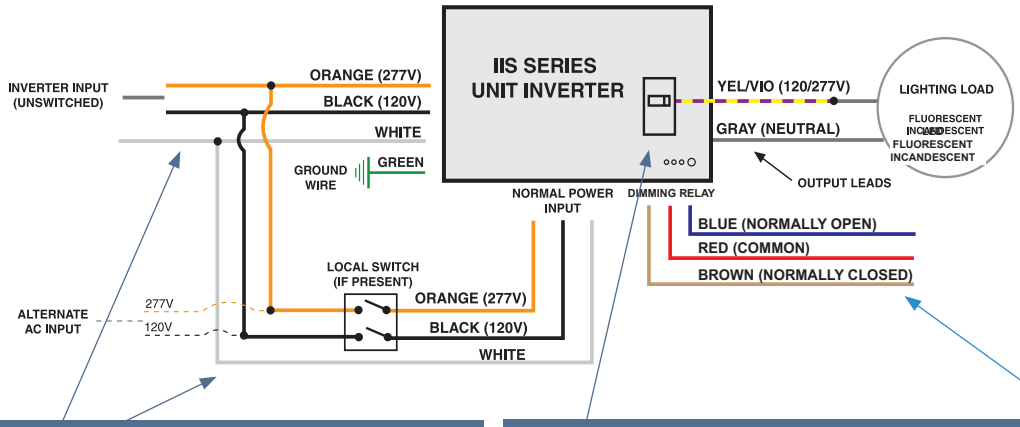
A recommended industry practice is to de-rate inverters by 25% when used with LED loads to account for inrush, however select IOTA IIS models are **NEMA 410 rated** to accommodate the full rated capacity, including inrush, meaning no de-rating is required.



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 375 LED	375 Watt
IIS 550 HE	550 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. Any switch for the designated load will be present on the Normal Power Input leads. For emergency operation only, the Normal Input leads would be disconnected and capped.

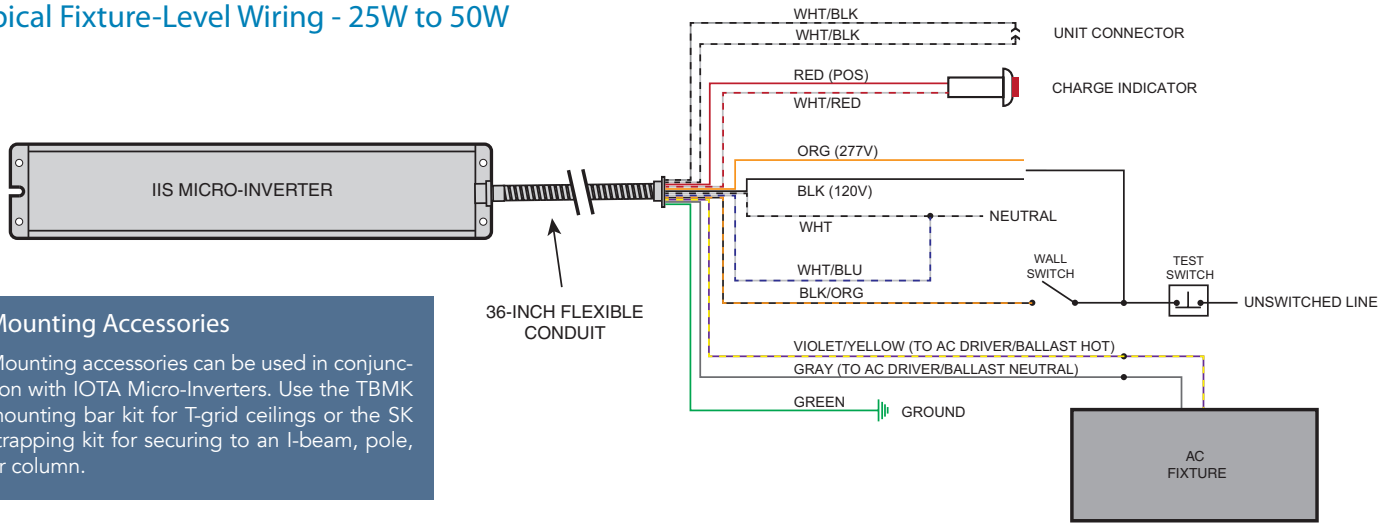
Internal Circuit Breaker

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



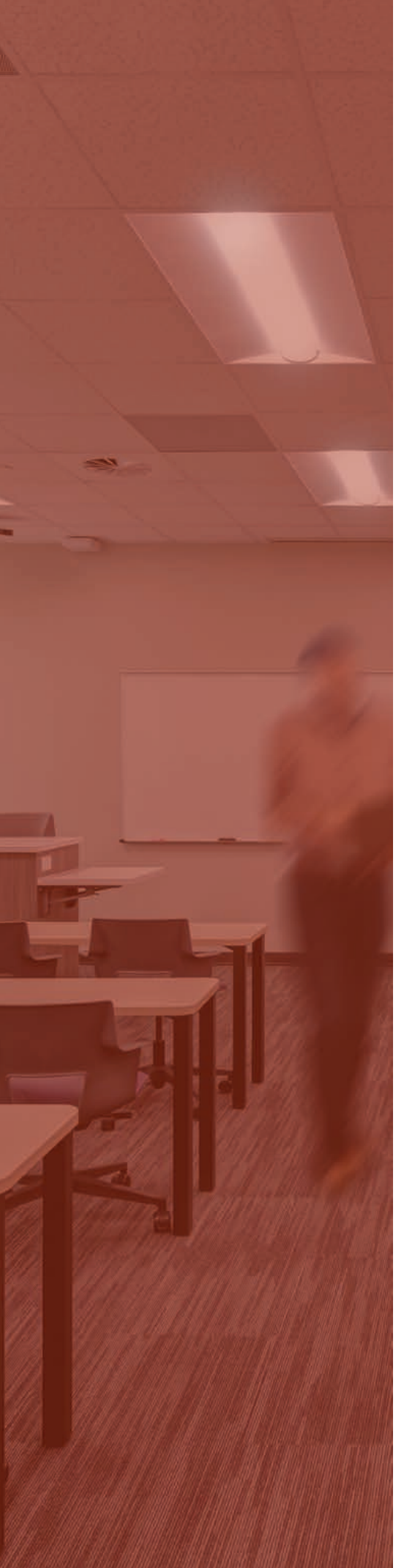
Mounting Accessories

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 systems. 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.

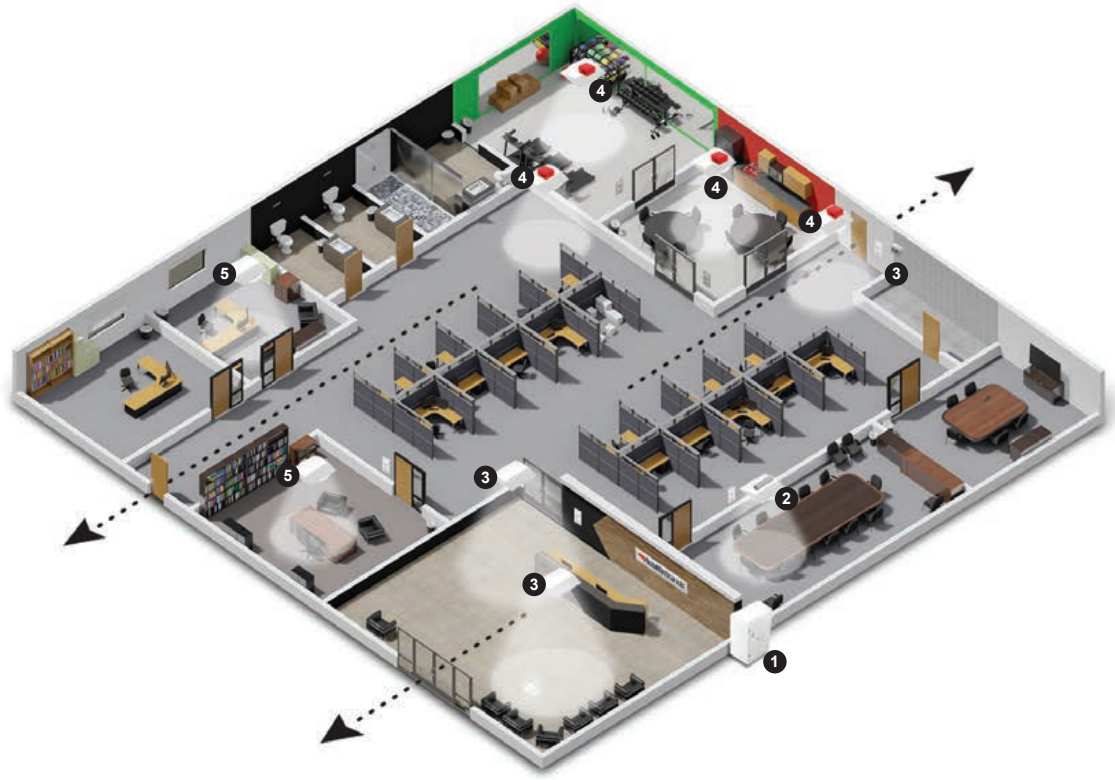
Model	Operation	Application	Description
ETS DR	Senses Loss of Normal Power	Not Networked	Fixture Level ALCR
ETS 20	Senses Loss of Normal Power	Not Networked	Circuit Level ALCR
nLight ER	Senses Loss of Normal Power	Networked	Fixture or circuit level ALCR
nLight EM	Senses Transfer from Normal to Emergency	Networked	Fixture or circuit level ALCR. No wiring to Normal Power required.

Senses Loss of Normal Power
The unit connects directly to the Normal Hot and Neutral to detect presence of normal power.

Senses Transfer
The unit does not connect to Normal Power. Instead, transfer of power to the emergency supply is detected to engage emergency control.

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.) Often, fast transfer speeds are chosen for optimal performance of the electrical load. Due to the differing natures of how ALCRs function, consideration must be given to transfer speed and ALCR selection:

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)	30 milliseconds or greater
nLight Air "EM" (Fixture Embedded)	200 milliseconds or greater

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 a normal 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 55° C (-4° to 131° 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 55° C (-4° to 131° F)

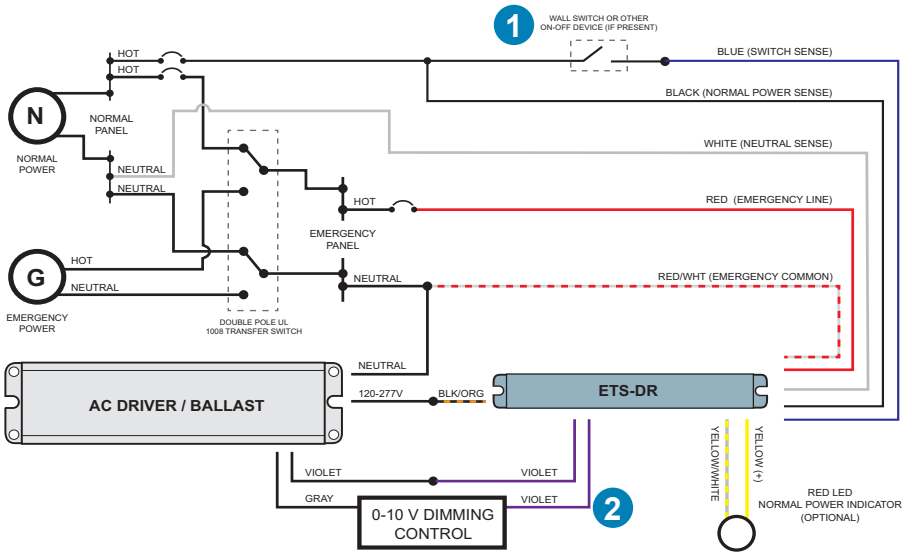
Approval
UL 924 Listed for U.S. and Canada.
Rated for damp location and
plenum applications.

Dimensions
4.625" x 2.25" x 2.25"
Threaded Coupling: 1" with 0.5 diam.

Weight: 1.0 lbs

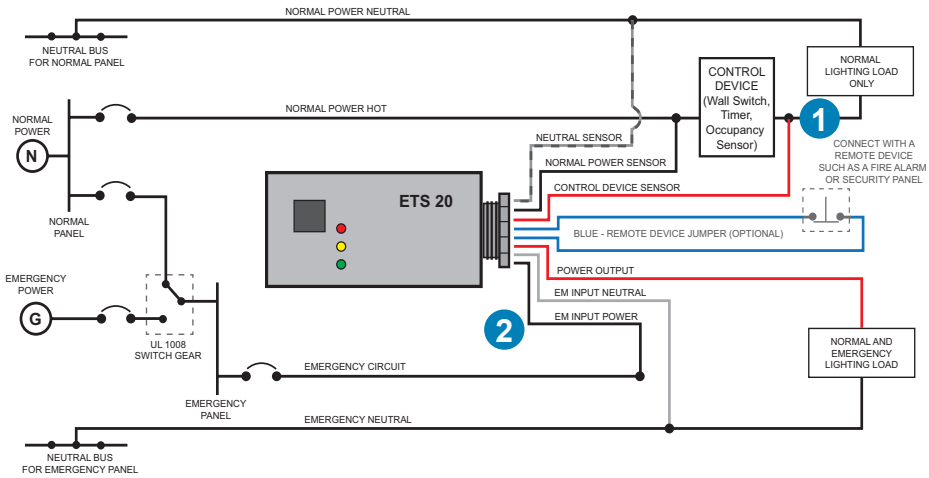
- **Dimming Relay Included**
- **Integral and Flex Models Available**
- **Inrush Rated to NEMA 410 Standards**
- **Extended Temperature Performance**
- **Optional Trigger Capability with Blue Jumper Leads**
- **Inrush Rated to NEMA 410 Standards**
- **Allows for Dual Zoning Dimming**
- **Optional Trigger Capability with Blue Jumper Leads**
- **Inrush Rated to NEMA 410 Standards**

Fixture-Level ALCR Wiring (ETS DR)



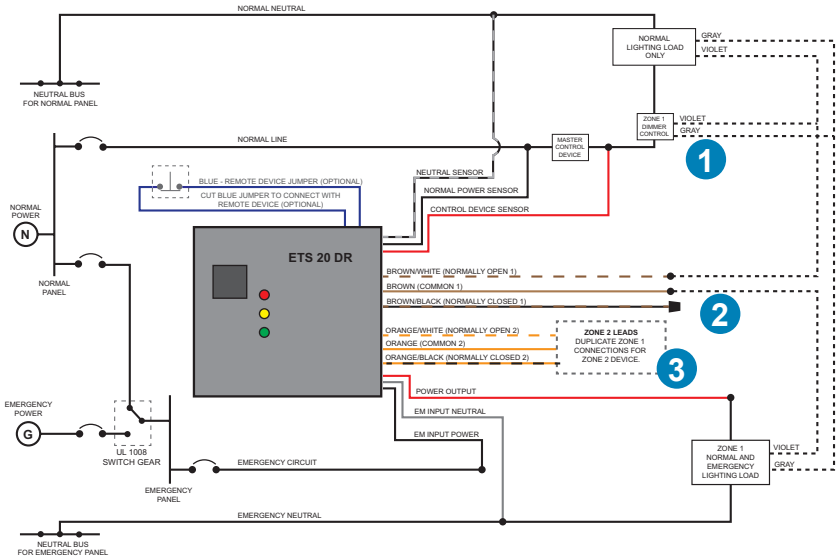
The **ETS DR** has two leads connected to either side of the local control: one senses the presence of normal power, and the other senses the switch setting (1). If the **ETS DR** senses that power is lost ahead of the switch, the unit allows power from the unswitched generator to the driver or ballast 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.

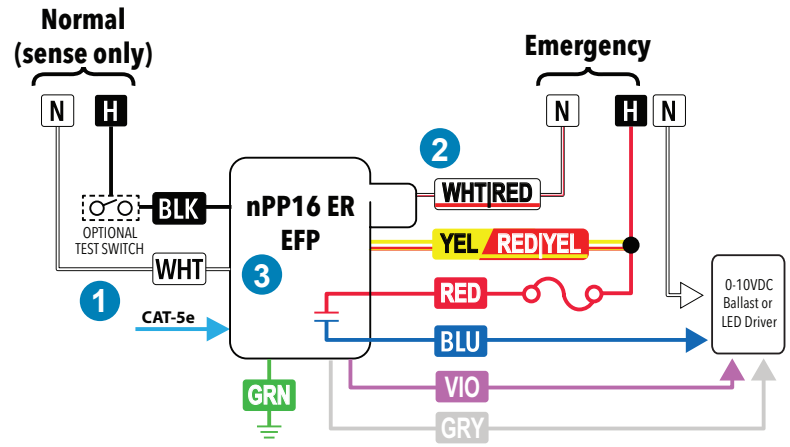
- Compatible with nLight wired controls
- Allows 0-10V Dimming (Class 1 or Class 2)
- Suitable for Standard or Fast Transfer Systems
- Optional Activation from Fire Alarm Panel
- Low Temperature Performance

- 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

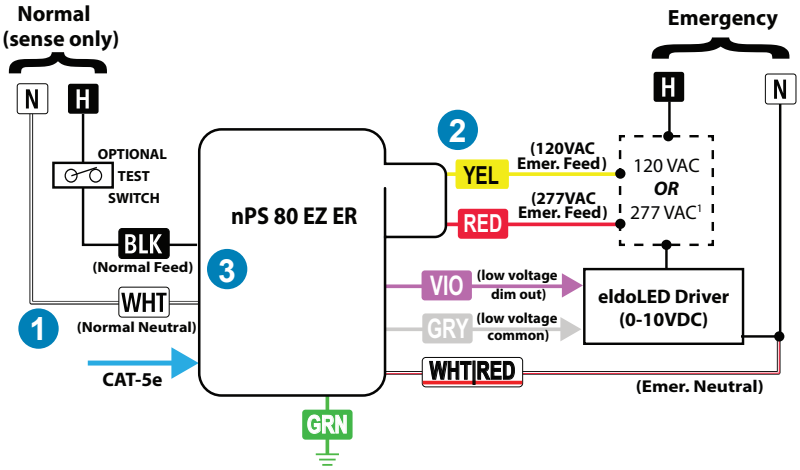
- Compatible with nLight wireless controls
- Suitable for Standard or Fast Transfer Systems
- Allows 0-10V Dimming (Class 1 or Class 2)

- Compatible with nLight wired controls
- Suitable for Standard or Fast Transfer Systems
- Accommodates additional LEDcode-based occupancy or daylight sensor

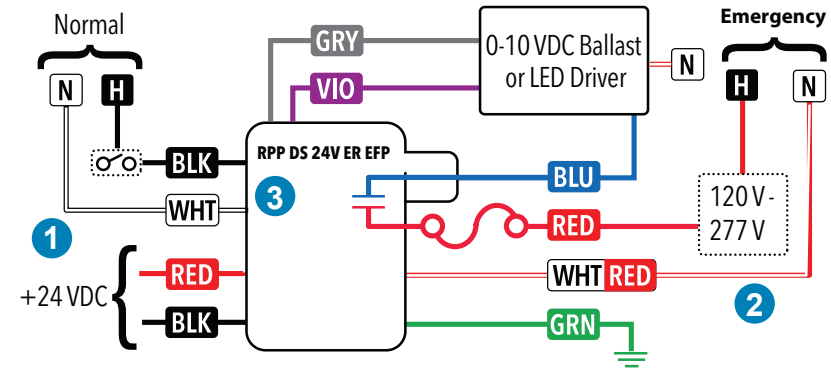
Stand-Alone nPP16 ER Wiring



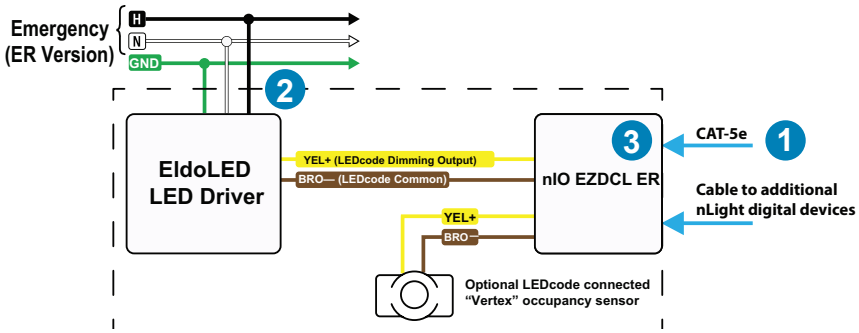
Stand-Alone nPS 80 EZ ER Wiring



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 hot power. These models can be used on central emergency lighting power with power interruption transfer times greater than 30 milliseconds necessary for the nLight controllers to activate the Egress Mode functionality.

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.

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.

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.

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.

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, do not require a wiring connection to normal hot power. This model can be used on central emergency lighting power with power interruption transfer times greater than 200 milliseconds to activate the Egress Mode functionality.

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.

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.

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.

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.

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)

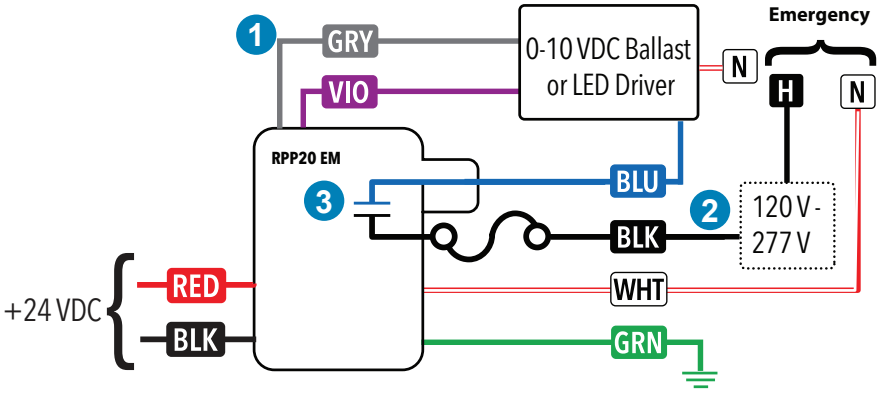
Approval
UL 924 Listed for U.S. and Canada. IP66 Rated.
FCC Compliant.

Dimensions
1.180" x 2.617" x 1.335"

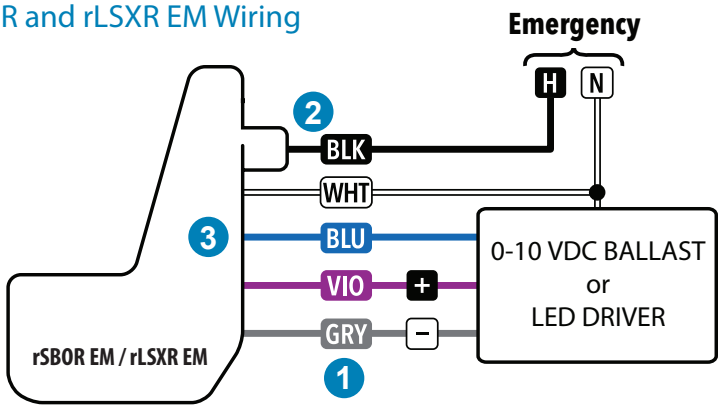
Warranty: 5-year limited warranty.

- Compatible with nLight AIR wireless controls
- Includes occupancy/ daylight sensing
- IP66 Outdoor Rated
- Extended Temperature Performance

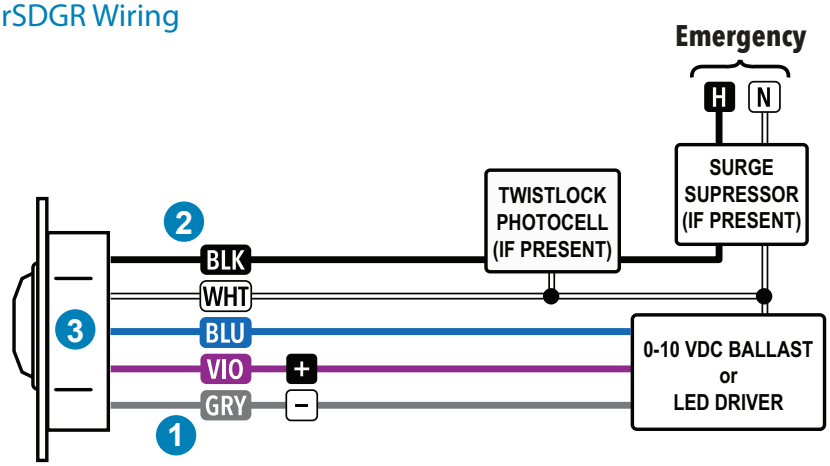
Stand-Alone rPP20 EM Wiring



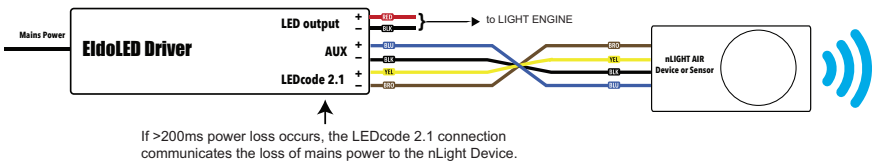
rSBOR and rLSXR EM Wiring



rSDGR Wiring



Low Voltage Sensor and eldoLED Driver



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. 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.

EM controller ignores all automatic and manual commands and controls the driver or ballast to its fully tuned light output for 90 minutes: the relay is closed and the 0-10V dimming signal is set at the maximum trim level (default 9.3 VDC, user programmable).

EM controller resumes normally programmed manual and automatic control sequences after receiving an "exit EM" command, or after 90 minutes (regardless of whether normal utility power has been restored), whichever action comes first.

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 Pro) 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 30 seconds of normal power applied.

*NOTE: The following devices will not trigger an exit of the EM mode: Non-Dimming Power Pack Devices (rPP20), 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)

AcuityBrands.

Professional Expertise for your Life Safety Questions

Looking for additional products or guidance for your emergency lighting requirements? Let us help! The Acuity Brands team represents decades of knowledge and insight into Life Safety egress solutions.

1-800-705-SERV

www.AcuityBrands.com

LITHONIA LIGHTING TECH SUPPORT

TechSupport-Emergency@AcuityBrands.com

IOTA TECH SUPPORT

TechSupport@iotaengineering.com

nLIGHT TECH SUPPORT

nLight-Support@AcuityBrands.com

The Industry's Leading Portfolio of Emergency Lighting Solutions...

With an extensive selection of commercial indoor emergency lights, exit signs, and exit combination lights, Lithonia Lighting® emergency products offer egress solutions designed to meet the architectural and practical elements of any facility.

IOTA® emergency lighting solutions bring confident egress lighting performance to existing fixtures through the use of integral emergency battery designs, powerful auxiliary inverter systems, and energy-saving ALCR control devices.

nLight® emergency devices provide ALCR capability into networked lighting controls, enhancing the occupant's interaction with the lighting environment while maintaining the integrity of Life Safety performance.

One Lithonia Way | Conyers, Georgia 30012 | Phone: 800.535.2465