# ILBHI CP10 HE SD

PRODUCT SPECIFICATION SHEET



347V AC 480V HIGH-VOLTAGE INPUT

CP CONSTANT POWER EMERGENCY OUTPUT

SELF-DIAGNOSTIC AUTOMATIC MONTHLY & ANNUAL TESTING

REDUCED FOOTPRINT WITH LITHIUM TECHNOLOGY

AC ACTIVATE FOR SIMPLER INSTALLATION


2021 PROGRESS Report SELECTION

MODEL NO: _____

TYPE: _____

PROJECT: _____

COMMENTS: _____

## DESCRIPTION

The IOTA **ILBHI CP10 HE SD** is a UL Listed emergency LED driver for field and factory installation that allows a **347-480VAC** fixture with **15-55VDC Class 2 LED lighting loads** to be used for both normal and emergency operation. In the event of a power failure, the **ILBHI CP10 HE SD** switches from the existing AC driver to operate the fixture from the battery supply for **90 minutes**. The unit contains a battery, charger, and converter circuit in a single enclosure for integral installation within the luminaire. The **ILBHI CP10 HE SD** will operate the 15-55VDC LED load at **10 watts** with **Constant Power**. The patented Constant Power design of the unit maintains the rated output wattage to the LED array even as the battery voltage diminishes, resulting in a constant illumination level for the entire emergency runtime. Features lithium battery technology for **significantly decreased form factor** and includes automatic monthly and annual **self-testing** features as standard. Self-diagnostic status is communicated via the illuminated single-piece test accessory, which can be mounted up to 25 ft. from the unit.

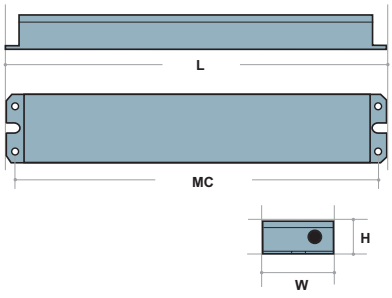
## SPECIFICATIONS

| | |
|---|---|
| Input Voltage | 347-480VAC, 50/60Hz |
| Input Current (347/480V) | 15.3mA (max) |
| Output Voltage | 15-55Vdc (nom) |
| Output Current | 0.18A (@55VDC) to 0.67A (@15VDC) |
| Output Power | 10 Watts (constant) |
| Max. AC Driver Neutral Current | 1.5A |
| Surge Protection | Meets or Exceeds ANSI/IEEE C62.41.2-2002 |
| Emergency Operation | 90 minutes |
| Operating Temp | 0° to 55° C |
| THD | < 10% (@ full charge) |
| EMI | Complies to FCC commercial limits |
| Battery | Maintenance-free $LiFePO_4$ Lithium Iron Phosphate (no heavy metals)<br>24 Hour Recharge<br>5-7 Year Life Expectancy |
| Weight | 1.65 lbs |
| Certifications | UL Listed for Factory and Field Installation in U.S. and Canada<br>CSA C22.2 No. 141<br>CA Title 20 Appliance Efficiency Database |

c UL US LISTED BC

## DIMENSIONS

(L) 12.14″ x (W) 2.26″ x (H) 1.12″
(mounting center 11.7″)




## LUMEN PERFORMANCE

| Fixture Efficacy | Minute 1 | Minute 45 | Minute 90 |
|---|---|---|---|
| 100 lm/W | 1000 | 1000 | 1000 |
| 110 lm/W | 1100 | 1100 | 1100 |
| 120 lm/W | 1200 | 1200 | 1200 |
| 130 lm/W | 1300 | 1300 | 1300 |

## PRODUCT ADVANTAGES

- **347 to 480V Input**
  Accommodates fixtures using a high-voltage AC input from 347-480VAC, 50/60 Hz
- **Auto-Sensing Class 2 Output**
  Auto-adjusting 15-55 VDC output range accommodates a wide range of Class 2 forward voltage designs
- **Constant Power Performance**
  Constant wattage delivery maintains illumination level for the full emergency runtime with no degradation
- **Self-Diagnostic / Self-Testing**
  Monthly and annual self-test feature satisfies the periodic testing requirements in accordance with NFPA 101 while the on-board diagnostics provides system readiness with visual indicators.

## ADDITIONAL FEATURES

- UL 924 Listed, UL Listed and Classified to FTBV
- UL 1310 Certified, Output Class 2 Compliant
- AC-Activate circuitry simplifies wiring by eliminating the need for manual battery connection during installation.
- Maintenance-free, high-temp recyclable $LiFePO_4$ for significantly reduced space requirements.
- Durable, galvanized steel enclosure
- Single-piece test switch and charge indicator can be remote-mounted up to 25 ft.
- For use with switched or unswitched fixtures
- **5-Year Warranty.** See Warranty Page for details.
- Meets or exceeds all NEC, IBC, and Life Safety Code Emergency Lighting Requirements
- Certified to CA Title 20 and registered in the Modernized Appliance Efficiency Database (MAEDBS)
- Suitable for use in plenum, damp location, and enclosed and gasketed luminaires
- RoHS Compliant RoHS COMPLIANT

IOTA®



Patented. See **www.iotaengineering.com/patents** for details.

Product specifications are subject to change without notice

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# ILBHI CP10 HE SD

**CONSTANT POWER HIGH-VOLTAGE LED EMERGENCY DRIVER**

## ORDERING GUIDE

**ILBHI** **CP10** **HE** **SD** **B**


WIRING TO FIXTURE AND TEST ACCESSORIES

**Understanding Your IOTA Driver Model:**
**ILBHI** = IOTA Emergency LED Driver with High-Voltage Input
**CP**** = Constant Power Performance at the rated wattage
**HE** = High efficiency charging control for CA Title 20 requirements
**SD** = Self-diagnostic capability
**B** = Intregral installation (no flexible conduit)

## SAMPLE SPECIFICATION

Supply and install **IOTA ILBHI CP10 HE SD B** Constant Power emergency LED driver system as indicated on the plans. The emergency driver shall include a self-contained, high-temperature, sealed, maintenance-free $LiFePO_4$ battery rated for a 5-7 year service life designed for external mounting to the luminaire. The unit shall be provided complete with an illuminated three-color push to test switch. The three-color LED provides AC status, charge status and diagnostic fault status. The emergency driver system shall be UL class 2 certified in accordance with UL 1310 and shall be UL listed for use in damp locations and in enclosed and gasketed fixtures with a temperature range of 0° to 55° C.

The AC input shall be a two-wire, universal voltage capable 347 thru 480 VAC, 50/60 Hz with a maximum input current of 15.3mA The unit shall monitor and adjust the input power consumption and be certified in the CA Title 20 Modernized Appliance Efficiency Database System (MAEDBS) as a small battery charger.

The charger shall be current limited, short-circuit protected with reverse polarity protection. A low voltage battery disconnect (LVD) circuit shall be provided and will disconnect the load and circuitry from the battery when it reaches approximately <87% of its nominal terminal voltage, preventing a non-recoverable, deep-discharge condition as well as equipment initialization failure when utility power is restored. The unit shall achieve a full recharge in 24-hours.

The emergency driver shall accommodate an LED load with a forward voltage requirement ranging from 15 to 55VDC. The output voltage sensing shall be automatic and instantaneous with a resulting, inversely-proportional current to maintain constant power to the LED array with an output tolerance of +/- 10%. The unit shall supply the rated load for a minimum of 1 1/2 hours or to 87 1/2% of rated battery terminal voltage. The output power to the LED load during emergency operation shall be held at a constant **10W** from minute one throughout the entire emergency run time resulting in no loss or degradation of the light source during emergency operation.

The unit shall be furnished with electronic AC-Activate circuitry which will connect the battery when the branch circuit is energized.

### Emergency Lumen Performance - ILBHI CP10 HE SD

| Approx. Luminaire Efficacy | Minute 1 | Minute 45 | Minute 90 |
|---|---|---|---|
| 100 lm/W | 1000 | 1000 | **1000** |
| 110 lm/W | 1100 | 1100 | **1100** |
| 120 lm/W | 1200 | 1200 | **1200** |
| 130 lm/W | 1300 | 1300 | **1300** |
| 140 lm/W | 1400 | 1400 | **1400** |
| 150 lm/W | 1500 | 1500 | **1500** |

c UL us LISTED

This unit is UL Listed and Classified for Field Installation. Refer to the "**CP Series Compatibility and Suitability of Use Guidelines**" addendum for complete project installation requirements.

### Remote Mounting

The emergency LED driver may be remote mounted from the fixture up to 50 feet. If used in conjunction with an AC driver, the typical maximum distance is up to half the distance the AC driver manufacturer recommends remote mounting the AC driver from the LED load. Use 18 gauge wire or larger to maintain output power and minimize loss. Remote mounting can result in reduced performance of the system. For more information, contact IOTA Technical Services.

## DIAGNOSTIC CODES

The charge indicator (TCTS) LED provides indication of the charging status of the battery. If a problem is encountered during the test cycle, the TCTS will flash, according to the diagnostic codes below:

| STATUS INDICATION | CONDITION |
|---|---|
| FLASHING AMBER | BATTERY IS CHARGING |
| GREEN | BATTERY IS FULLY CHARGED |
| OFF | EMERGENCY MODE |
| FLASHING GREEN | UNIT IS PERFORMING A TEST |
| FLASHING RED/GREEN | INSUFFICIENT CHARGE |
| FLASHING RED (ONCE PER 0.5 SEC.) | BATTERY MAY BE MISSING |
| FLASHING RED (ONCE PER 6 SEC.) | BATTERY FAILURE |
| TWO RED FLASHES | EMERGENCY LED LOAD FAILURE |
| THREE RED FLASHES | ELECTRONICS FAILURE |
| FOUR RED FLASHES | TEMPERATURE OUT OF RANGE |

**Attention:** Refer to the IATA website at https://www.iata.org for air transporation requirements and restrictions for lithium batteries and products containing lithium batteries.

Contact IOTA Customer Service to learn more about IOTA standards and best practices for the shipping, handling, and storage of IOTA lithium battery products.

**Warranty:** 5-Year Limited Warranty
Complete warranty terms located at *www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx*



Patented. See **www.iotaengineering.com/patents** for details.

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