

Constant Power HIGH-VOLTAGE EMERGENCY LED DRIVER for Non-Class 2 LEDs

ILBHI CP20 HE SD HV

PRODUCT SPECIFICATION SHEET



MODEL NO: _____
TYPE: _____
PROJECT: _____
COMMENTS: _____

LUMEN PERFORMANCE

Fixture Efficacy	Minute 1	Minute 45	Minute 90
100 lm/W	2000	2000	2000
110 lm/W	2200	2200	2200
120 lm/W	2400	2400	2400
130 lm/W	2600	2600	2600

LED

DESCRIPTION

The IOTA ILBHI CP20 HE SD HV is a UL Listed emergency LED driver for field and factory installation that allows a **347-480VAC** fixture with **55-200VDC Non-Class 2 LED lighting loads** to be used for both normal and emergency operation. In the event of a power failure, the **ILBHI CP20 HE SD HV** 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 with the options for integral (no flexible conduit) or single and dual flexible conduit for wiring to the fixture and test accessories. The **ILBHI CP20 HE SD HV** will operate the 55-200VDC LED load at **20 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

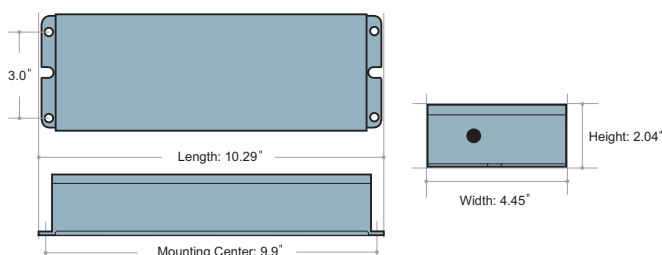
Input Voltage	347-480VAC, 50/60Hz
Input Current (347/480V)	0.015A (max)
Output Voltage	55-200Vdc (nom)
Output Current	0.1A (@200VDC) to 0.363A (@55VDC)
Output Power	20 Watts (constant)
Max. AC Driver Neutral Current	1.5 Amps
Power Factor (@347V)	≥ 0.9*
Surge Protection	Meets or Exceeds ANSI/IEEE C62.41.2-2002
Emergency Operation	90 minutes
Operating Temp	0° to 55° C
THD	< 10% (@ full charge)
EMI	Complies with FCC commercial limits
Battery	Maintenance-free LiFePO ₄ Lithium Iron Phosphate (no heavy metals) 24 Hour Recharge 5-7 Year Life Expectancy
Weight	(integral) 4.6 lbs (single flex) 4.85 lbs
Certifications	UL Listed for Factory and Field Installation in U.S. and Canada CSA C22.2 No. 141 CA Title 20 Appliance Efficiency Database

* PF is ≥0.8 for 480Vac



DIMENSIONS

10.29" x 4.45" x 2.04" (mm: 261 x 113 x 52)



PRODUCT ADVANTAGES

- **347 to 480V Input**
Accommodates fixtures using a high-voltage AC input from 347-480VAC, 50/60 Hz
- **Auto-Sensing Non-Class 2 Output**
Auto-adjusting 55-200 VDC output range accommodates a wide range of Non-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.
- **High Output for Increased Illumination**
20W emergency output is ideal for elevated mounting heights and high-bay fixtures

ADDITIONAL FEATURES

- UL 924 Listed for U.S. and Canada
- Integral and flexible conduit models for wiring to the fixture
- AC-Activate circuitry simplifies wiring by eliminating the need for manual battery connection during installation.
- Maintenance-free, high-temp recyclable LiFePO₄ 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



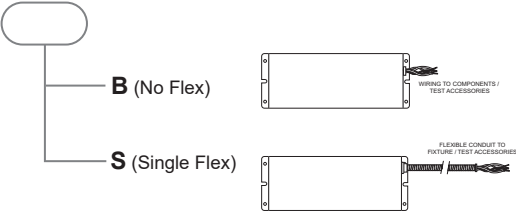
ILBHI CP20 HE SD HV

CONSTANT POWER HIGH-VOLTAGE LED EMERGENCY DRIVER for NON-CLASS 2 LEDs

ORDERING GUIDE

ILBHI CP20 HE SD HV

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
HV = High voltage output for non-class 2 LED loads



SAMPLE SPECIFICATION

Supply and install **IOTA ILBHI CP20 HE SD HV [select flexible conduit option]** Constant Power emergency LED driver system as indicated on the plans. The emergency driver shall include a self-contained, high-temperature, sealed, maintenance-free LiFePO₄ 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 dual-color push to test switch. The dual color LED provides AC status, charge status and diagnostic fault status. The emergency driver system shall be UL listed for use in damp locations 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 0.015A. 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 55 to 200 VDC (235 VDC max. normal mode). 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 **20W** 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 CP20 HE SD HV

Approx. Luminaire Efficacy	Minute 1	Minute 45	Minute 90
100 lm/W	2000	2000	2000
110 lm/W	2200	2200	2200
120 lm/W	2400	2400	2400
130 lm/W	2600	2600	2600
140 lm/W	2800	2800	2800
150 lm/W	3000	3000	3000



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.

DIAGNOSTIC CODES

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

STATUS INDICATION	CONDITION
STEADY GREEN	BATTERY IS FULLY CHARGED
STEADY RED	BATTERY IS CHARGING
FLASHING GREEN	UNIT IS PERFORMING A TEST
OFF	EMERGENCY MODE
FLASHING RED/GREEN	INSUFFICIENT CHARGE
1 RED FLASH	BATTERY FAILURE
2 RED FLASHES	EMERGENCY LED LOAD FAILURE
3 RED FLASHES	ELECTRONICS FAILURE
4 RED FLASHES	TEMPERATURE OUT OF RANGE

Attention: Refer to the IATA website at <https://www.iata.org> for air transportation 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