

ILB CP20 HE SD

Constant Power Self-Diagnostic Emergency LED Driver

PRODUCT SPECIFICATION SHEET



Certified in CA TITLE 20
Appliance Efficiency Database -
Battery Charger



DESCRIPTION

The **ILB CP20 HE SD** from IOTA is a UL Listed LED emergency driver that allows the same LED fixture to be used for both normal and emergency operation. In the event of a power failure, the **ILB CP20 HE SD** switches to the emergency mode and operates the existing fixture for **90 minutes**. The unit contains a battery, charger, and converter circuit in a single enclosure and is available in different mounting configurations for individual fixture requirements. The **ILB CP20 HE SD** will operate an LED array load at **20 watts** with **constant power** at a rated output voltage of **20V-60V**. The Constant Power design of the **ILB CP20 HE SD** maintains the output wattage to the LED array, providing consistent illumination for the entire emergency runtime. The integrated self-diagnostic circuitry will **automatically conduct monthly 30-second and annual 90-minute tests** to verify proper emergency capability per Life Safety Code requirements. The **ILB CP20 HE SD** features high-efficiency performance and is certified in the CA Title 20 Appliance Efficiency Database.

SPECIFICATIONS

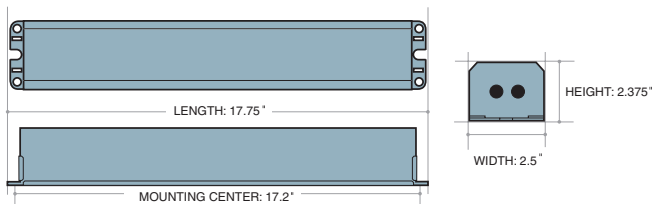
Input Voltage	(Universal) 120-277VAC, 50/60Hz
Input Rating (120/277)	5.5 Watts (max)
Output Voltage ¹	20-60VDC Class 2 Compliant
Output Current	1.0A (@20VDC) - 0.3A (@60VDC)
Output Power	20 Watts (constant)
Max. AC Driver Output Current	5A _{dc}
Power Factor	≥ 0.85
Surge Protection	Meets ANSI/IEEE C62.41.2-2002
Emergency Operation	90 minutes
Operating Temp.	0° to 55° C
THD	< 20%
EMI	Complies to FCC commercial limits
Battery	High Temp Nickel-Cadmium 24 Hour Recharge 7-10 Year Life Expectancy
Weight (configuration)	6.0 lbs. (A, R) 5.7 lbs. (S)
Certifications	UL Listed for factory and field installation CSA C22.2 No 141 CA T20 Appliance Efficiency Database

¹Max. output voltage in emergency mode is 58.5 VDC with a + tolerance of 1.5 volts



DIMENSIONS

17.75" x 2.5" x 2.375"
(mounting center 17.2")



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

PRODUCT ADVANTAGES

- **Self Test / Self Diagnostics**
Self-Diagnostic Capability satisfies the periodic testing requirements in accordance with NFPA 101 and conducts internal circuitry testing of battery, charger, and load performance.
- **Remote Activation Feature**
Remotely activate manual tests through your local switching controls
- **Certified for CA Title 20**
High Efficiency Performance meets CA Title 20 battery charger efficiency standards
- **Auto-Sensing Class 2 Output**
Auto-adjusting 20-60 VDC output range accommodates a full range of Class 2 forward voltage LED designs
- **Constant Power Performance**
Constant wattage delivery maintains illumination for the full emergency runtime with no degradation
- **Listed for Field or Factory Installation**
UL Listed for both field or factory installation

FEATURES

- UL 924 Listed, UL Listed and Classified to FTB9
- UL 1310 Certified, Output Class 2 Compliant
- Three mounting configurations available
- Long life high temperature recyclable Ni-Cad battery
- Galvanized steel case
- Dual-color TBTS test switch/charge indicator can be remote mounted up to 50 feet.
- For use with switched or unswitched fixtures
- Expanded functionality allows tests to be manually initiated or canceled by local switching controls.
- **5-Year Warranty.**
- Meets or exceeds all NEC, IBC, and Life Safety Code Emergency Lighting Requirements
- Suitable for use in Plenum and Damp Location fixtures
- RoHS Compliant



ILB CP20 HE SD

Constant Power Self Diagnostic Emergency LED Driver

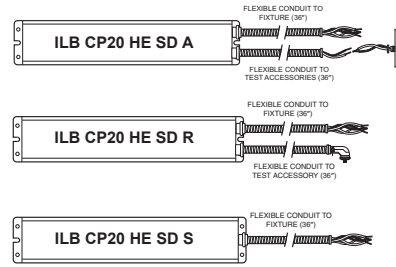
ORDERING GUIDE



Understanding Your IOTA Driver Model:

- ILB** = IOTA Emergency LED Driver
- CP**** = Constant Power Performance at the rated wattage
- HE** = High Efficiency for CA Title 20
- SD** = Self Test / Self Diagnostic

- A** (Dual Flex)
- R** (Dual Flex w/ Reflector Mount TBTS)
- S** (Single Flex)



ILB CP20 HE SD Sample Specification

Supply and install IOTA [Insert 20W HE model number] Constant Power Self Diagnostic emergency LED driver system as indicated on the plans. The emergency driver shall be designed for [Select "Internal" or "External"] mounting to the luminaire including a self-contained, high-temperature, sealed, maintenance-free nickel cadmium battery rated for a 10-year service life. The unit shall be provided complete with an illuminated push to test switch. 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 120 thru 277 VAC, 50/60 Hz and be UL Listed to Category Control Number (CCN) FTBR, Emergency Lighting and Power Equipment, and FTBV, Emergency Light-Emitting-Diode Drivers for field installation. Maximum input power of the emergency driver shall be 5.5 watts. 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 unit charger shall consist of a two-stage charging system which samples the battery in relation to its temperature, state of charge and input voltage fluctuations. The charger shall be current limited, temperature compensated, 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 80 to 85% 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 input shall be designed to automatically test the emergency lighting capability for no less than 30 seconds monthly and 90 minutes annually, and shall monitor battery charge and battery discharge current and load performance. A dual-color light-emitting LED shall be provided to indicate test results and charge status.

The emergency driver shall accommodate an LED load with a forward voltage requirement ranging from 20 to 60 VDC. 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 +/- 3%. 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 constant 20 watts 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 an electronic, AC-lockout circuit which will connect the battery when the AC circuit is activated, and an electronic brownout circuit which will enable a transfer to emergency operation when utility power dips below an acceptable level. Maximum remote mounting distance of the emergency driver shall be 50-feet.

Emergency Lumen Performance - ILB CP20 HE SD

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



Visit www.iotaengineering.com/cptools to access our on-line ILB CP performance calculator for additional performance data and other specification resources.



The **ILB CP20 HE SD** 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 TBTS LED will flash **GREEN** when charging and remain lit solid **GREEN** when fully charged and in the standby mode. If a problem is encountered during the test cycle, the TBTS will flash **RED**, according to the diagnostic codes shown here:

Charger Failure	1 Flash
Battery Failure	2 Flashes
Load Failure	3 Flashes

Manual testing

Manual testing can be initiated at any time by entering the following sequences through the **TBTS** or the local wall switch.

	ILB-CP-HE-SD MANUAL TESTING SEQUENCES	
	TBTS	WALL SWITCH 1 CYCLE = ON-OFF-ON OR OFF-ON-OFF
FUNCTIONAL TEST	PRESS AND HOLD	N/A
30-SECOND TEST	2 PRESSES	3 CYCLES
90-MINUTE TEST	3 PRESSES	4 CYCLES
CANCEL 90-MINUTE TEST	1 PRESS	2 CYCLES
CALIBRATE LOAD	4 PRESSES	N/A

Note: Wall Switch Testing not recommended for phase-dimming control applications

ACCESSORIES

TBMK T-Grid Mounting Kit

Use the TBMK mounting kit to remote mount flexed units within a grid ceiling. The ILB CP is secured to the TBMK bars which mount to the T-bars of the ceiling grid. The flexible conduit of the ILB CP connects to the fixture.

SK Strapping Kit

The strapping kit provides (2) straps that run through the mounting tabs of the ILB-CP for securing to a beam or column near the fixture. Overall strap length is 18".

Warranty: 5-Year Limited Warranty

Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx