

Certified in CA TITLE 20
Appliance Efficiency Database -
Battery Charger



DESCRIPTION

The **ILB-CP20-HE-SD** from IOTA Engineering is a UL Listed LED emergency driver for field and factory installation 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 patented Constant Power design of the **ILB-CP20-HE-SD** maintains the output wattage to the LED array even as the system voltage diminishes, resulting in a constant illumination level 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

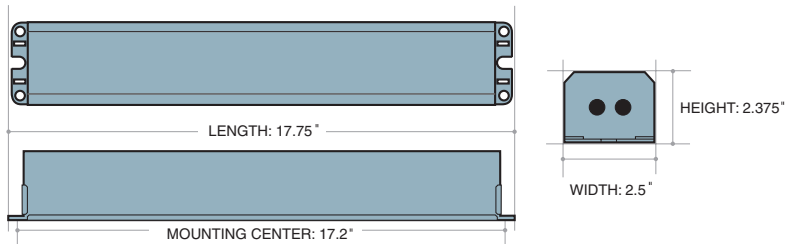
Input Voltage	(Universal) 120-277VAC, 50/60Hz
Input Rating (120V/277V).....	5.5 Watts (max)
Output Voltage ¹	20-60VDC Class 2 Compliant
Output Current	1.0A (@20VDC) - 0.3A (@60VDC)
Output Power	20 Watts (constant)
Max. AC Driver Output Current	5A _{dc}
Power Factor	≥ 0.85
Surge Protection	Meets ANSI/IEEE C62.41.2-2002
Emergency Operation	90 minutes
Operating Temp	0° to 55° C
THD	< 20%
Battery.....	High Temp Nickel-Cadmium 24 Hour Recharge 7-10 Year Life Expectancy
Weight	(dual flex -A, -R) 6.0 lbs. (single flex -S) 5.7 lbs.
Certifications	UL Listed for factory and field installation 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: _____

LED OPERATION:
20W LED Load @ 20-60 VDC nom.¹

OUTPUT:
20 Watts [Constant]

PRODUCT ADVANTAGES

- Satisfies the period testing requirements in accordance with NFPA 101
- High Efficiency Performance meets CA T20 battery charger efficiency standards
- Increased illumination output designed for elevated fixtures
- UL Listed for factory and field installation
- Remotely activate manual tests through your local switching controls.
- Patented Constant Power Design maintains illumination throughout the 90-minute runtime with no light degradation
- Two-wire universal AC input
- Self-sensing output voltage operates various product types reducing product SKUs for emergency options.

FEATURES

- UL 924 Listed for U.S. and Canada
- UL 1310 Certified, Output Class 2 Compliant
- Three mounting configurations available
- Long-life, maintenance-free, high temperature recyclable Ni-Cad battery
- Galvanized steel case
- Single-piece TBTS test switch and charge indicator can be remote-mounted up to 50 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
- IC Rated and suitable for use in plenum and damp location fixtures
- RoHS Compliant



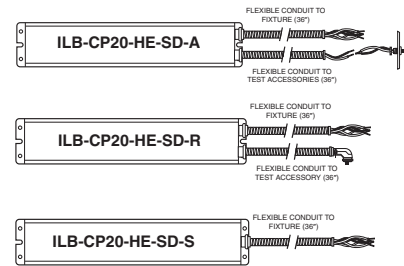
ILB-CP20-HE-SD

CONSTANT POWER SELF-DIAGNOSTIC LED EMERGENCY DRIVER

ORDERING GUIDE



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



ILB-CP20-HE-SD SAMPLE SPECIFICATION

Supply and install IOTA [Insert 20W model number] Constant Power emergency LED driver system as indicated on the plans. The emergency driver shall be designed for 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 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 20 to 60VDC. 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 constant 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 online 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 charge indicator (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 below:

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

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

FUNCTIONAL TEST	TBTS	WALL SWITCH
		1 CYCLE - ON-OFF-ON OR OFF-ON-OFF
30-SECOND TEST	PRESS AND HOLD	N/A
90-MINUTE TEST	2 PRESSES	3 CYCLES
CANCEL 90-MINUTE TEST	3 PRESSES	4 CYCLES
CALIBRATE LOAD	1 PRESS	2 CYCLES
	4 PRESSES	N/A

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

MOUNTING ACCESSORIES

Refer to www.iotaengineering.com/maccessory.htm for further details on mounting accessories.

TBMK (T-Grid Mounting Kit)

Use the TBMK mounting kit to remote-mount flexed units or RME1 within a grid ceiling. The unit is secured to the bars of the TBMK mounting clips. The bars then mount to the T-bars of the ceiling grid. The unit connects to the fixture via flexible conduit.

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".