

LED

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

LED OPERATION:
 10W LED Load @ 10-60 VDC nom.¹

OUTPUT:
 10 Watts [Constant]

PRODUCT ADVANTAGES

- Satisfies the periodic testing requirements in accordance with NFPA 101
- Internal self-diagnostic circuitry tests battery, charger, and load performance
- High Efficiency Performance meets CA T20 battery charger efficiency standards
- UL Listed for factory and field installation
- 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
- Six mounting configurations available
- Long life high temperature recyclable Ni-Cad battery
- Galvanized steel case
- Includes dual-color TBTS test switch/charge indicator
- For use with switched or unswitched fixtures
- Expanded functionality allows tests to be manually initiated or canceled by local switching controls
- **5-Year Warranty.** See Warranty Page for details.
- Meets or exceeds all NEC, IBC, and Life Safety Code Emergency Lighting Requirements
- Rated for use in Plenum, Damp Location, Recessed Type IC, and Enclosed and Gasketed Luminaires
- RoHS Compliant

DESCRIPTION

The **ILB-CP10-HE-SD** from IOTA Engineering is a UL Listed self-diagnostic 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-CP10-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. The unit will operate an LED array load at **10 watts** with **constant power** at a rated output voltage of **10V-60V**. The Constant Power design of the **ILB-CP10-HE-SD** maintains the output wattage to the LED array even as the system voltage diminishes. 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-CP10-HE-SD** features high-efficiency performance and is certified in the CA Title 20 Appliance Efficiency Database.

SPECIFICATIONS

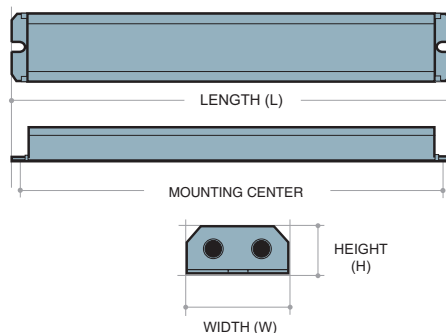
| | |
|-------------------------------------|---|
| Input Voltage | (Universal) 120-277VAC, 50/60Hz |
| Input Rating (120V/277V)..... | 3.7 Watts (max) |
| Output Voltage ¹ | 10-60VDC Class 2 Compliant |
| Output Current | 1.0A (@10VDC) - 0.16A (@60VDC) |
| Output Power | 10 Watts (constant) |
| Max. AC Driver Output Current | 3Adc |
| Power Factor | ≥ 0.9 at 120VAC ² |
| 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..... | (-A, -R) 4.0 lbs. (-B, -TM) 3.5 lbs. (-J, -R-J) 3.75 lbs. |
| Certifications | cUL 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
²PF ≥ 0.85 at 277VAC



DIMENSIONS

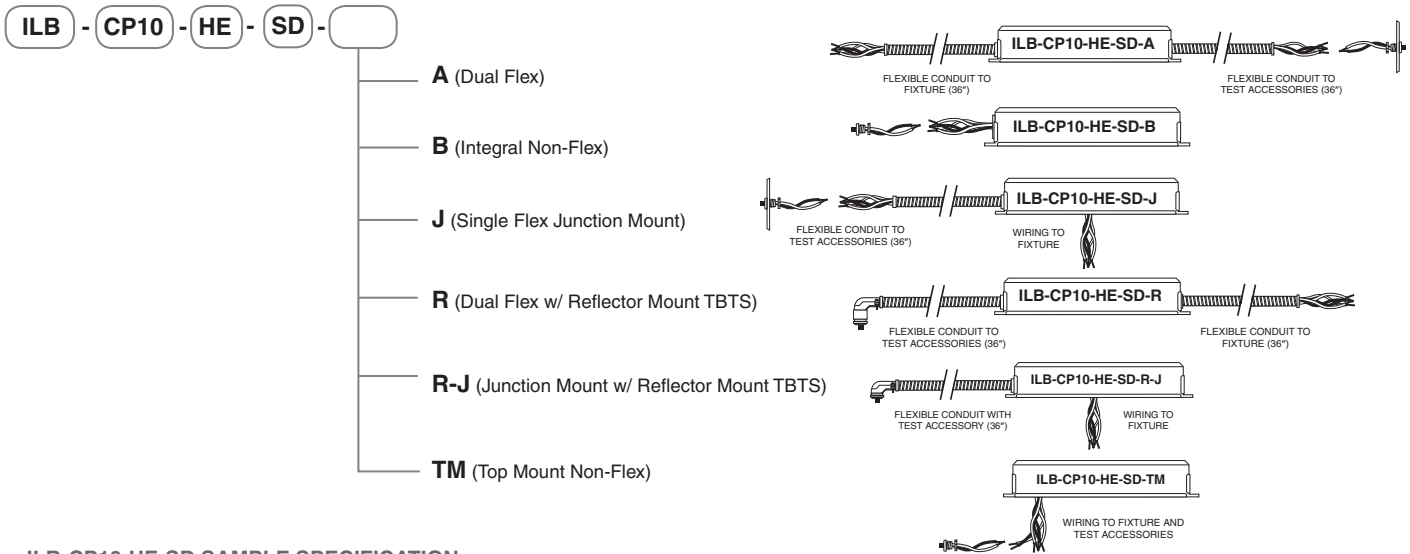
- “A” Configuration
(L) 15.37” x (W) 2.24” x (H) 1.3”
(mounting center 15.0”)
- “B” Configuration
(L) 15.0” x (W) 2.2” x (H) 1.2”
(mounting center 14.64”)
- “J” and “R-J” Configuration
(L) 15.37” x (W) 2.24” x (H) 1.3”
(mounting center 15.0”)
- “TM” Configuration
(L) 15.0” x (W) 2.2” x (H) 1.2”
(mounting center 14.64”)



ILB-CP10-HE-SD

CONSTANT POWER SELF-DIAGNOSTIC LED EMERGENCY DRIVER

ORDERING GUIDE



ILB-CP10-HE-SD SAMPLE SPECIFICATION

Supply and install IOTA [Insert 10W 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 3.7 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 10 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 10 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-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 |



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



The **ILB-CP10-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 below:

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

MOUNTING ACCESSORIES

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

○ TMK-80 Top Mount Cover

When top-mounting "B" configuration ILB-CP units, the TMK-80 is used to cover the exposed wiring that goes from the battery pack into the fixture.

○ RME1 Remote Mounting Enclosure

The RME1 enclosure accepts the ILB-CP unit for remote mounting. The ILB-CP is secured inside and wiring is routed through the 2 ft. of flexible conduit for connecting to the fixture. Can be used in conjunction with the TBMK for grid ceiling mounting.

○ 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 via mounting clips. The bars then mount to the T-bars of the ceiling grid. The unit connects to the fixture via flexible conduit.