Thomas Research Products

LBU10-M Series

Emergency LED Driver

Rev 4-6-18

Intelligent Device ECOSYSTEM dynamic

Electrical Specifications

Output Power:	10W (constant)
Input Power:	4.2 W (Max)
Input Voltage Range:	120-277 Vac (Universal)
Frequency:	50 / 60 Hz
Output Voltage:	20-56 VDC (Class 2 Compliant)
Output Current:	0.50 A @ 20Vdc 0.17 A @ 56Vdc
Emergency Operation:	90 Minutes (Min)
Recharge Time:	24 Hrs (Max)
Max AC Driver Output Current	1.6A
Battery:	28.8Wh, 9.6V, 200mA charging current
Battery Type:	High temperature Nickel-Cadmium
Battery Life:	7-10 Yrs

Environmental Specifications

Operating Temperature:	0ºC to +55 ºC (Ambient)
Case Material:	Steel
Weight:	3.4 lbs (1.54 kg)

- UL Listed for factory and field installation
- Constant 10W design provides emergency lighting without loss of lumen output
- Provides a minimum of 90 minutes of emergency lighting
- Suitable for Dry & Damp Locations
- Suitable for use in sealed or gasketed fixtures
- Meets California's Title 20 Energy Efficiency requirements for battery chargers
- Constructed of durable galvanized steel with a whip end
- Can be used with normally-on, normally-off or switched fixtures
- Auto-sensing output voltage full Vf range (20-56V)
- 2-wire input simplify wiring (120-277 VAC, 50/60Hz)
- Electronic AC lockout and low voltage disconnect (LVD) circuit
- Includes 2-wire test switch and LED charging indicator
- Remote test switch/charge indicator module fits in a single-gang box, available separately
- 5 year warranty

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Application

The LBU10-M is a universal input (120-277V) emergency LED battery pack that works with an AC LED driver to allow an LED lighting load to be used in both normal and emergency operation. When normal AC power is lost, the LBU10-M operates to provide 10 watts of constant emergency power at a rated output voltage of 20-56Vdc. The constant power design provides backup for a minimum of 90 minutes with no loss of emergency lumen output. When used with emergency-only LED fixtures, no AC driver is needed. The UL924 Listed allows for both field and factory installations of suitable LED loads including LED luminaires, DC voltage driven LED replacements for fluorescent lamps and others.

Construction

The LBU10-M consists of a compact case constructed of durable galvanized steel. The unit contains a solid-state charger with automatic transfer circuit, a 2-wire test switch and LED charging indicator light, and a high-temperature, Nickel-Cadmium battery.

Part	Model	Current Out *(mA ±5%)*	Voltage Out *(Vdc)*	Max Power *(W)*	Wire Entry
93057537	LBU10-M		20-56	10	End

Class 2: US/Canada

Accessories

Part	Model	Description
93080406	PLRTS	Remote Test Switch/Indicator

PLRTS is an optional test switch that includes a wall plate for a single gang J-box. Only one LBU series emergency driver can be wired to each PLRTS switch at a time. Remote switch is intended to be used in place of the internal switch supplied with the driver. Use Class 2 wiring methods for installing switch and wiring. Switch wire length can be 50ft maximum from the emergency driver.

Safety/Compliance	Standard
UL	UL924 Damp Location Listed for field installation, UL1310 for UL Class 2
NFPA	NFPA 101 (Life Safety Code), NFPA 70 (National Electrical Code)
CSA	C22.2 No. 141 Canadian Life Safety Standard
CEC	CEC-400-2014-009-CMF Battery Charger Efficiency Standard

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HUBBELL

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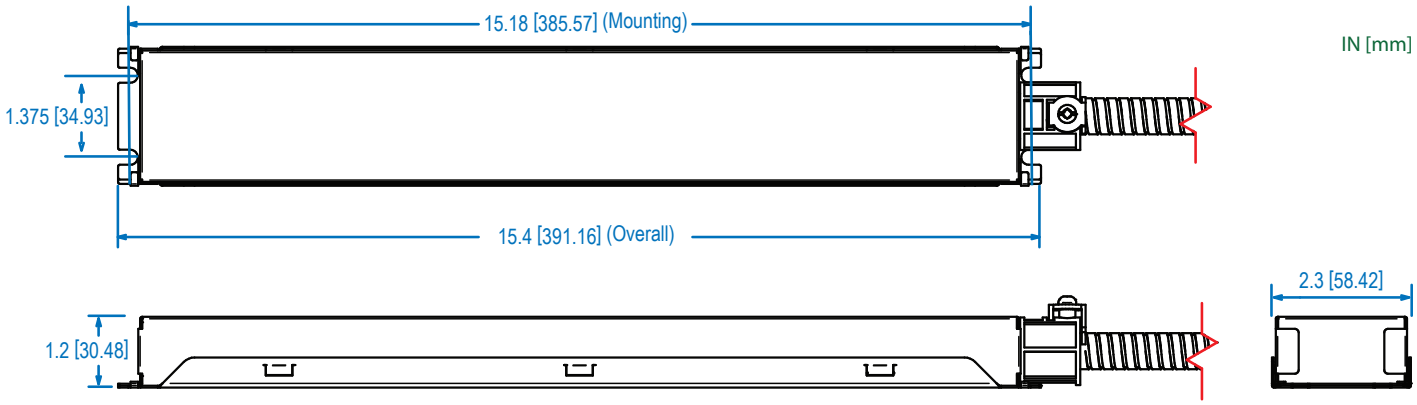
Dimensions



Nominal Dimensions: 15.4" L x 2.3" W x 1.2" H

Illumination

The LBU10-M will operate an LED load, that has a power rating of 10 watts or greater, for a minimum of 90 minutes. Using the LED load's efficacy in lm/w, as published by the Design Lights Consortium website (http://www.designlights.org), EnergyStar - Certified Products - product finder website (http://www.energystar.gov/productfinder) or given by the luminaire manufacturer on product catalog specification sheets, lumen output can be calculated by multiplying by the LBU10-M output power (10w).

Specification

Operation

The LBU10-M emergency LED battery pack is designed to provide a minimum of 90 minutes of emergency lighting to commercial or industrial LED fixtures. Operation is fully automatic. A solid-state charger maintains the battery at full charge as long as utility power is present. Upon interruption of utility power, the unit will activate and the automatic transfer circuit will switch to the emergency mode, keeping the LED load illuminated for a minimum of 90 minutes. Lumen output during emergency mode is estimated as described below. Upon restoration of utility power, the LBU10-M emergency battery pack will return to the charging mode. Full battery recharge is accomplished within 24 hours. A test switch and LED status indicator light is provided for testing and monitoring of unit performance.

Estimate the egress lighting illumination levels as follows:

A) Find the efficacy of the LED load, which will be found in the Design Lights Consortium database. This number will be given in lumens per watt (lm/w).

B) Lumens can be calculated by multiplying the output power of the Emergency LED Driver (10W) by the efficacy of the LED load. In many cases the actual lumen output in emergency mode will be greater than this calculation yields; however it will provide a good estimate for beginning the lighting design of the system.

Lumens In Emergency Mode = Lumens Per Watt of Fixture * Output Power of Chosen Product

(LUMENS) = (LM/W) * W

C) Using the results of this calculation and industry standard lighting design tools, calculate the anticipated illumination levels in the path of egress.

NOTE: After installation, it will be necessary to measure the egress lighting illumination levels to ensure compliance with national, state and local code requirements.

Installation

The LBU10-M emergency battery pack does not affect normal LED fixture operation and may be used with either switched or unswitched fixtures. If a switched fixture is used, an unswitched hot lead must be connected to the emergency ballast. The emergency battery packs must be fed from the same branch circuit as the AC ballast. Due to its steel construction, the LBU10-M is designed to be mounted outside of the LED fixture. The LBU10-M emergency battery pack is suitable for use in damp locations where the ambient temperature is between 0°C (32°F) and 55°C (131°F). It is not suitable for installation in heated air outlet fixtures and wet or hazardous location fixtures.

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