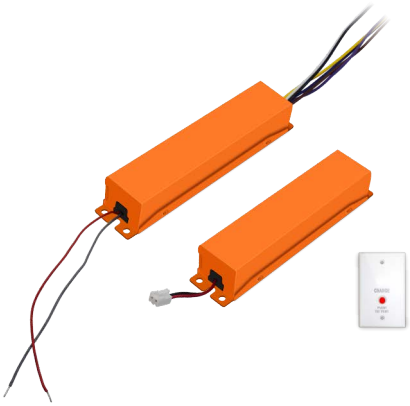
# Emergency LED Driver

## Low Voltage | DC Wiring | Gen 4

This innovative emergency LED driver delivers reliable emergency power for any LED fixture, providing 8W output for 90+ minutes runtime during outages. Its compact, split-design—separating the Control board and battery pack—makes it one of the most capable and versatile solutions on the market.



DC Wiring
The EM-S emergency driver powers LED modules directly, bypassing the standard driver to ensure continuous illumination. With flexible wiring for direct LED module connection, it's more flexible, ideally to install in a narrow profile housing or limited compartment space.

## Feature

### ☑ Built for Reliability

- Field-installable (UL Listed for US & Canada)
- Energy-efficient charger (CEC Title 20 compliant) *
- Premium battery backup – 90+ minutes runtime during outages*
- Backed by a 5-Year Limited Warranty*

### ☑ Seamless Compatibility

- Compact, split-design, flexible to built-in any narrow housing
- Supports most LED luminaires (Up to 100W)
- Universal input voltage (100–277V AC)
- Field installation or Pre-install service available for hassle-free installation

### ☑ Smarter Features

Automatic self-diagnostic testing with monthly, semi-annual, and annual checkups.

### ☑ More Intuitive

Enhanced indicators for real-time working status and issue notifications, making it easier to monitor performance.

CERTIFIED

BC
CEC Compliance
California Energy Commission
Title 20 efficiency standards

QUICK SHIP

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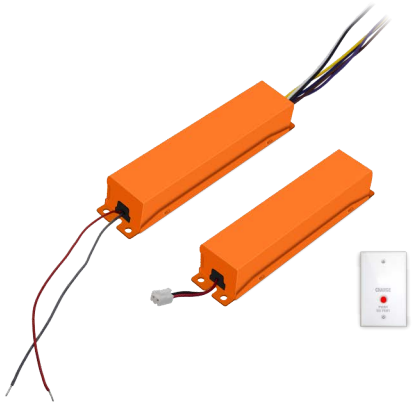
## SPECIFICATION



Note:

- EM-S powers LED modules directly, bypassing the standard driver.
- Power of LED fixture ⩾Power of emergency driver.
- LED Driver Output Current: 4A Max

### EM-S0854-RBN

**Output Power**
8 Watts

**Output Voltage**
20-54V DC

**Input Current**
70 mA Max (120V)

**Input Power**
4.5 Watts Max (120V)

**Input Voltage**
100-277VAC, 50-60Hz

**Emergency Operation**
⩾90 Minutes

**Standby Power**
＜0.35W (120V)

**Operating Temp**
0℃ to 50℃

**Battery**
LiFePo4

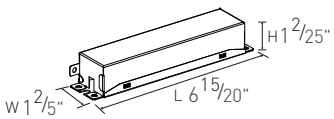
**Recharge**
24 Hrs

**Luminaire Load Power**
100W (Max)

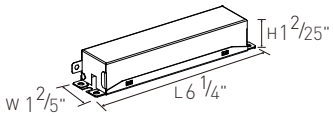
**Certificate**
UL , CEC

**Output Class**
UL LELV (Output protection self-resetting)

## DIMENSIONS

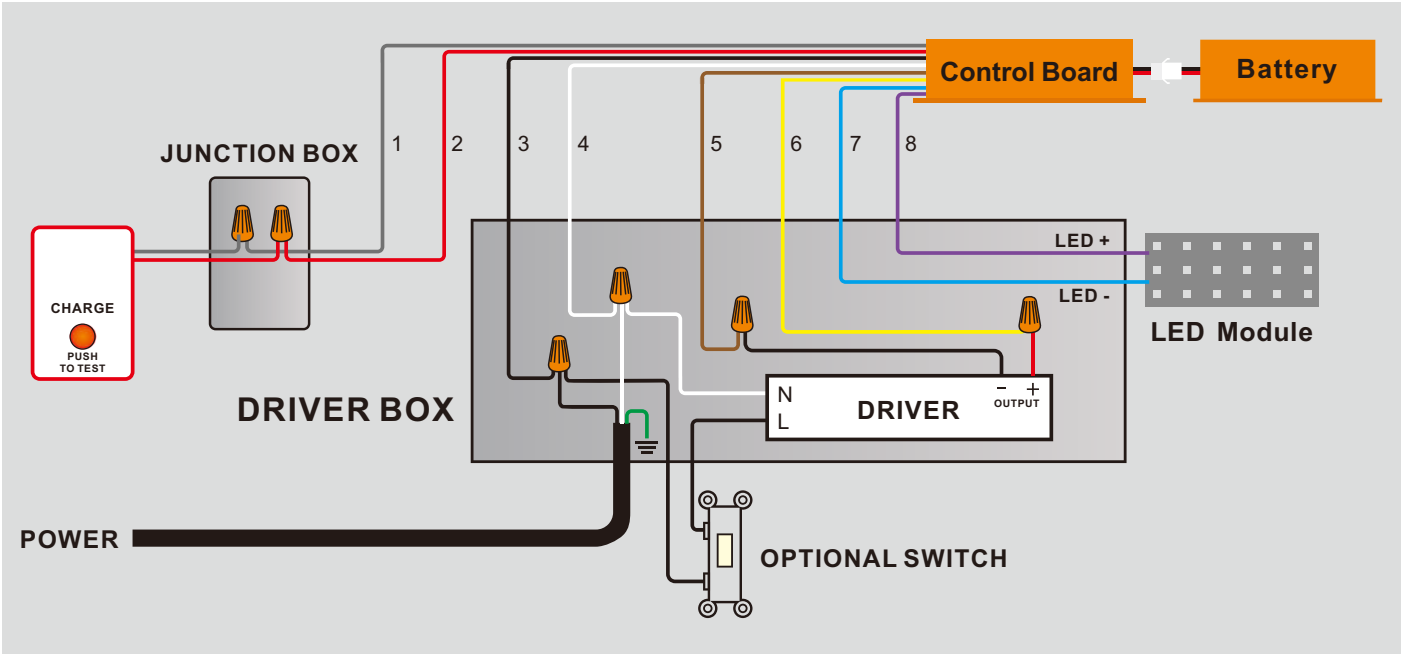



Control Board




Battery Pack

## WIRING DIAGRAM



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## APPLICATION

The EM-S series is UL Listed for factory or field installation and allows the same LED luminaire to be used for normal and emergency operations. It combines a maintenance-free LiFePO4 battery, charger and circuitry in 2 rugged metal enclosures. The EM-S is suitable for indoor and damp locations.

## COMPACT & SPACE-SAVING DESIGN

The EM-S series embodies innovative Very Small Form Factor (VSFF) design, setting a new benchmark for space efficiency in emergency lighting solutions. With its ultra-compact footprint, the EM-S stands out as one of the smallest 8-watt emergency LED drivers available on the market today.

This streamlined design ensures seamless integration into tight or confined spaces, making it ideal for applications where minimal obstruction and maximum discretion are key—such as in modern architectural linear lighting, or low-profile led fixtures. Despite its small size, the EM-S delivers full 8W power output, proving that superior performance doesn't require bulky hardware.

## OPERATION

When AC power fails, the EM-S immediately switches to the emergency mode, operating the LEDs at a reduced lumen output for a minimum of 90 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode.

## INSTALLATION

The EM-S does not affect normal fixture operation. For optimal performance and longevity, avoid installing the EM-S in environments where ambient temperatures may drop below 0°C (32°F). Prolonged exposure to sub-zero conditions may affect battery efficiency and overall system reliability. It is recommend to mount the control board and battery pack inside the LED luminaire, then connect together and wire.

## CODE-REQUIRED TESTING

More secure, more rigorous than standard requirements.

| Automatic Detection Modes | |
|---|---|
| Power-On Self-Test | Trigger: Upon power connection |
| | Duration: Max. 2 minutes |
| Monthly Auto-Test | Trigger: Day 30 (after light OFF + 6-hour delay) |
| | Duration: 35 seconds |
| Semi-Annual Auto-Test | Trigger: Day 180 (after light OFF + 6-hour delay) |
| | Duration: 30 minutes |
| Annual Auto-Test | Trigger: Day 365 (after light OFF + 6-hour delay) |
| | Duration: 90 minutes |

Key Notes:

All time-based tests initiate 6 hours after the fixture is turned OFF;
Test cycles are calculated from the last power-on date;
"Day 30/180/365" refers to cumulative operational days.

| Manual Button Test Operations |
|---|
| Single Press (1×)<br>Action: Initiates 35-second self-test |
| Double Press (2×)<br>Action: Initiates 30-minute self-test |
| Triple Press (3×)<br>Action: Initiates 90-minute self-test |
| Long Press for 3 seconds<br>Action: Cancels ongoing self-test |
| Long Press for 10 seconds<br>Action: Forces system reset & reboot |

Safety Notice:

» Interrupting tests may require manual restart of the detection cycle.