

Emergency LED Driver

Low Voltage | DC Wiring | Gen 4



OKT's 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

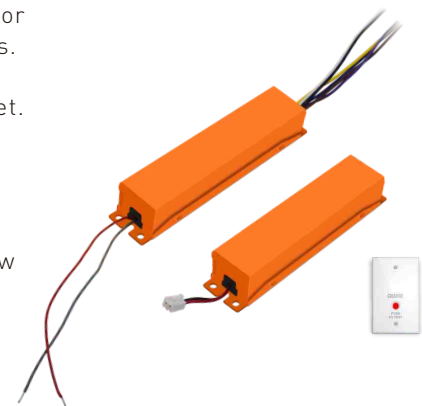
- Compact, split-design, flexible to built-in any narrow housing
- Supports most LED luminaires (Up to 100W)
- Universal input voltage (100–277V AC)
- Field installation or Pre-install service available for hassle-free installation

✓ 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.

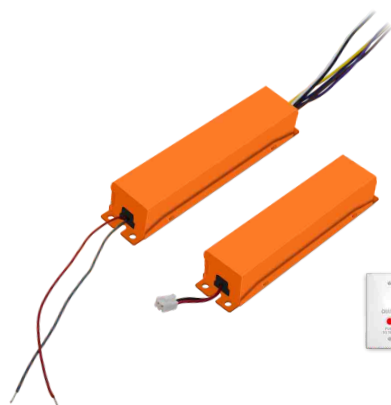


Emergency LED Driver

Low Voltage | DC Wiring | Gen 4



SPECIFICATION



It may be remotely mounted up to 20ft 18#AWG from the emergency driver.

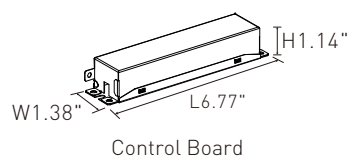
EM-S0854-RBN

Output Power 8 Watts	Operating Temp 0°C to 50°C
Output Voltage 20-54V DC	Battery LiFePo4
Input Current 70 mA Max (120V)	Recharge 24 Hrs
Input Power 4.5 Watts Max (120V)	Luminaire Load Power 100W (Max)
Input Voltage 100-277VAC, 50-60Hz	Certificate UL , CEC
Emergency Operation ≥90 Minutes	Output Class UL LELV (Output protection self-resetting)
Standby Power <0.35W (120V)	

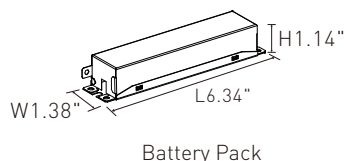
Note:

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

DIMENSIONS

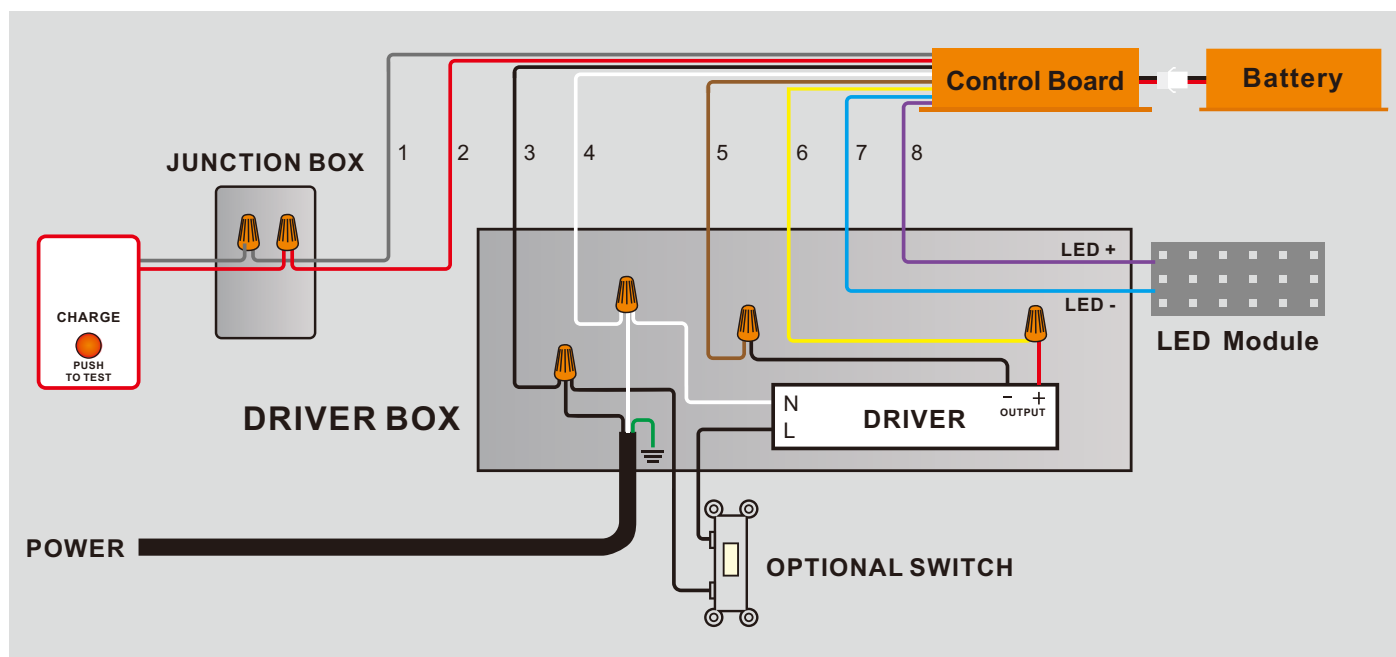


Control Board



Battery Pack

WIRING DIAGRAM



Emergency LED Driver

Low Voltage | DC Wiring | Gen 4



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 OKT’s 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×)	Action: Initiates 35-second self-test
Double Press (2×)	Action: Initiates 30-minute self-test
Triple Press (3×)	Action: Initiates 90-minute self-test
Long Press for 3 seconds	Action: Cancels ongoing self-test
Long Press for 10 seconds	Action: Forces system reset & reboot

Safety Notice:

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