HIGH VOLTAGE VERSION

LED EMERGENCY DRIVER
Installation Instructions

⚠ IMPORTANT SAFEGUARDS

1. To prevent high voltage from being present on the purple and blue output leads prior to installation. The LED emergency driver connector must be open. Join the unit connector after it has been installed and before the AC power is supplied.
2. Make sure all connections are in accordance with the National Electrical Code or any local regulations.
3. To reduce the risk of electric shock, disconnect both normal and auxiliary power supplies and unit connector of the LED emergency driver before servicing.
4. An AC power source (100-277VAC, 50/60Hz) ahead of any wall switch is required to provide battery charging current.
5. Do not install near gas or electric heaters.
6. This product is for use with indoor or damp locations where ambient temperature is (0℃ to 50℃). It is not suitable for wet. Do not use in heated air outlets, hazardous locations and outdoor.
7. For use with grounded, UL Listed, damp location rated, indoor fixtures and case should be grounding.
8. The LED emergency drivers are intended for ordinary locations and for permanent installation into one or more emergency luminaires.
9. This LED emergency driver has not been investigated for use in an air handling fixture.
10. This is a sealed unit. Integral battery is not replaceable. Replace entire unit when necessary.
11. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
12. Servicing should be performed by qualified service personnel.
13. LED emergency driver should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel. Indicator light should be mounted can see location.
14. LED emergency driver is only use for LED lighting emergency backup. Do not use it for other than its intended use.
15. The weight of the LED emergency driver should be considered before installation.
16. CAUTION - This emergency battery pack for use LED lamp or LED fixture. Suitable voltage of LED fixture is AC100-120V.

SAVE THESE INSTRUCTIONS

This product contains a rechargeable lithiumion battery.

THE BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY TO PREVENT FIRE.

CAUTION: Before installing, make certain the A.C.power is off and the LED lamp emergency backup unit connector is disconnected.

NOTE : Make sure that the necessary branch circuit wiring is available. An unswitched source of power is required. The unswitched and switched power source must be fed from the same branch circuit.

OPERATION

During normal operation, AC power is supplied to the AC driver through the LED emergency driver and charged the battery. The AC input line voltage (100-277V AC) of LED emergency driver automatically sets the output voltage during emergency mode.

When AC power fails, the LED emergency driver automatically switches to emergency mode, keeping the load illuminated for a minimum of 90 minutes. When AC power is restored, the LED emergency driver returns to charging mode. The LED emergency driver consists of a low-battery voltage disconnect which is reset when AC power is restored.

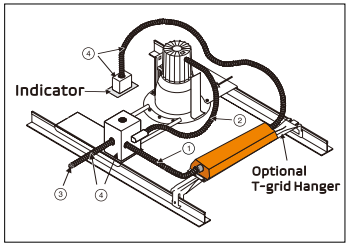
INSTALLING THE EMERGENCY DRIVER

- The LED emergency driver will be located between the AC power sources and the AC driver as shown in wiring diagram section of instructions.
- The LED emergency driver may be installed in close proximity to the fixture or remote from the fixture.
- The maximum remote distance using 16AWG wire is 250ft. Contact the factory for more information.
- The AC power is fed to the LED emergency driver.
- The AC driver receives power from the LED emergency driver. Identify the output wires of the LED emergency driver by the presence of the orange and blue leads.

MOUNTING

Method 1: Mount the LED emergency driver outside the LED luminaire with flexible conduct.
Method 2: Mount the LED emergency driver inside the LED luminaire without flexible conduct.
Method 3: Optional T-grid Hanger

The T-grid hanger is safer to mount the LED emergency driver on the T-grid ceiling. It is sold separately and is available from the factory as an accessory kit. Call your local distributor or the factory for complete information.



①-Flexible conduit (supplied) to connect AC driver wires.
②-Existing conduit to run existing wires to lamp holder.
③-AC line in.
④-Conduit and junction box (not supplied).

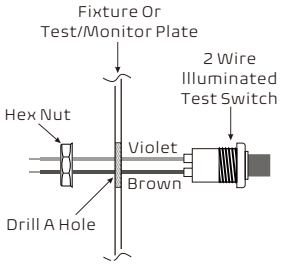
CERTIFIED

CEC Compliance
California Energy Commission
Title 20 efficiency standards

INSTALLING THE ILLUMINATED TEST SWITCH

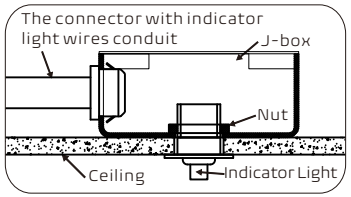
Standard Indicator:

- Mount the supplied indicator in a location that is visible and accessible by maintenance personnel.
- The indicator mounts through a hole which may need to be made in the luminaire or could come pre-punched by the luminaire supplier.
- Connect the indicator per wiring diagrams provided on these instructions.
- If wired correctly, the indicator light should be ON when AC power is supplied to the fixture indicating that the unit is charging.



Optional Recessed Indicator:

- The recessed indicator is only use for LED emergency driver with dual-flex wiring.
- Install the indicator to the opening hole onto the ceiling with the nut.
- Connect the indicator per wiring diagrams provided on these instructions.
- Closing the J-box, then finish.



MAINTENANCE

Although no routine maintenance is required to keep the LED emergency driver functional, it should be checked periodically to ensure it is working.
The following schedule is recommended:

- Visually inspect the charging indicator light monthly. It should be illuminated.
- Test the emergency operation of the fixture at 30-day intervals for a minimum of 30 seconds. The lamp should operate at illumination.
- Conduct a 90-minute discharge test once a year. The lamp should operate at illumination for at least 90 minutes.
- This red indicator flashes or off, the emergency power supply is abnormal.
- If the emergency power supply is abnormal after the first installed, please charge for 2 hours and then check if it is normal.

JOIN CONNECTOR & APPLY POWER

- After installation is completed, join the LED emergency driver's connector and apply AC power.
- At this point, power should be connected to both the AC driver and the LED emergency driver. The charging indicator light should be illuminated indicating the battery is charging.
- At short-term discharge test may be conducted after the LED emergency driver has been charging for 2 hours. Please charge for 24 hours before conducting a long term discharge test. Refer to operation.

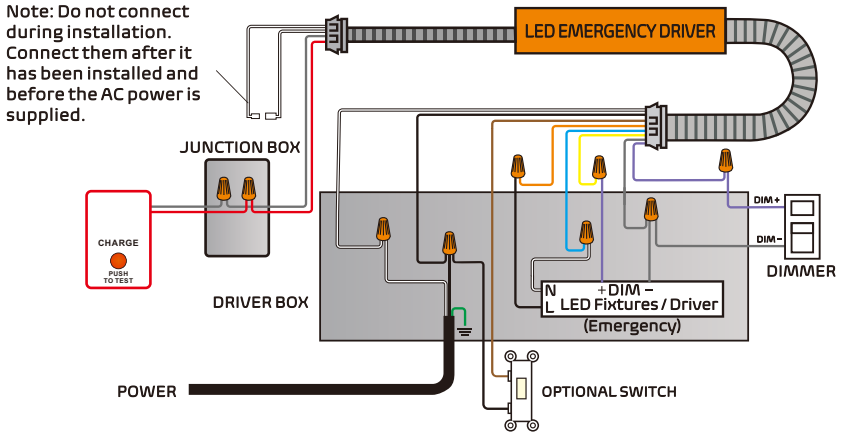
WIRING THE EMERGENCY DRIVER

Select the appropriate wiring diagram to connect the emergency driver to the AC driver and LED load.

1. Wiring If Power Of Luminaire > Power Of LED Emergency Driver.

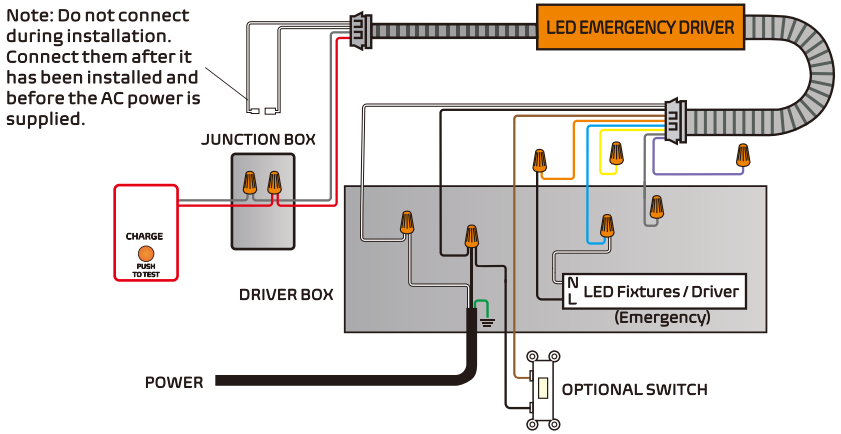
Ensure the LED load's rated power is greater than the power output of this emergency LED driver

- 8W: Compatible up to 60w LED luminaire with internal or external driver which has 0-10V dimming
- 25W: Compatible up to 220w LED luminaire with internal or external driver which has 0-10V dimming
  Minimum dim-down power of LED luminaire ≤ the power output of this emergency LED driver.
- It must connect 0-10V dimming wires.



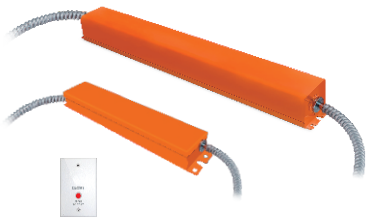
2. Wiring If Power Of Luminaire ≤power Of Led Emergency Driver.

Ensure the LED load's rated power is less than or equal to the power output of this emergency LED driver
No need to connect 0-10V dimming wires



EMERGENCY
LED DRIVERS

Low Voltage / High Voltage Versions



FREQUENTLY ASKED QUESTIONS

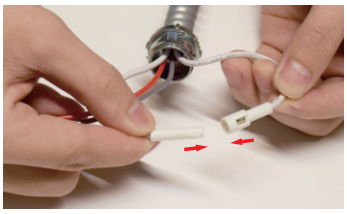
Q1 Why does the LED emergency driver 's red indicator flash (once a second)?

It is operating incorrectly.
The LED emergency driver has self-testing function, and the indicator flashing once a second means "incorrect wiring" or "low battery".
First, please check if it's wired correctly according to the wiring diagram;
Second, if the wiring is correct, please charge for 10 hours.
If it's still flashing after those 2 steps, please contact the factory for further consulting.

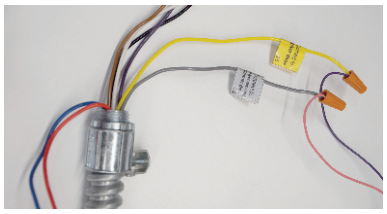
Q2 Why does the LED emergency driver's red indicator flash (twice a second)?

It is operating incorrectly.
The LED emergency driver has a self-testing function, and the indicator flashing twice a second means "incorrect wiring". Please double check if it's wired correctly according to the wiring diagram, by following :

- Check whether the two white battery wires are connected together.



- Check whether the two dimming wires are connected correctly if the high power version (EM-H series) .



- If it's still flashing with correct wiring, please contact factory for further consulting.

Q3 Why is the LED emergency driver's red indicator off?

It means "abnormal".
Reason 1: Main power not connected;
Reason 2: Incorrect wiring
Please double check whether the main power and wiring it is correct. If it's still off, please contact factory for further consulting.

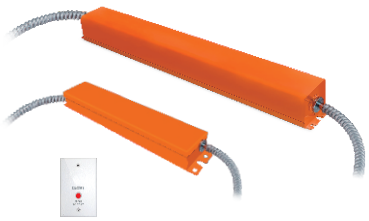
Q4 Why does the LED emergency driver work less than 90 minutes?

There are 3 reasons.
First, it happens when the LED emergency driver is not fully charged. Please ensure enough charging time, 24 hours for 8W and 36 hours for 25w.
Second, it happens in high power version (EM-H when the emergency power is more than rated power).
Third, defective battery, please contact factory for further consulting.

Q5 Why the LED luminaire flashes for a few seconds after wired to LED emergency driver?

It is operating correctly.
The LED emergency driver is conducting its first self-testing function once wired and powered on, so it will automatically disconnect the main power and test.

EMERGENCY
LED DRIVERS
Low Voltage / High Voltage Versions



FREQUENTLY ASKED QUESTIONS

Q6 Why does the LED luminaire flash “off” and “on” with low brightness and then “off” and on at 100% brightness after being connected to the high voltage LED emergency driver?

It is operating correctly.
This high voltage LED emergency driver has 0-10V dimming function and it will conduct first self-testing once wired and powered on.
During self-testing, the battery takes the following actions: Disconnect the main power- LED emergency driver works and dims down the LED luminaire -Connect the main power.

Q7 Why every month does the LED luminaire flash “off” and “on” with low brightness and then “off” and on at 100% brightness after being connected to the high voltage LED emergency driver?

It is operating correctly.
The LED emergency driver conducts MONTHLY self-testing and it has 0-10V dimming function.
Here are the self-testing steps: Disconnect the main power- LED emergency driver works and dims down the LED luminaire -Connect the main power.

Q8 Why does the LED luminaire turn on and then off in emergency mode for an instant?

It happens when the LED emergency driver wattage is too low and it can’t power the high wattage LED luminaire.

Recommended compatibility based on driver wattage:

Items for LED emergency driver	Compatible LED Luminaire
Low Voltage 8W	Up to 100W LED luminaire with external driver
Low Voltage 25W	Up to 300W LED luminaire with external driver
High Voltage 8W	**Situation 1) Without 0-10V dimming function** – Compatible for ≤8W LED luminaire with internal driver. **Situation 2) With 0-10V dimming function** -Compatible for up to 100w LED luminaire with internal or external driver. -Minimum Dim-down Power≤ Output Power of LED emergency driver (e.g: 60W LED panel, 10%~100% dimming range, and the minimum dim-down power is 6W. It can work since it is less than 8W LED emergency driver) .
High Voltage 25W	**Situation 1) Without 0-10V dimming function** – Compatible for ≤25W LED luminaire with internal driver. **Situation 2) with 0-10V dimming function** -Compatible for up to 300w LED luminaire with internal or external driver. -Minimum Dim-down Power≤ Output Power of LED emergency Driver. (e.g: 200W LED highbay, 10%~100% dimming range, and the minimum dim-down power is 20W. It can work since it is less than 25W LED emergency driver).