

**H3 Group Inc. 1-800-967 5573**  
LED Emergency Conversion Power Pack  
For Field or Factory Installation  
**LCP25DF / EMP25TFF2 / LEDRV25**



## INSTALLATION INSTRUCTIONS

### IMPORTANT SAFEGUARDS

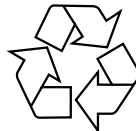
### READ AND FOLLOW ALL SAFETY INSTRUCTIONS

When using electrical equipment, basic safety precautions including the following:

1. To prevent high voltage being present on yellow and orange output leads prior to installation, converter connector must be open. Do not join converter connector (wht/blk wires) until installation is complete and AC power is supplied to the emergency driver.
2. This product is for use with an LED lighting load and supplies up to 25 Watts of constant power with output voltage between 20 and 50 VDC in emergency mode for a minimum of 90 Minutes.
3. All connections must be in accordance with the National Electric Code or Canadian Electric Code and any local regulations.
4. To reduce the risk of electric shock, disconnect both normal and emergency power supplies and converter connector of the emergency driver before servicing.
5. U.L. Listed for field or factory installation.
6. Suitable for use in damp locations with ambient temperature between 10° and 50° C.  
Not suitable for heated air outlets and wet or hazardous locations.
7. An unswitched power source of 120 - 277 VAC, 50/60 Hz. required.
8. Do not install near gas or electric heaters.
9. Do not attempt to service the battery. Battery is sealed and not field replaceable.  
Contact manufacturer for service.
10. Use of accessory equipment not recommended by manufacturer may cause unsafe condition.
11. Do not use this product for other than intended use.
12. Servicing should be performed by qualified service personnel.
13. Apply only to LED driver with output current less than 5 Amps.
14. Equipment should be mounted in locations and at heights  
where it will not be subject to tampering by unauthorized personnel.

## SAVE THESE INSTRUCTIONS

Contains LiFePO4  
rechargeable battery.  
Must be recycled or  
disposed of properly.



# LED Luminaire Evaluation

This product is suitable for field installation with suitable LED loads including LED luminaires, DC voltage driven LED replacements for fluorescent lamps and others.

There are 4 checks to determine if your luminaire is eligible for field installation.

1. Ensure the LED load's rated power is greater than or equal to the power output of this emergency LED driver.  
This is to ensure that the emergency product will not produce more power than the LED load can handle, thus ensuring that the LED load will not be damaged when the system is in the emergency mode.
2. Verify that the forward voltage of the luminaire's LED array is within the limits of this emergency LED driver. The forward voltage of the LED array is commonly designated as  $V_f$  and should be found on the luminaire's markings, in the luminaire specifications, or imprinted directly on the LED arrays. If multiple LED arrays are to be driven, verify that the total forward voltage is within the limits of this product. Using a voltage meter, it may be possible to directly measure the voltage across the LED arrays when operating from the AC driver.
3. Ensure the output current of the LED driver does not exceed 5.0 Amps. This is the current into the blue wire.
4. Ensure there will be sufficient light output in the end application. Estimate the egress lighting illumination levels by doing the following:
  - a. Find the efficacy of the LED load. This can be given by the luminaire manufacturer or DLC test report. 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 by the efficacy of the LED load. In many cases the actual lumen output in the emergency mode will be greater than this calculation, however, it will provide a good estimate for beginning the lighting design of the system.  
  
Total Lumens in Emergency Mode = Lumens per Watt of luminaire (lm/w) \* 25 \_\_\_\_\_
  - c. Using the results of this calculation and industry standard lighting design tools, calculate the anticipated illumination levels in the path of egress.

**NOTE:** This product has been designed to reliably interface with a wide selection of LED loads and is electrically compatible with every simple LED array that meets criteria 1 and 2 above. However, compatibility cannot be guaranteed with all current and future LED systems. Compatibility testing of the end-use system is suggested. Please contact the factory with any questions.

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

## Installation

**CAUTION: DO NOT JOIN CONVERTER CONNECTOR (WHT/BLK LEADS) UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED TO THE EMERGENCY DRIVER**

**NOTE:** Make sure the necessary branch circuit wiring is available. An unswitched source of power is required. The emergency driver must be fed from the same branch circuit as the AC driver.

### STEP 1 INSTALLING THE EMERGENCY DRIVER

Disconnect AC power from the LED luminaire.

Mount the emergency LED driver by the mounting tabs using the supplied screws.  
The luminaires installation instructions may provide guidance on the recommended mounting location.

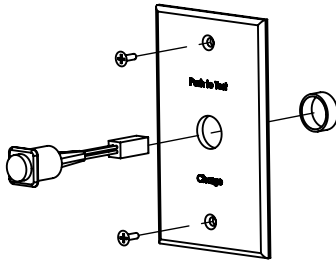
Emergency driver with cable conduit is suitable for remote mounting from luminaire. Emergency driver without cable conduit is not suitable for remote mounting. If used with AC driver, maximum remote distance is half the AC driver manufacturer's remote driver recommended distance, or a maximum of 50 feet.

**Mounting Height:** This product meets or exceeds the NFPA minimum light requirements with all loads, down to the smallest rated lamp load, at heights up to 7.17 ft (2.2 m). Many factors influence emergency illumination levels, such as the lamp load selected, luminaire design, and environmental factors; therefore, end use verification is necessary. For field installations, when the attached luminaire is mounted at heights greater than 7.17 ft (2.2m), the level of illumination must be measured in the end application to ensure the requirements of NFPA 101 and local codes are satisfied.

## STEP 2 INSTALLING TEST SWITCH

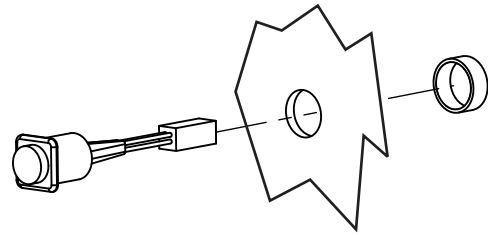
Test switch indicator light will be ON when AC power is supplied to the fixture, indicating emergency battery charging.

A. For installation of test switch on included switch box, for wall or ceiling surface mount.



B. For installation of test switch on fixture surface.

Mount the test switch in a location that is visible and accessible to maintenance personnel after installation. Test switch mounts in 0.64" diameter drilled or punched hole.



## STEP 3 WIRING THE EMERGENCY BALLAST

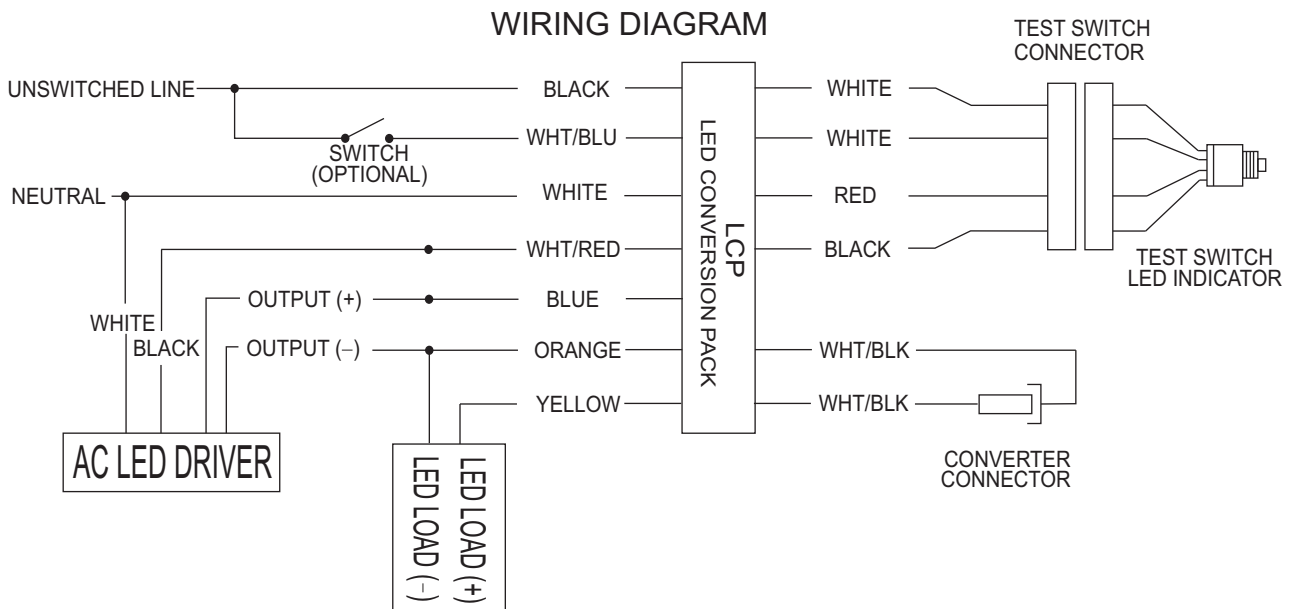
Connect the emergency driver to the AC driver and LED load as shown in the wiring diagram below. All connections must be in accordance with the National Electric Code and local regulations.

After installation is complete, apply AC power to the emergency driver and AC driver and join the converter connector (wht/blk leads).

Indicator light will illuminate indicating battery is charging.

A short-term discharge test may be conducted after charging for one hour. Charge for 24 hours before conducting a long-term discharge test. Refer to OPERATION.

Attach the label "CAUTION - This Unit Has More Than One Power Connection Points. To Reduce The Risk Of Electric Shock, Disconnect Both The Branch Circuit Breakers Or Fuses And Emergency Power Supplies Before Servicing."



TYPICAL SCHEMATIC ONLY. MAY BE USED WITH OTHER DRIVERS.  
CONSULT FACTORY FOR OTHER WIRING DIAGRAMS

## Operation

When AC power is applied, the charging indicator is illuminated, indicating the battery is being charged. When power fails, the emergency driver automatically switches to emergency power, operating the LED load at reduced illumination. When AC power is restored, the emergency driver returns to the charging mode, and the luminaire returns to normal illumination.

This emergency driver will operate an LED lighting load and supply up to 25 Watts of constant power with output voltage between 20 and 50 VDC for a minimum of 90 Minutes.

## Maintenance

Although no routine maintenance is required to keep the emergency driver functional, it should be tested periodically to ensure proper operation.

The following schedule is recommended:

1. Visually inspect the charging indicator monthly. It should be illuminated.
2. Test the emergency operation of the luminaire at 30-day intervals for a minimum of 30 seconds. The LED lighting load should operate at reduced illumination.
3. Conduct a 90 minute discharge test once per year. The emergency LED load should operate at reduced illumination for a minimum of 90 minutes.
4. The life expectancy of the battery is at least 4 years. The integral battery is not replaceable. Replace entire unit when necessary.