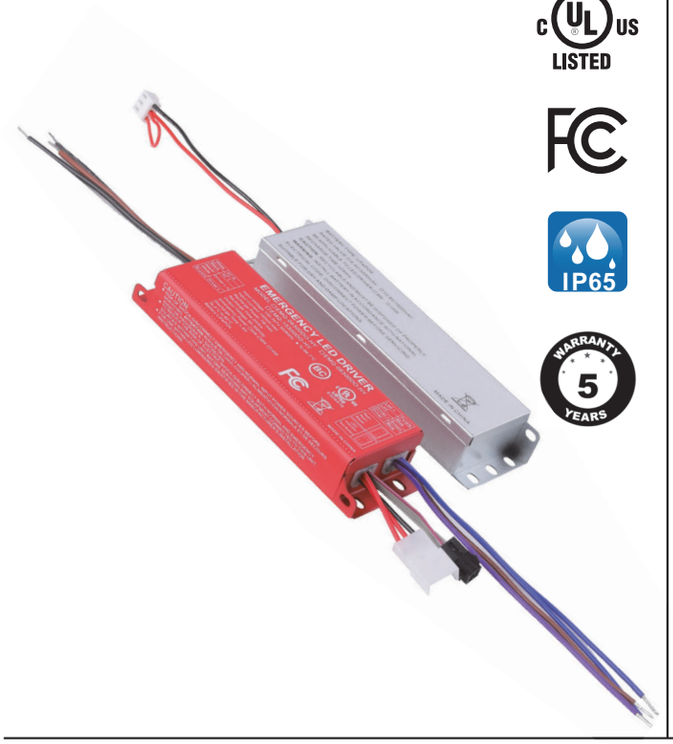
E2 Lighting International Inc.

Project Name: _____ Catalog Number: _____

Notes: _____ Fixture schedule: _____

Emergency LED Driver

E2-EMQ-4/8/15W-HY



Product Description:

The emergency driver is suitable for 4/8/15W LED lamps with external driver. There will be more than 1.5 hour emergency power supply during power off. It can be used in public places to ensure LED lights work normally even when power outages which caused by earthquake, fire, electric circuit malfunction etc. This driver would not affect its surrounded environment and power when it works.

Features

- Listed for US and CANADA
- Listed to UL924 and tested to CSAC22.2 NO.141 Field or factory installation
- 3. Low energy consumption CEC Title20 compliance
- High output voltage
- Constant output power
- Self-testing
- Battery: Over Charge Protection
  Over Discharge Protection
- Malfunction indicate function
- For wiring to the led driver's AC input

Specifications

Models	Emergency Power	Battery Type	Output Voltage
E2-EMQ-4W-HY	4 Watts (Constant)	LiFePo4	25V～58Vdc or 50V～300Vdc
E2-EMQ-8W-HY	8 Watts (Constant)		
E2-EMQ-15W-HY	15 Watts (Constant)		

Input voltage	100~347Vac.50/60Hz	Input Current	100mA max.
Recharge Power	7W max.	Output Voltage	25-58Vdc/50-300Vdc
Emergency Power	4W/8W /15W	Recharge Time	24Hrs
Discharge Time	1.5H	Warranty	5Years
Battery	LiFePO4	Ambient Temp	32~140°F(0~60°C)
Weight	1.54lbs(0.7kg)max.	Surge Protection	Line-Neutral 3KV

Self-Testing

The integrated Self- Diagnostic circuitry will automatically conduct monthly 30-second and annual 90-minute tests to verify proper emergency capability per Life Safety Code requirements. NFPA 101, Life Safety Code Outlines the following schedule:
Monthly- During AC mode, the system conducts a (30)seconds self-discharge test of the emergency led driver every 30 days. And automatically restore to normal charging after (30)seconds dis-charged.
Annually- During AC mode, the system conducts a (90)minutes self-discharge test of the emergency led driver every 365 days. And automatically restore to normal charging after fully dis-charged.

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E2 Lighting International Inc.

Installation Manual

!!! IMPORTANT SAFEGUARDS !!!	**WHEN USING ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTION SHOULD ALWAYS BE FOLLOWED, INCLUDING THE FOLLOWING**

Read and follow all safety instruction

1. **CAUTION**-This emergency driver provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency source by turning off the A.C. branch circuit.
2. **CAUTION**- Servicing of this equipment should be performed by qualified personnel only.
3. **CAUTION**- Do not attempt to service the battery. A sealed, no-maintenance battery is used that is not field replaceable. Replace the entire unit when necessary.
4. **CAUTION**- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition, void warranty, and result in non-compliance with UL specifications.
5. **CAUTION**- Connect the emergency driver battery pack to the unit before applying A.C. Power.
6. **CAUTION**- The emergency driver requires a UN-switched AC power source of 100-347VAC, 50/60Hz. Verify the correspondent electrical rating at the LED fixture before servicing. Both of the electrical rating will supply power under an output voltage of 170VDC in emergency mode for at least 90 minutes.
7. **CAUTION**- Battery pack should be charged for 24 hours every 6 months during storage.
8. **CAUTION**- Press test switch again to turn off emergency before shipping.
9. Battery in this unit may not be fully charged. After electricity is connected to the unit for at least 24 hours, then normal operation of this unit should take effect.
10. For use in 0°C minimum, 50°C maximum ambient temperatures. Suitable for use in damp locations and plenum spaces.
11. The emergency driver should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
12. Do not use this equipment for anything other than its intended use. Equipment only use for LED Lighting emergency backup.
13. Do not mount near gas or electric heaters. Do not let power supply cords touch hot surfaces.
14. Do not make or leave any other open holes in the wiring enclosure or electrical component enclosure during installation.
15. The emergency driver have battery inside, forbidden for insulation voltage(I/P-O/P) test.
16. This fixture is for use with grounded, UL Listed, damp location rated, indoor fixture. Not for use in heated air outlets or hazardous locations.
17. Maximum installation height: 28.5 feet.
18. Do not use outdoor.

Lumen output during emergency operation

The luminaire rated data and maximum mounting height can be found as follows:

1. Determine the fixture efficacy under normal AC operation, based on fixture manufacturer published data in lumens per watt(LM/W).
2. Reference DLC QPL (www.designlights. org) and Energy Start QPL (www.energystar.gov) for rated data on fixture efficacy. If the fixture is not found on DLC or Energy Star Qualified Product List, contact fixture manufacturer.
3. Multiply fixture LM/W by rated output power of emergency pack Example 'model" is 25W x 100LM/W = 2500 Lumens

This product has been designed and tested to compatible with most of led drivers in the market. However, compatibility cannot be guaranteed with all current and future LED drivers or fixtures. So compatibility testing of the end-use system is suggested. Please contact the factory with any questions.

Caution: Before installation, Make certain the A.C. Power is off!

STEP1: INSTALLING THE EMERGENCY LED DRIVER

> Turn off the AC power before installing.
> Test switch and indicator light shall be installed where can be seen depending on the application.
> The voltage input to the dimmable wires (DIM+,DIM-) of emergency LED driver must less than 20Vdc.
> Determine appropriate location for emergency driver on the fixture or using brackets to fix emergency driver on the fixture. The installation instruction of LED luminaire may provide guidance on mounting location.

STEP2: WIRING THE EMERGENCY DRIVER

> The emergency driver and A.C. driver must be on the same branch circuit
> Select the appropriate wiring diagram to connect the emergency driver to the driver's AC input. For other diagrams, consult the manufacturer.
> Using wire nuts to cover unused wires and make sure all connections are in accordance with the NEC and any local regulations.

STEP3: TESTING

> After wiring is complete, check if the indicator light lights or not, which will indicate the battery's charging situation.
> The battery in this unit may not be fully charged. A short-term discharge test may be conducted after the emergency driver has been charging for 1 hour. Charge for 24 hours before conducting a long-term discharge test.

SAVE THESE INSTRUCTIONS

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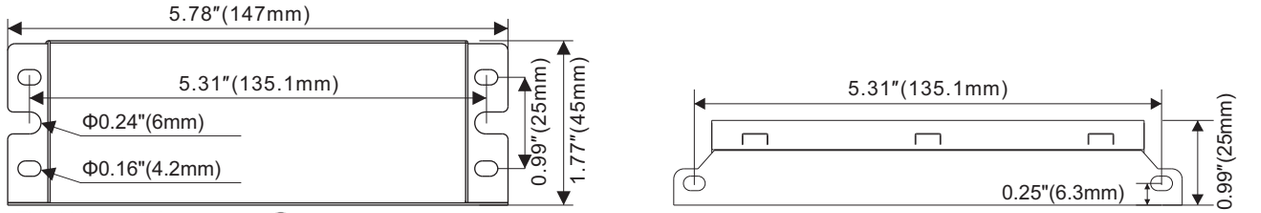
Dimensions

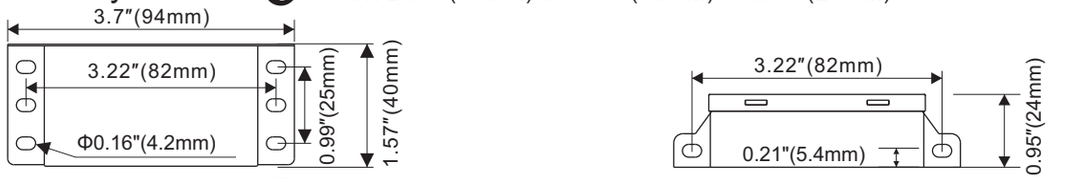
Driver Size

L 5.78"(147mm) W 1.77"(DRIVER SIZE * 45mm)*H 0.99"(25mm)



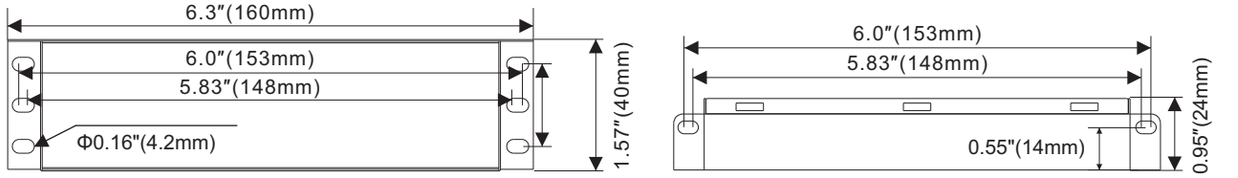
Battery Size ❶

4W: L 3.7"(94mm)*W 1.57"(40mm)*H 0.95"(24mm)



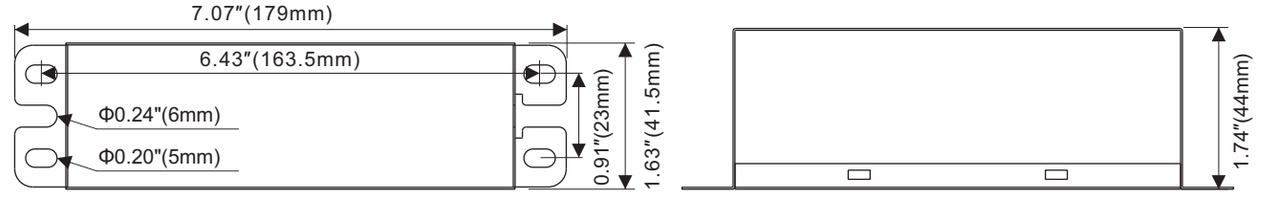
Battery Size ❷

8W: L 6.3"(160mm)*W 1.57"(40mm)*H 0.95"(24mm)



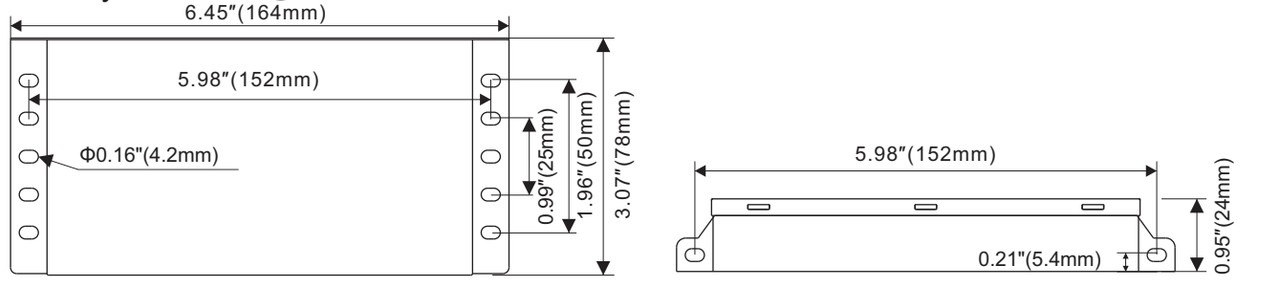
Battery Size ❸

15W: L 7.07"(179mm)*W 1.63"(41.5mm)*H 1.74"(44mm)



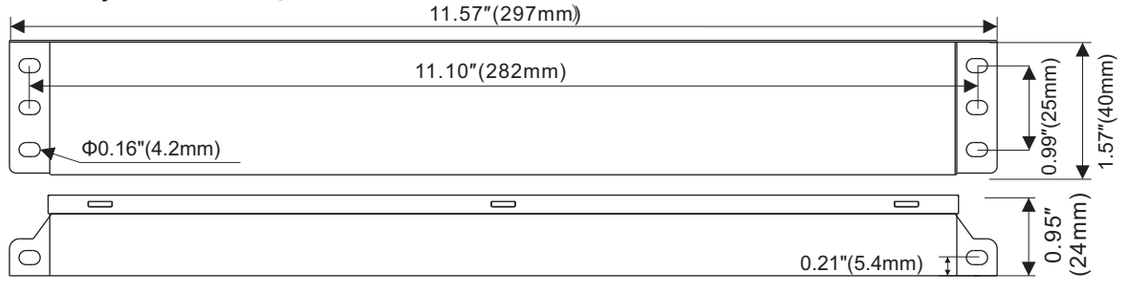
Battery Size ❹

15W: L 6.45"(164mm)*W 3.07"(78mm)*H 0.95"(24mm)



Battery Size ❺

15W: L 11.57"(294mm)*W 1.57"(40mm)*H 0.95"(24mm)



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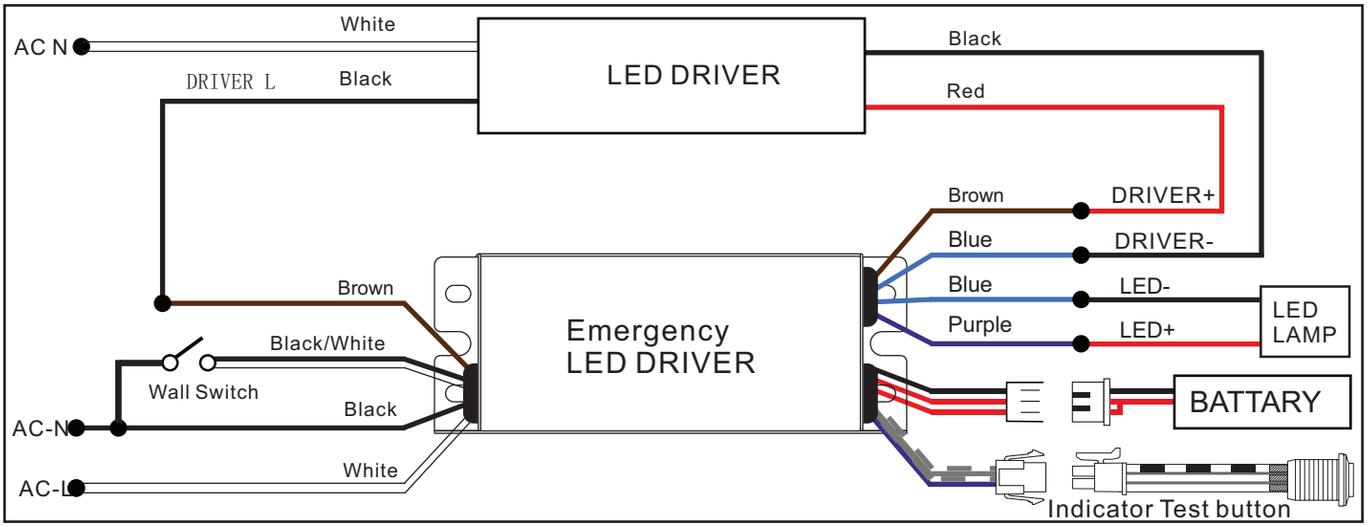
Wiring diagram

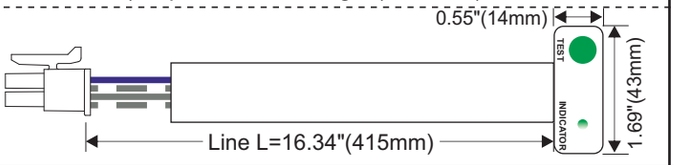
25V~58Vdc:FOR LED LUMINAIRE < 150W AND < 3A LED DRIVER CURRENT.
50V~300Vdc:FOR LED LUMINAIRE < 200W AND < 2A LED DRIVER CURRENT.



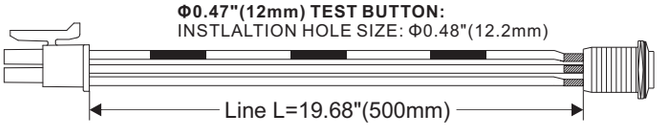
Optional Accessories

Indicator light & Test Button

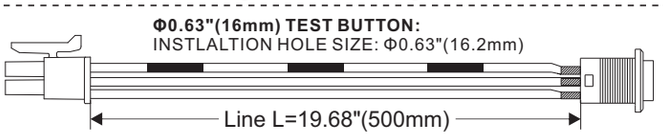
(A) Separate Indicator light (No Panel)



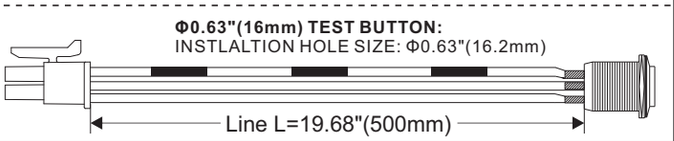
(C)Metal one-piece Indicator light



(B)Plastic integrated Indicator light



(D)Metal one-piece Indicator light



Operation (Indicator status)

Mode	Test Button Operation	Indicator Status	Comment & Solutions
AC MODE (1)	NO press	Permanent green	Emergency LED driver is charging
AC MODE (2)	press once	Fast flashing green (0.1s on, 0.1s off)	Emergency LED driver is conducting a 30s short-term emergency test, After 30 seconds, it will automatically restore to normal charging mode
AC MODE (3)	press twice (2s) in sequence	Slow flashing green (1s on, 1s off)	Emergency LED driver is conducting a long-term emergency test until battery is fully discharged
EMERGENCY MODE	NO Press	Slow flashing green (2s on, 2s off)	Emergency LED driver is conducting a long-term emergency test until battery is no power
AC MODE (4)	/	Slow flashing red (0.1s on, 0.1s off)	Battery over charge fault
AC MODE (5)	/	Slow flashing red (1s on, 1s off)	No battery
WARNING Risk of Electric Shock ⚠		Note:Please press once test button to make certain the battery is turned off, before installation, maintenance, storage or shipping.	

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