

Emergency LED Driver



MODEL: EMBXXFY-ZZZ




Features

- UL Listed for us and canada
- Listed to UL924 and tested to CSA C22.2 NO.141 Field or factory installation
- High voltage Input
- Low energy consumption CEC compliance
- Constant output power
- Self-testing
- Battery: over temperature protection
- Emergency driver abnormal alarm
- The output can be turned off in an emergency state
- For wiring to the led driver's input

Specifications

- Input Voltage: 100~347Vac, 50/60Hz
- Input Current: 100mA max.
- Input Power Rating: 7W max.
- Output Voltage: 170Vdc
- Emergency Power: 8W/18W
- Recharge Time: 24Hrs
- Discharge Time: 1.5H
- Warranty: 5 Years
- Ambient Temp : 41~122°F (5~50°C)
- Battery: Li-ion
- Weight: 0.5kg
- Surge Protection: Line-Neutral 3KV

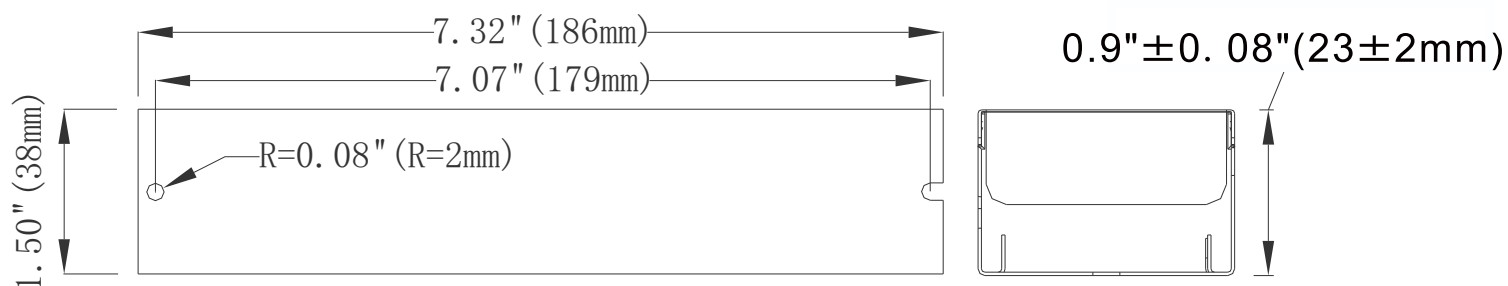
EMB-FY SERIES SPECIFICATION CHART

Models	Input Voltage	Output Power	Output Voltage
EMB08FY-ZZZ	100-347V AC	8 Watts (Constant)	 HIGH VOLTAGE OUTPUT 170V DC EMBXXFY-ZZZ • XX = output power: 8Watts, 18Watts ; • FY = sales code • ZZZ = output voltagae: 170Vdc
EMB18FY-ZZZ	100-347V AC	18 Watts (Constant)	

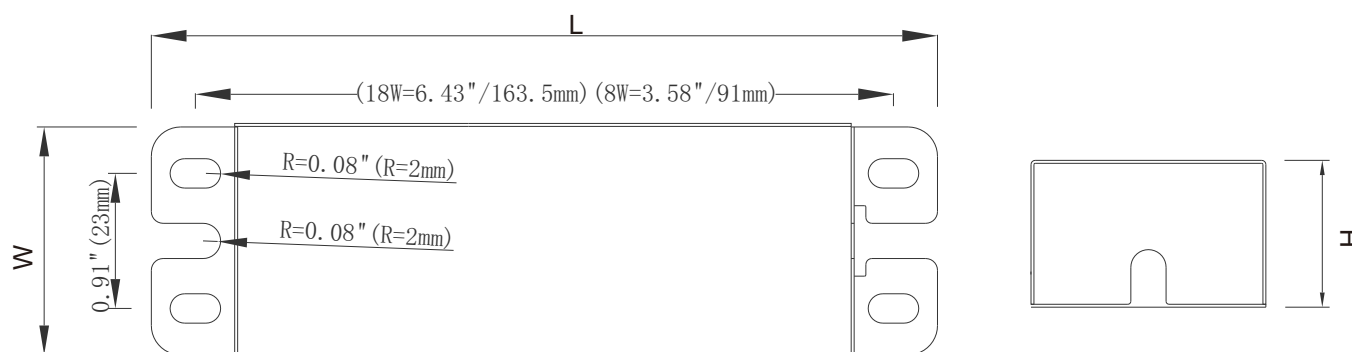
For unit of EMB08FY-ZZZ better for LED lamp less than 50W(When dimming to a minimum, the power needs to be less than 5W).
 For unit of EMB18FY-ZZZ for LED lamp less than 80W(When dimming to a minimum, the power needs to be less than 15W).

Dimensions

DRIVER SIZE: L*W*H = 7.32"(186mm) * 1.50"(38mm) * 0.9"±0.08"(23±2mm)



BATTERY SIZE: L*W*H EMB08FY = 4.25"(108mm) * 1.63"(41.5mm) * 0.9"±0.08"(23±2mm)
 EMB18FY = 7.07"(179mm) * 1.63"(41.5mm) * 0.9"±0.08"(23±2mm)



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 **EMBFY** 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 and by disconnecting the battery on/off connector.
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 **EMBFY** battery pack to the unit before applying A.C. Power.
6. **CAUTION-** The **EMBFY** requires an 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. (See individual units for output specifications.)
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 5°C minimum, 50°C maximum ambient temperatures. Suitable for use in damp locations and plenum spaces.
11. The **EMBFY** should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
12. For led fixture power higher than or equal to rating of the **EMBFY** emergency battery pack.
13. Do not use this equipment for anything other than its intended use. Equipment only use for LED Lighting emergency backup.
14. Do not mount near gas or electric heaters. Do not let power supply cords touch hot surfaces.
15. Do not make or leave any other open holes in the wiring enclosure or electrical component enclosure during installation.
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. Max. mounting height: 13.9 ft .
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 Star QPL (www.energystar.gov) for rated data on fixture efficacy. If 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 **EMB18FY-ZZZ**" in **18 W** x **100 LM/W**= **1800 Lumens**



Caution: Before Installation, Make Certain The A.C. Power is Off !

STEP 1: MOUNTING THE EMBFY

- > Pre-drill a hole into the fixture ballast cover/wire-way cover for the test switch (see illustration).
- > Indicator light and test switch should be mounted where can be seen by the maintenance personnel.
- > Determine appropriate location for the battery backup LED driver and LED battery pack in the fixture. Install the battery backup LED driver and LED battery pack to the fixture using existing mounting holes in the fixture. The installation instruction of LED luminaire may provide guidance on mounting location.

STEP 2: WIRING - THE EMBFY and AC LED DRIVER

- > Select the appropriate wiring diagram found as reference. For other diagrams, consult our customer service.
- > Connect the A.C. power source leads to the input of the **EMBFY** series. Connect the output leads of the **EMBFY** Series to the LED load.
- > Wire the AC driver with the lamp in accordance with manufactures installation instructions. Make sure all connections are accordance with National Electrical Code or any other local regulations.
- > The **EMBXXFY** requires an unswitched A.C. power source of **100-347VAC**, 50/60Hz.

STEP 3: INSERT THE INDICATOR COMBO TEST SWITCH(ICTS)

- > The **EMBFY** and A.C. driver must be on the same branch circuit.
- > The **EMBFY** requires an unswitched A.C. power source of 100-347VAC, 50/60Hz; Therefore when used with switched fixtures, the **EMBFY** input must be wire ahead of the switch. Insert test switch into the pre-drilled hole in the fixture's wire-way cover (see illustration)

STEP 4: TESTING

- > After the A.C. input wiring is complete, switch the A.C. power on. Then the charging indicator light should illuminate, which indicating the battery is charging.
- > **The battery in this unit may not be fully charged.** A short-term discharge test may be conducted after the **EMBFY** has been charging for 1 hour. Charge for 24 hours before conducting a long-term discharge test.

SELF-DIAGNOSTIC(MAINTENANCE)

- The integrated Self-Diagnostic circuitry will automatically conduct 1 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.
- "Written Records of the Testing should be kept by the owner for inspection by the authority having jurisdiction." If the charging indicator is flashing rapidly or off, contact manufacturer.

SAVE THESE INSTRUCTIONS



THIS PRODUCT CONTAINS A RECHARGEABLE LITHIUM-ION BATTERY. THE BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY TO PREVENT FIRE.

1 VERSATILE MOUNTING METHOD

> Suitable for LED lamp with internal driver. Mount the EMBFY series in the driver/ lamp compartment or enclosed wire-way, so the wire leads are not exposed, at least 1/2" from away from the driver. (see method 1&2)

Method1: Tri-Proof Light

Method2: Wall Pack Light

Illustration: Mounting

2 INSTALLATION INSTRUCTION

CAUTION Risk of Electric Shock **Note:** The LED fixture must be integrated with 0-10V driver, when LED fixture power more than Emergency backup unit power.

WIRING DIAGRAM 1:

For unit of EMB08FY-ZZZ is better for LED lamp not more than 8W
For unit of EMB18FY-ZZZ is better for LED lamp not more than 18W

WIRING DIAGRAM 2:

For unit of EMB08FY-ZZZ is for LED lamp more than 8W
For unit of EMB18FY-ZZZ is for LED lamp more than 18W

CAUTION: before installation, make certain the A.C. power is off.

OPTIONAL ACCESSORIES

<p>Face Plate</p>	<p>Indicator light</p> <p>(A) Plastic integrated Indicator light Φ0.63" (Φ16mm)</p> <p>Line L=19.68"(500mm)</p> <p>(B) Metal one-piece Indicator light Φ0.47"Φ(12mm) or 0.63" or (Φ16mm)</p> <p>Line L=19.68"(500mm)</p> <p>(C) Flexible cable Indicator light 0.55"(14mm)</p> <p>Line L=13.78"(350mm)</p>
<p>DIM light</p> <p>22AWG Line L=19.68"(500mm) 0.315"(8mm)</p>	

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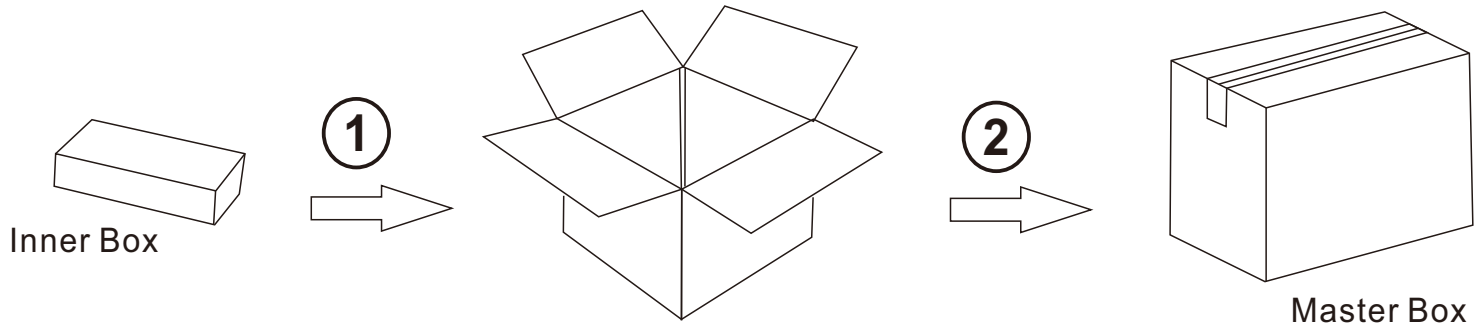
OPERATION (INDICATOR STATUS)

Mode	Test Switch Operation	Indicator Status	Comment & Solutions
AC MODE (1)	NO Pressed	ON(no flashing)	Emergency led driver is charging
AC MODE (2)	Pressed once	2s ON and 2s OFF (slow flashing)	Emergency led driver is conducting a 30s short-term emergency test
AC MODE (3)	Pressed twice (2s) in sequence	2s ON and 2s OFF (slow flashing)	Emergency led driver is conducting a long-term emergency test until battery is fully discharged
EMERGENCY MODE	NO Pressed	2s ON and 2s OFF (slow flashing)	Emergency led driver is automatically conducting a emergency until battery is fully discharged
ABNORMAL	When indicator flashes (0.2s) ON and (0.2s) OFF fast or goes off, the emergency backup pack is abnormal. Contact the manufacturer.		

WARNING  Risk of Electric Shock

Note: Please pressed test switch of the EMBFY (in once) and make certain the battery is turned off, before installation, maintenance, storage or shipping.

Package



Package information are as following forms

Power	Length(inch)	Width(inch)	Height(inch)	G.W(kg)	N.W(kg)	QTY(pcs)
8W	13.19"	8.66"	7.87"	8.5	7.3	20
18W	13.19"	8.66"	7.87"	10.4	9.4	20

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