

# WP-EWG-040U

## Emergency Back-up Power Inverter

SKU No:

Project Name:

Date:

### IMPORTANT: SAVE THESE INSTRUCTIONS



#### DESCRIPTION

EWG 40W, listed for field and factory installation, provides constant power output to the load during emergency mode operation. They maintain illumination in the emergency mode for a minimum of 90 minutes. It is an ideal emergency solution for UFO LED highbay lights.

#### FEATURES AND BENEFITS

- Self-diagnostic and testing
- Universal input range
- Integrated junction box design
- Easy field installation
- IP65 rated
- 40W & 90 mins durable emergency operating time
- Surge L-N:3KV; L&N-PE: 3KV
- Title 20 Compliant
- Protection: Over-Voltage, Short-Circuit, Over-Load, Open-Circuit
- LiFePO4 safety batteries
- High PF even during charging
- Remote test by handheld remote controller
- RoHS compliant
- UL924 listed
- Operating temperature: 50°F - 122°F (10°C - 50°C)

#### INPUT

PARAMETER	MIN.	TYPICAL	MAX.	REMARKS
RATED INPUT VOLTAGE (VAC)	100	--	277	--
INPUT VOLTAGE RANGE (VAC)	90	--	305	--
INPUT FREQUENCY RANGE (HZ)	47	50/60	63	--
MAX. INPUT CURRENT (A)	--	--	0.2	120Vac, charging
MAX. INPUT POWER (W)	--	--	15	120Vac, charging
INPUT SURGE CURRENT (A)	--	--	10	277Vac/60Hz, cold start
STANDBY POWER (W)	--	--	0.8	277Vac/60Hz, charged
POWER FACTOR	0.9	--	--	Vin=120Vac/60Hz (charging)
THD	--	15%	20%	Vin=120-277Vac/60Hz (charging)
MAX. LOAD (W)	--	--	300	Min. dim power have to lower than 36W

#### OUTPUT

PARAMETER	MIN.	TYPICAL	MAX.	REMARKS
NO LOAD OUTPUT VOLTAGE (VAC)	--	--	250	--
EMERGENCY OUTPUT POWER (W)	36	--	40	Constant power output
INSTANTANEOUS OUTPUT POWER (W)	--	--	100	Emergency, cold start peak output, last time 10 secs
POWER-UP TIME (S)	--	--	0.5	120Vac, charging
RESPONSE TIME (S)	--	--	5	Switch from mains supply cuts to Emergency output
EMERGENCY DURATION TIME	90	--	--	--
OUTPUT VOLTAGE (V)	120	--	200	Approximate value, varies w/ the battery voltage
MAX. LOAD CURRENT (MA)	--	--	350	Determined by the LED load, load current=output power/ output voltage

#### BATTERY

NAME	PARAMETER
BATTERY TYPE	LiFePO4
BATTERY CAPACITY	6000mAh/16V 96WH
CHARGING TIME (H)	24 Hours
MAX. CHARGING INTERVAL (M)	12 Months



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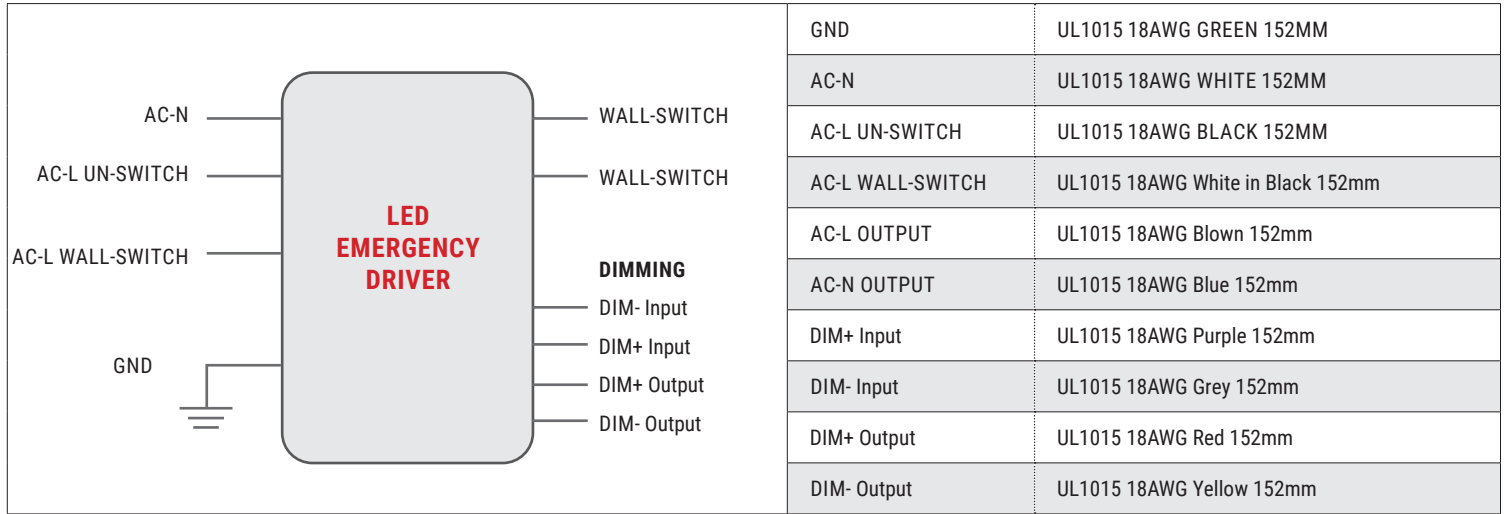
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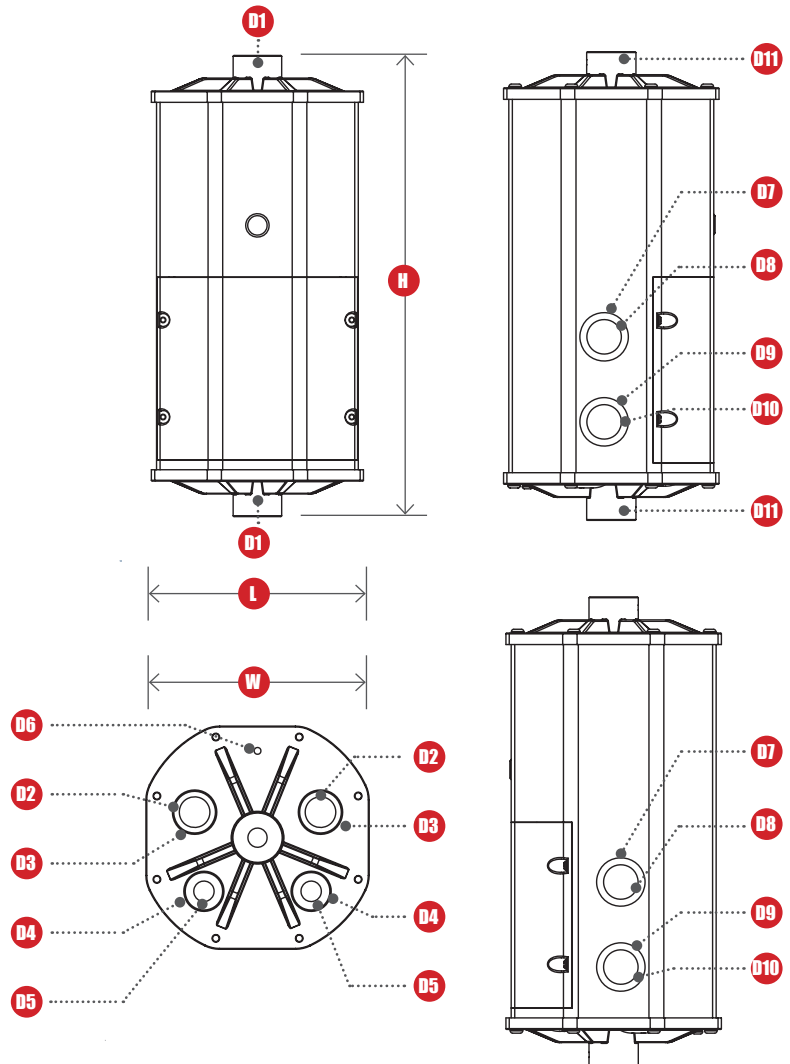
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### STRUCTURE



NAME	CODE	SPECS.
Length	L	4.92"
Width	W	4.92"
Height	H	11.22"
Fixed Hole	D1	M12
Fixed Hole	D2	G(PF) 1/2
Fixed Hole	D3	1.26"
Fixed Hole	D4	0.87"
Fixed Hole	D5	G(PF) 1/4
Fixed Hole	D6	6#-32*1/4
Fixed Hole	D7	1.26"
Fixed Hole	D8	NPT 1/2
Fixed Hole	D9	1.57"
Fixed Hole	D10	NPT 3/4
Fixed Hole	D11	6#-32* 5/8



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### INDICATOR

PARAMETER	REMARKS
GREEN NORMAL ON	Normal
LIGHT OFF	Abnormal, check if battery voltage is too low, short circuit in LED luminaire
GREEN FLASH (1S ON, 1S OFF, CYCLING)	Abnormal, faulty battery connection
GREEN FLASH (0.5S ON, 5S OFF, CYCLING)	Normal, Working in Emergency Mode
GREEN SLOW FLASH (5S ON, 5S OFF, CYCLING)	Abnormal, check if self-diagnostic discharging time <90mins, or Open-circuit, Over-load in LED Luminaire
GREEN FLASH (1S ON, 1S OFF, 5 TIMES)	Close self-diagnostic test system
GREEN FLASH (1S ON, 1S OFF, 3 TIMES)	Start self-diagnostic test system

### DIAGNOSTIC SYSTEM

#### • Manual Diagnostic System

In the normal Charging Mode, after charged for 12 hours or fully charged, press the test button >3S and hold it, to start the Manual Diagnostic Mode, and then release the button to exit the Manual Diagnostic System, it will get back to normal Charging Mode.

#### • Close / Start Self-diagnostic System

In the normal Charging Mode, press the button twice within two seconds, then press and hold the button 2-5S, then release and press the button again twice in succession, the indicator light will be on and off for 5 times (1S interval), that means the Self-diagnostic System have been closed successfully. Repeat this operation, and the indicator light will be on and off for 3 times (1S interval), Self-diagnostic System have been started (factory defaults Self-diagnostic System Start).

#### • Enter Sleep Mode

Under Emergency Mode, pressed the test button>3s, it will enter Sleep Mode( For storage and shipment). after connecting to mains supply, it will be reactivated.

#### • Reset

Under abnormal status, press and hold the test button >5s, power off, and re-connect to mains supply, the Self-diagnostic System will be reset.

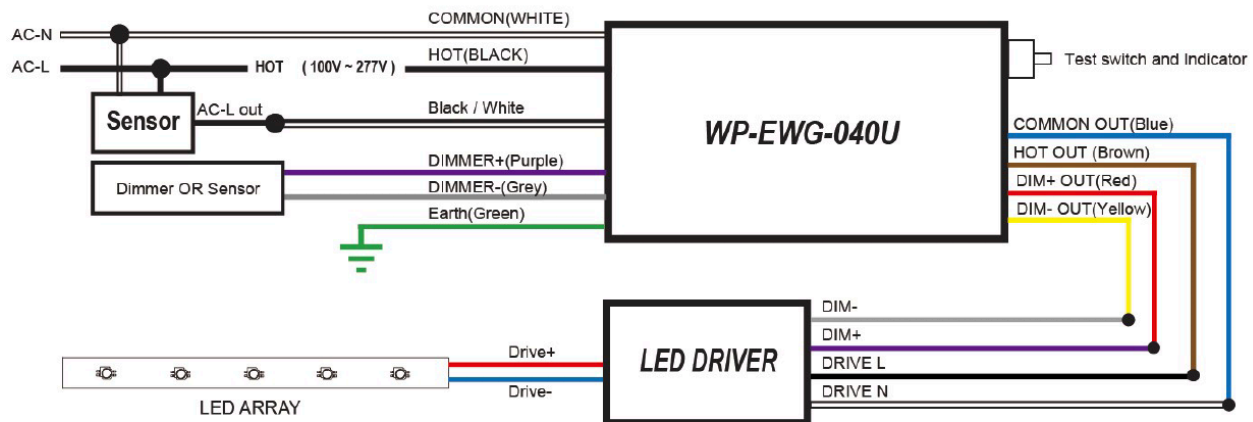
#### • Monthly Self-diagnostic

Every 30 days, it will switch to Self-diagnostic mode automatically, and working under emergency mode 30S.

#### • Yearly Self-Diagnostic

Every 360 days, it will switch to Self-diagnostic mode automatically, and working under emergency mode until.

### WIRING DIAGRAM



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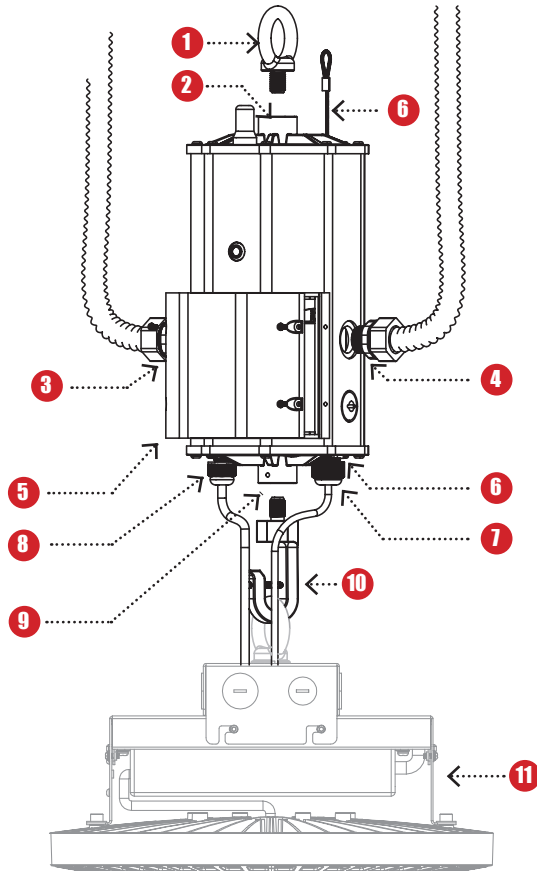
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#### INSTALLATION GUIDELINE

1	Hanging ring bolt
2	Thread mounted hole
3	AC input wire protective tube
4	Dimming wire protective tube
5	Integrated junction box cover
6	Safety rope
7	LED Driver dimming wire
8	LED Driver input wire
9	Thread mounted hole
10	Hanging hook bolt
11	LED Driver of UFO highbay light

#### ATTENTIONS

Please use waterproof connectors in position 3 and 4 for application in damp location



#### INSTALLATION GUIDELINE

##### • Step One – Power Off

disconnect the power connection of the UFO lamp

##### • Step Two - Install LED Emergency Driver

1. Take the LED emergency driver from packaging box, open the integrated junction box cover 5, unscrew the waterproof plugs, and install them into position 7 and 8. Take off the waterproof plugs ( 3 4 ) from NPT1/2 hole or NPT3/4 hole accordingly.
2. Screw the hang ring bolt 1 into thread mounted hole 2
3. Screw the hang hook bolt 10 into thread mounted hole 9, and locked with stop bolt.
4. Install the safety rope 6
5. Connect AC input wire through 3, screw in the protective tube
6. Connect dimming wire through 4, screw in the protective tube
7. Connect input wire of LED driver through 8, tighten the waterproof plug
8. Connect the LED Driver dimming wire through 7, tighten the waterproof plug
9. Connect all the wires according to the wiring diagram
10. Cover the junction box and complete the installation

##### • Step Three

Turn on the mains supply to power the LED Emergency driver. After 1 hour charging, make a diagnostic test. After 24 hours charging, make a complete discharge diagnostic test.

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#### REMOTE CONTROLLER

**• Diagnosis**

In the normal Charging Mode, after charged for 12 hours or fully charged, dial the switch on the side(towards the antenna),pull out the antenna, press the button ON, then it will enter Manual Diagnostic Mode. Press OFF to exit.

**• Controller Battery**

6F22 9V aneroid battery or same specification rechargeable battery

**• Remote control distance**

No more than 20 meters, the received signal will be better by pulling out the antenna.



Dimension:  
L: 5.79"  
L1: 5.35"  
W: 1.7"

#### FUSE REPLACEMENT

**• Fuse specifications**

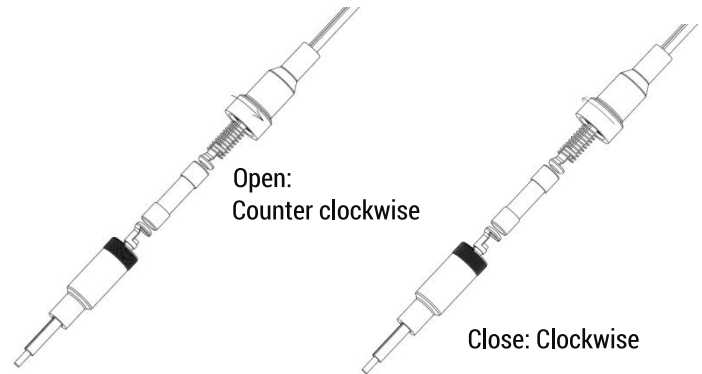
Time Lag Axial fuse(Glass Body or Ceramic Body)  $\Phi 5 * 20\text{mm}$ , 10A/300V

**• Purpose**

To ensure the safety of products, the blown fuse must be connected to the UFO lamp fire wire (normal lighting switch control wire, black-into-white wire)If short circuit happen on luminaires, or short circuiting during wiring accidentally, that may damage the fuse. Only operators with relevant permits can open the fuse holder and replace it with same specification fuse.

**• Operation method**

Turn counterclockwise, open the fuse installation box, take out the bad fuse, replace it with a new one, and then turn clockwise to tighten



#### LIGHT OUTPUT CALCULATION

To ensure sufficient light output in the end application, please estimate by doing the following:

**A.** Check the light efficacy(lm/w) of LED luminaire, which is provided by the luminaire manufacturer or test it directly, or check the test data from 3rd party test laboratory like UL, ETL etc., or visit 3rd party public database(such as Design Lights Consortium, www.designlights.org etc.). or other comparable means.

**B.** Lumens can be calculated by multiplying the output power of the battery backup emergency inverter by the light efficacy of the LED luminaire. In many cases, the actual lumen output in emergency mode will be greater than this calculation gives, however, it will provide a good reference for the lighting design.

**C.** Using the results of this calculation and industry standard lighting design tools, the expected illuminance in the curve can be calculated.

LUMENS IN EMERGENCY MODE = LUMENS PER WATT OF FIXTURE \* OUTPUT POWER OF CHOSEN PRODUCT

\_\_\_\_\_ (Lumens) = \_\_\_\_\_ (lm/W) \* 40(W)

#### ACCESSORIES

#	Name	Image	Qty
1	M12 Hanging Ring Bolt		1
2	M12 Hanging Hook Bolt		1
3	CM-221-2P Terminals		8
4	CM-221-3P Terminals		3
5	6#-32*1/4 Screws		1
6	6#-32*5/8 Screws		2
7	G(PF) 1/4 Cable Grand Cord Grip		1
8	G(PF) 1/2 Cable Grand Cord Grip		1
9	Installation Manual Book	--	1
10	Stainless Steel Safety Rope		1
11	Remote Controller		1
12	6F22 9V Battery	--	1

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**WHEN USING ELECTRICAL EQUIPMENT AND THIS LIGHTING DEVICE BASIC SAFETY PRECAUTION SHOULD BE FOLLOWED AT ALL TIMES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:**

**PLEASE READ CAREFULLY AND FOLLOW ALL INSTRUCTIONS FOR YOUR OWN SAFETY**

**WARNING:** AC power must be off before proceeding with assembly or installation of emergency driver.

**IMPORTANT:** For use with non-dimming LED fixtures up to 40W. For use with LED fixtures (MAX 300W) that utilize 0-10V dimming that are above 40W, but this inverter will be limited to 40W(Including driver).

**IMPORTANT:** An un-switched AC power source of 100Vac to 277Vac is required.

**CAUTION:** Make sure all electrical connections conform to the National Electrical Code and all applicable local regulations.

**CAUTION:** Do not let power supply cords touch hot surfaces.

**CAUTION:** Do not mount near gas or electric heaters.

**CAUTION:** Use with grounded, UL Listed, dry or damp or wet location rated fixtures.

**CAUTION:** The equipment is intended for ordinary location and for permanent installation into one or more Listed emergency luminaires.

**CAUTION:** Battery is rechargeable LiFePO4 type and must be recycled or disposed of properly. Do not use this emergency driver with accessory equipment other than recommended by manufacturer; failure to follow this may cause an unsafe condition. Servicing should only be performed by qualified service personnel. Do not use this emergency driver for other than intended use. Not suitable for high-risk task area lighting. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

**IMPORTANT:** Indicator (LED light) illuminated indicates battery in charge mode when AC power is applied. It is recommended and required by applicable code to test emergency ballast to ensure proper function of the system; push the test switch every thirty (30) days to ensure the emergency driver is functioning by illuminating the light source. Conduct a ninety (90) minutes discharge test one (1) time per year; LED light source should be illuminated for a minimum of ninety (90) minutes .

**TESTING SYSTEM:** The emergency battery requires a charge minimum of one (1) hour before testing the circuit. A full charge requires twenty four (24hours)