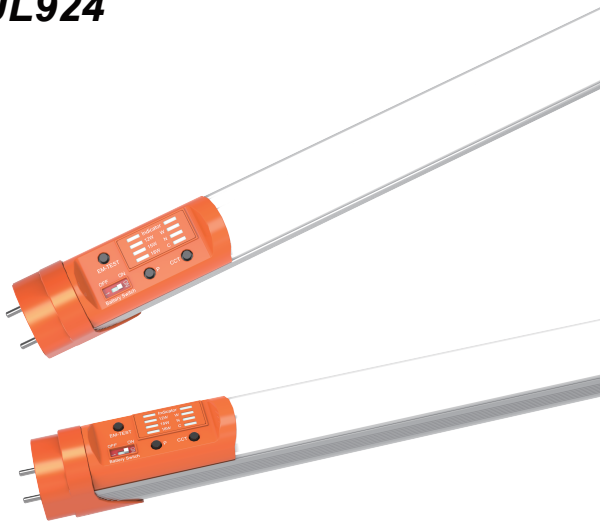


UL924



### FEATURES

- Aluminum heat sinks and integrated driver designed to retrofit T8 fluorescent lighting.
- Compatible with both conventional power supply function and emergency power supply function.
- Full brightness in automated switch-over to emergency mode with 90 minutes minimum emergency run-time.
- Internal rechargeable Ni-MH battery, over 500 cycles of standard charge and discharge.
- Indicator shows a variety working modes.

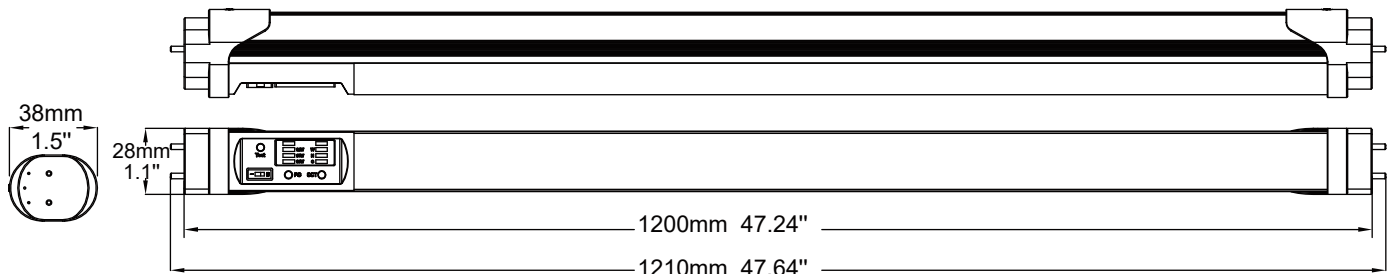
### SPECIFICATIONS

- Input Voltage: 100~277Vac, 50/60Hz
- Input Current: 250mA max
- AC Power: 12W/15W/18W selectable
- Included Charge Power: 22W max
- Emergency Power: 5W
- AC normal lumens: 1300lm/1650lm/2000lm
- Emergency Lumens: 700lm
- CRI: > 80 Body Aluminum+PC Frosted lens
- Charge Time: 24Hrs
- Emergency Time: 90 minutes
- 3CCT: 3500K/4000K/5000K selectable



### DIMENSIONS

47.64"x1.1"x1.5"(1210mmx28mmx38mm) Mounting center-47.24"(1200mm)



### IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

#### READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- 1.WARNING-** Risk of Fire or Electric Shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED retrofit kit. Check for enclosed wiring and components.
- 2.WARNING-** Risk of fire or electric shock. Install this kit only in luminaires that have the construction features and dimensions shown in the photographs and or drawings.
- 3.** Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.
- 4.WARNING-** Prevent Wiring Damage: To avoid wiring damage or abrasion, ensure that wiring is not exposed to edges of sheet metal or other sharp objects.
- 5.WARNING-** To avoid potential fire or shock hazard, do not use this retrofit kit in luminaires employing shunted bi-pin lampholders.

**Note:** Shunted lamp holders are found only in fluorescent luminaires with Instant-Start ballasts.

Instant-start ballasts can be identified by the words "Instant Start" or "I,S." marked on the ballast. This designation may be in the form of a statement pertaining to the ballast itself, or may be combined with marking for the lamps with which the ballast is intended to be used, for example F40T12/IS. For more information, contact the LED luminaire retrofit kit manufacturer. Only suitable for single end powered lamps.

**6.** Installers should examine all parts that are not intended to be replaced by the retrofit kit for damage and replace any damaged parts prior to installation of the retrofit kit.

7. Installers should not disconnect existing wires from lampholder terminals to make new connections at lampholder terminals. Instead installers should cut existing lampholder leads away from the lampholder and make new electrical connections to lampholder lead wires by employing applicable connectors.

**8. WARNING-** Risk of fire. Input ratings may need to be determined based on any configuration(s) permitted by the instructions. Regardless of the configuration(s) of the retrofit kit, the input ratings of the overall retrofit kit shall not exceed the marked input ratings of the host luminaire.

9. The installation instructions shall indicate the environmental locations the retrofit kit is suitable for. (i.e Damp locations or Wet locations).

10. Prior to installation, review all environmental designation locations in the retrofit kit installation instructions. Only install in damp or wet locations if so indicated in the installation instructions.

**11. FOR RETROFIT KITS CERTIFIED TO CANADIAN REQUIREMENTS.**

The retrofit kit is accepted as a component of a luminaire where the suitability of the combination shall be determined by authorities having jurisdiction. Product must be installed by a qualified electrician in accordance with the applicable and appropriate electrical codes. The installation guide does not supersede local regulations for electrical installations.

12. For use with incandescent surface mounted or recessed non-IC or recessed IC luminaires.

13. Suitable for open type luminaires. Suitable for closed type luminaires. Suitable for use with luminaires with maximum 6 lamps

14. Suitable for use with luminaires with 1210mm×38mm×28mm lamp compartment.

"1210mm×38mm×28mm" shall be replaced by the minimum or specific dimensions of lamp compartment of the host luminaires.

15. Suitable for operation in luminaires with ambient not exceeding 50°C. Max, mounting height: 16.7 ft.

**OPERATIONAL NOTES**

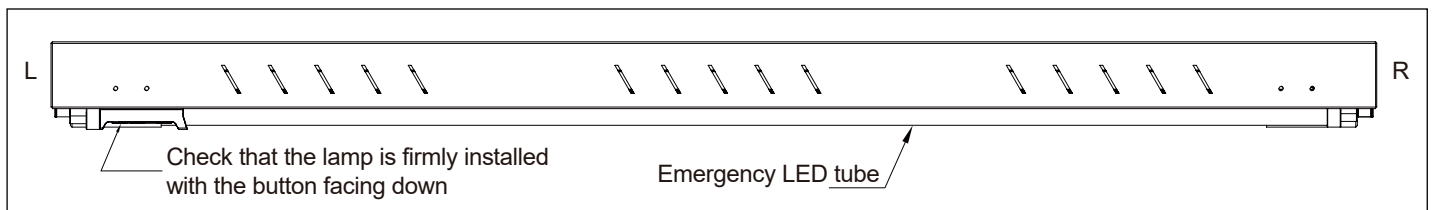
1. Please modify the circuit according to the wiring diagram. For Indoor use only.
2. Not compatible with the Traditional fluorescent ballast. Not for use with DC power. Not for use with dimmer.
3. After unpacking check that the products are in good condition. If there is any problem, call customer support.
4. For use in the voltage range staged over, and frequency 50/60Hz.
5. Switch off the power supply when installing or charging the tube.

**INSTALLATION INSTRUCTION**

-Step 1 Turn off the power, and take out the old fluorescent tubes.

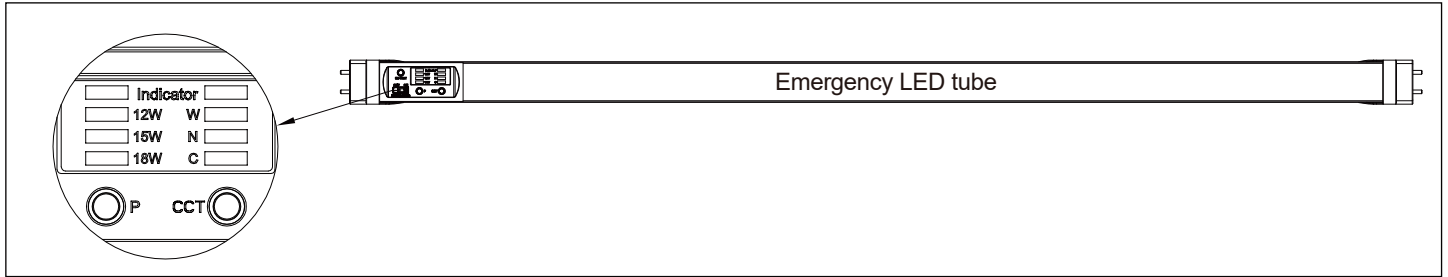
-Step 2 Bypass the ballast and remove starter where present.

-Step 3 Change the original G13 lamp socket as BillDa G13 lamp-socket. First, remove the original G13 lamp holders in two side from the lamp tray, install the BillDa G13 lamp-socket in right end. Second, install the LED battery backup tube with BillDa G13 lamp-socket in left end, and then insert the other side into the BillDa G13 lamp-socket in right end fix it. Finally, ensure that the installation is firm.



-Step 4 Connect the wiring as the follow wiring diagram, first, before connecting cables, disconnect the power supply to ensure safety; Second, use wire strippers to strip the insulation layer at the end of the wire to expose a long enough length of copper wire; Then, according to the following wiring diagram, the wire stripped of insulation layer is fixed in the lamp holder to ensure that the connection is firm, and the power test can work normally after the completion of the wiring. Refer to the circuit diagram.

- Step 5 Switch the Power selectable switch and the CCT selectable switch on the tube to the Power and the CCT that you want.



- Step 6 The retrofit position is located at the edge of the four LED Tubes. You can replace any one of them as required.

## FUNCTION

Combine emergency function and general lighting function together.

(1) When The city power is working well. The tube can work as general lighting, and fur on/off goptroled by the wall switch.

(2) When the city power is shut down suddenly. Whatever the tube is in tumn on/off status, the emergency status will be automatically be actiyated, and provide 90 minutes emergency lighting.

-Self-lest function, self test monthly and yearly, If the emergency function is abnormal, the indicator light will blink.

-Automatic charging function, The indicator light shows charging status and full charge status.

-Battery transportation protection function. Press the test button three times quickdy, the battery will go into hiberation, and standby 8000 hrs before installation,

## SELF-TEST:

This unit contains a control/monitor circuit that if enabled automatically performs a 30-second discharge test once a month and a full 90-minute discharge test once a year. During routine testing, the self-testing emergency driver simulates an AC power failure causing the unit to automatically switch to emergency mode. The unit will monitor the operation of the LED load, battery voltage, and emergency duration. If the emergency system functions properly, then the unit will return to normal mode. Should the unit detect any problems, the indicator light will flash per failure condition (see Troubleshooting Guide) until the condition has been corrected and the unit passes the next test.

## TEST SWITCH INDICATOR STATUS & TROUBLESHOOTING GUIDE

The charge indicator will be lit Solid Red when charging, and will be lit Solid Green when fully charged and in the standby mode.

The indicator will flash Green when self-testing. If a problem is encountered during the test cycle, the indicator will flash Red, according to the diagnostic codes below:

Mode	LED Indicators Status	Error	EM Driver Status / Mode	Corrective Action
<b>Normal Mode</b>	Solid Green	None	Battery fully charged/System OK	/
	Solid Red	None	Battery is charging	/
	None.Both LEDs OFF	None	In EM mode or emergency run-time is ended	/
	Flashing Green	None	Self-Diagnostic test underway	/
<b>Fault Mode</b>	Flashing Red	Lamp	lamp failure	1.change a new product. 2.contact customer service.

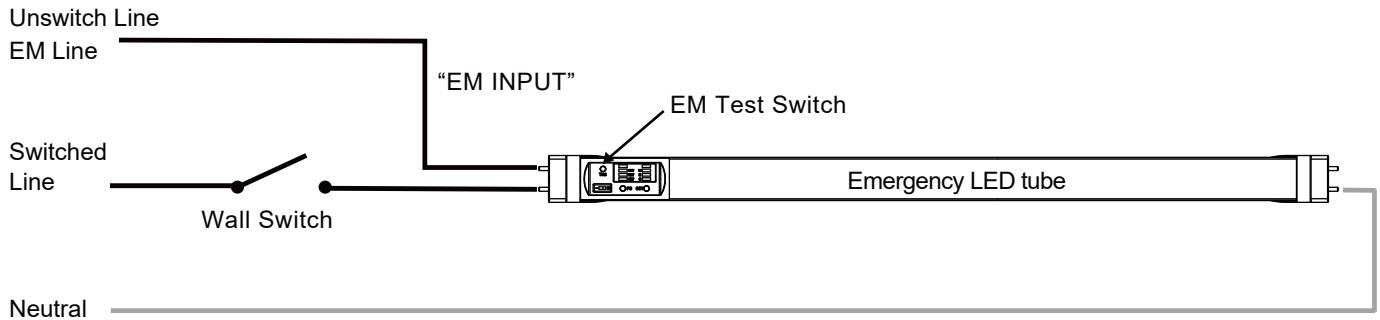
## MANUAL TEST

Test Mode	Description	Action	Status	Quit
<b>Initial Testing</b>	quick discharge test	press and hold the test button	LED load will light on	/
<b>Monthly</b>	30 second test	press the test button 1s	LED load will light up for 30s	hold the test button/switch for 1s
<b>Annually</b>	90 minute test	press the test button 2 times continuously	LED load will light up for 90 minutes	hold the test button/switch for 1s
<b>Suspend Function</b>	transportation/storage/ disconnecting the battery,etc	during annually test, pressing the test button more than 3s continuously	shut off the power function	powered on again

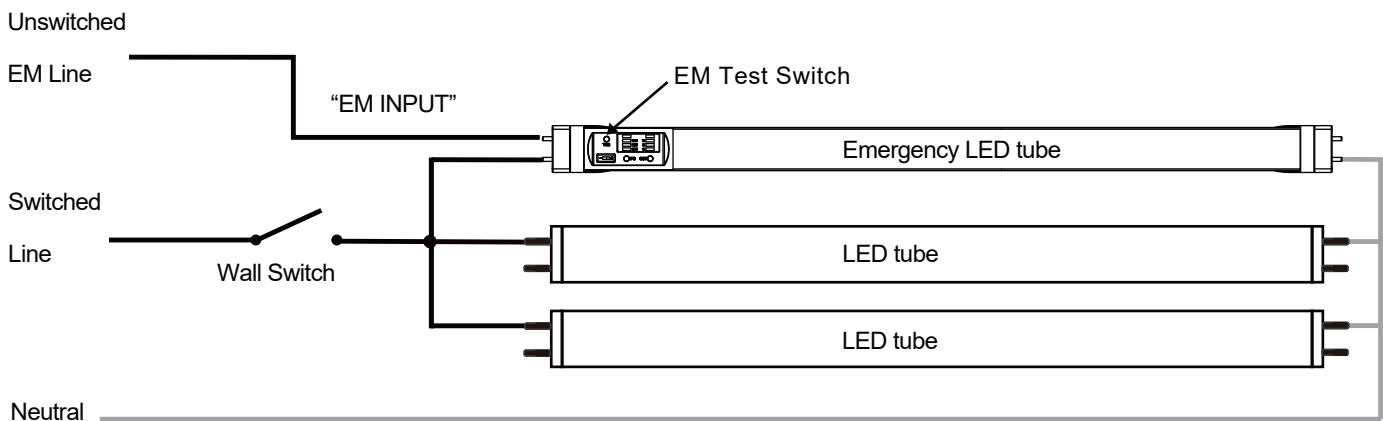
**WIRING DIAGRAM**

• **Note:** this lamp requires two AC Line supplies. One switched line for normal lamp use, and one always ON connected to the Emergency End (EM) input of the lamp to recharge the lamp batteries. Turn OFF all AC power before rewiring and installation.

**1. SIGLE LAMP WIRING DIAGRAM:**



**2. MULTIPLE LAMP WIRING FOR DOUBLE END POWER LAMPS:**



**3. MULTIPLE LAMP WIRING FOR SINGLE END POWER LAMPS:**

