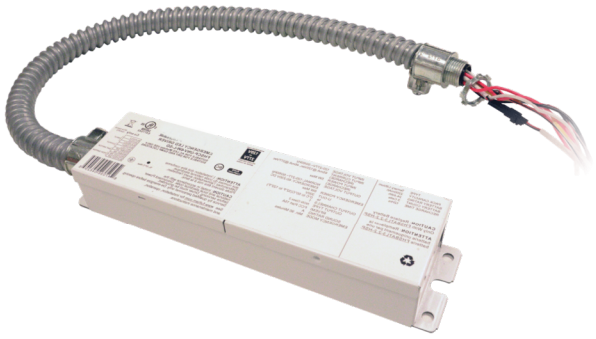
READ ALL INSTRUCTIONS BEFORE INSTALLATION. IMPROPER INSTALLATION MAY RESULT IN ELECTRIC SHOCK, SERIOUS INJURY, OR DEATH. FOLLOW ALL APPLICABLE ELECTRICAL CODES FOR YOUR SAFETY.

## IMPORTANT SAFETY INSTRUCTIONS

### Power Requirements

An unswitched AC power source of 120–277V is required. The unit includes double insulation between the supply and battery circuit and an intermittent recharging circuit. The recharging system remains safe under abnormal conditions.



### Cautions

- For use with metal-enclosed wiring systems only.
- Do not mount near gas or electric heaters.
- Do not allow power cords to contact hot surfaces.
- Not for outdoor use.
- Use only with manufacturer-approved accessories.
- Mount in locations and at heights to prevent unauthorized tampering.
- Battery is rechargeable ternary lithium and must be recycled or properly disposed of.

### Emergency Driver Use

This emergency driver is intended solely for its designated application. Servicing must be performed by qualified personnel.

### Indicator LED & Testing

The indicator LED confirms battery charging when AC power is present. As required by code:

- Test for 30 seconds monthly using the test switch.
- Conduct a 90-minute discharge test annually to ensure the LED light source remains illuminated throughout.

### Installation & Wiring

WARNING: Disconnect AC power before installing or wiring the emergency driver.
The emergency battery requires a minimum 1-hour charge before initial testing. A full charge is reached in 12 hours.

### Important for Warranty

To maintain system performance and warranty coverage, the battery must be recharged at least once per year prior to installation.

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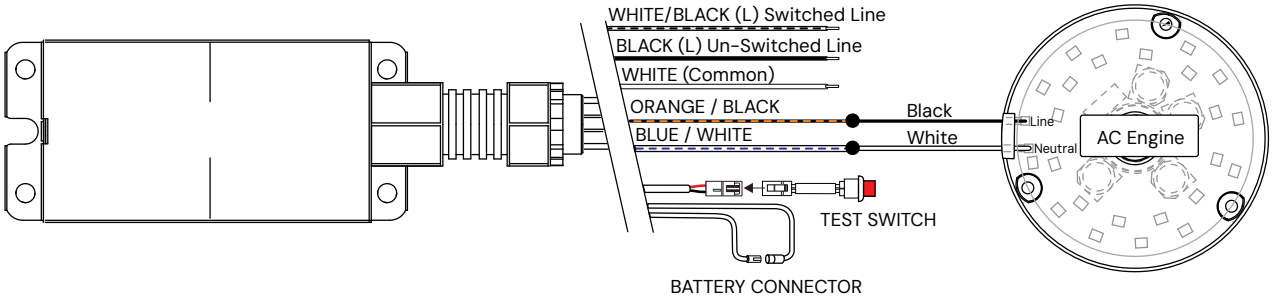
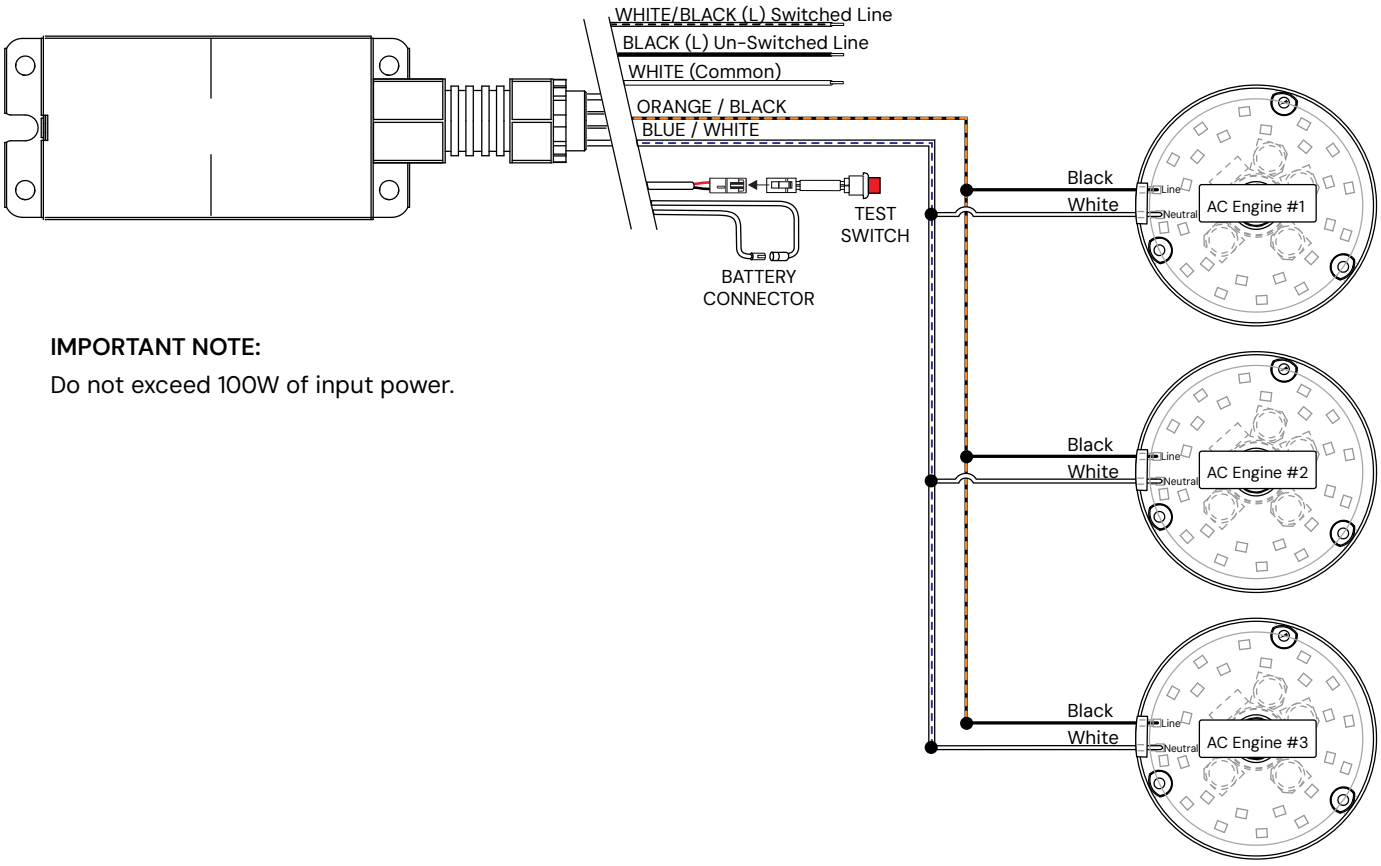
## WIRING DIAGRAM #1

**Single Luminaire**




## WIRING DIAGRAM #2

**Multiple Luminaires**




**IMPORTANT NOTE:**

Do not exceed 100W of input power.

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## INSTALLATION STEPS

**Step 1: Determine Emergency Power and Calculate Emergency Light Output**

The 11234-XEM driver features programmable output. Setting the appropriate emergency power level is critical to achieving the required illumination.

To calculate emergency light output, multiply the emergency wattage by the luminaire's efficacy (lm/W).

Example: If the luminaire efficacy is 120 lm/W and the emergency power is set to 3W, the resulting emergency light output is:

120 lm/W × 3W = 360 lm

**Step 2: Evaluate Emergency Illumination Levels Using Lighting Design Software**

Use industry-standard lighting simulation software to determine emergency illumination levels based on:

- Luminaire layout and quantity
- Mounting height
- Emergency light output (calculated in Step 1)
- The luminaire's original IES file

If the calculated illumination fails to meet life safety code requirements, repeat Step 1 by increasing the emergency power setting, selecting a higher-efficacy luminaire, or adding more fixtures.

### Compliance and Responsibility

The 11234-XEM complies with UL 924. Tables 1 and 2 (refer to UL test data) provide baseline guidelines for minimum emergency power and maximum mounting height to achieve 1 foot-candle of illumination using a single fixture with typical Lambertian distribution.

Final validation of illumination levels must be performed on-site by the lighting designer or contractor to ensure compliance with federal, state, and local life safety codes. Actual results may differ from theoretical simulations.

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## Compliance and Responsibility

Table 1. Minimum emergency power required to achieve 1 foot-candle of illumination at a 10-foot mounting height vs. Luminaire Efficacy.

| Luminaire Efficacy (lm/W) | Min. EM Power @ 10ft = 1fc |
|---|---|
| 100 | 3.9W |
| 120 | 3.3W |
| 140 | 2.8W |
| 160 | 2.5W |
| 180 | 2.2W |

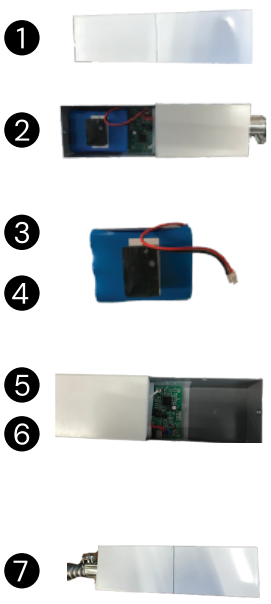
Table 2. Max. Mounting Height to Achieve 1fc Based on Luminaire Efficacy and EM Wattage.

| Luminaire Efficacy (lm/W) | Max. Mounting Height for 1fc | | | |
|---|---|---|---|---|
| | EM3W | EM4W | EM5W | EM6W |
| 100 | 8.9ft | 10.1ft | 11.2ft | 12.1ft |
| 120 | 9.6ft | 10.9ft | 12.1ft | 13.2ft |
| 140 | 10.3ft | 11.7ft | 13.0ft | 14.2ft |
| 160 | 10.9ft | 12.5ft | 13.9ft | 15.1ft |
| 180 | 11.5ft | 13.2ft | 14.6ft | 16.0ft |

## Battery Replacement & Servicing Instructions

**Warning:** Turn off power before servicing the fixture.

1. **Loosen the Nut**
   Unscrew the nut securing the battery cover.
2. **Access the Battery**
   Slide open the battery cover and carefully pull out the internal wiring.
3. **Disconnect the Battery**
   Unplug the battery connector from the circuit board.
4. **Prepare New Battery**
   Get the replacement battery ready.
5. **Install New Battery**
   Plug in the new battery connector and tuck all wires neatly back inside the housing.
6. **Reassemble**
   Slide the battery cover back into place and tighten the nut.
7. **Finish**
   Verify that the assembly is secure and properly closed.



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## TEST SWITCH INDICATOR STATUS

| Indicators Type | LED Indicators Status | EM Driver Status / Mode |
|---|---|---|
| Bi-Color Indicator | Solid Green | System OK / AC OK (Self-diagnostic Enabled or Disabled). |
| | None. Both LEDs Off | Normal working in EM mode. |
| | Slow Flashing Red, 4s On / 1s Off | Battery not detected. Check battery switch or connection. |
| | Flashing Red, 1s On / 1s Off | Replace battery. |
| | Flashing Green, 1s On / 1s Off | Self-diagnostic test underway. |
| | Fast Flashing Red, 0.1s On / 0.1s Off | Abnormal driver performance, replace driver. |
| | Very Slow Flashing Red, 1s On / 7s Off | Over temperature. |
| | Very Slow Flashing Red, 4s On / 4s Off | 1. LED output load is short/ Over Current/ Over Voltage/ Open load/ OCP in EM Mode.<br>2. Output circuit failure in EM mode. |

### Test Switch Operations

**Emergency Mode Activation**

To enter emergency mode while the fixture is connected to normal AC power, press and hold the test button for more than 1 second.

**Manual Self-Diagnostic Activation**

After the battery is fully charged (minimum 12 hours), press the test button three times quickly within 2 seconds to manually start the self-diagnostic cycle.

To cancel the cycle once initiated, press and hold the test button for 10 seconds.

**Check or Change Self-Diagnostic Status**

To check whether the self-diagnostic function is enabled or disabled, press the test button twice quickly within 2 seconds. The LED indicator will blink for three cycles to indicate the current status:

- Enabled: 2.5 seconds ON / 0.5 seconds OFF
- Disabled: 0.5 seconds ON / 2.5 seconds OFF

**Load Test Activation**

If the LED indicator is blinking red (4 seconds ON / 4 seconds OFF), press and hold the test button for 10 seconds to begin a self-diagnostic load test.