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AcuityBrands ELM4L Emergency Lighting Unit Instruction Manual

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Emergency Lighting Unit Instruction Manual

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IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS! SAVE THESE INSTRUCTIONS AND DELIVER TO OWNER AFTER INSTALLATION

- To reduce the risk of death, personal injury or property damage from fire, electric shock, falling parts, cuts/abrasions, and other hazards please read all warnings and instructions included with and on the fixture box and all fixture labels.
- Before installing, servicing, or performing routine maintenance upon this equipment, follow these general precautions.
- Installation and service of luminaires should be performed by a qualified licensed electrician.
- Maintenance of the luminaires should be performed by person(s) familiar with the luminaires' construction and operation and any hazards involved. Regular fixture maintenance programs are recommended.
- It will occasionally be necessary to clean the outside of the refractor/lens. Frequency of cleaning will depend on ambient dirt level and minimum light output which is acceptable to user. Refractor/lens should be washed in a solution of warm water and any mild, non-abrasive household detergent, rinsed with clean water and wiped dry. Should optical assembly become dirty on the inside, wipe refractor/lens and clean in above manner, replacing damaged gaskets as necessary.

- DO NOT INSTALL DAMAGED PRODUCT! This luminaire has been properly packed so that no parts should have been damaged during transit. Inspect to confirm. Any part damaged or broken during or after assembly should be replaced.
- Recycle: For information on how to recycle LED electronic products, please visit www.epa.gov.
- These instructions do not purport to cover all details or variations in equipment nor to provide every possible contingency to meet in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's or owner.



WARNING RISK OF ELECTRIC SHOCK

- Disconnect or turn off power before installation or servicing.
- Verify that supply voltage is correct by comparing it with the luminaire label information.
- Make all electrical and grounded connections in accordance with the National Electrical Code (NEC) and any applicable local code requirements.
- All wiring connections should be capped with UL approved recognized wire connectors.



CAUTION RISK OF INJURY

- Wear gloves and safety glasses at all times when removing luminaire from carton, installing, servicing or performing maintenance.
- Avoid direct eye exposure to the light source while it is on.



WARNING RISK OF BURN

- Allow lamp/fixture to cool before handling. Do not touch enclosure or light source.
- Do not exceed maximum wattage marked on luminaire label.
- Follow all manufacturer's warnings, recommendations and restrictions for: driver type, burning position, mounting locations/methods, replacement and recycling.



CAUTION RISK OF FIRE

- Keep combustible and other materials that can burn, away from lamp/lens.
- Do not operate in close proximity to persons, combustible materials or substances affected by heat or drying.



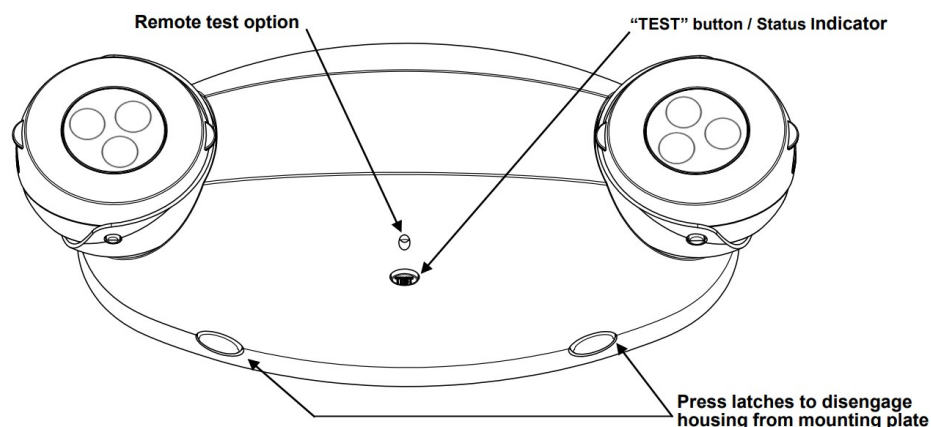
CAUTION: RISK OF PRODUCT DAMAGE

- Never connect components under load.
- Do not mount or support these fixtures in a manner that can cut the outer jacket or damage wire insulation.
- Unless individual product specifications deem otherwise: Never connect an LE product to dimmer packs, occupancy sensors, timing devices, or other related control devices. LED fixtures must be powered directly off a switched circuit.
- Unless individual product specifications deem otherwise: Do not restrict fixture ventilation. Allow for some volume of airspace around fixture. Avoid covering LED fixtures with insulation, foam, or other material that will prevent convection or conduction cooling.
- Unless individual product specifications deem otherwise: Do not exceed fixtures maximum ambient temperature.
- Only use fixture in its intended location.
- LED products are Polarity Sensitive. Ensure proper Polarity before installation.
- Electrostatic Discharge (ESD): ESD can damage LED fixtures. Personal grounding equipment must be worn during all installation or servicing of the unit.
- Do not touch individual electrical components as this can cause ESD, shorten lamp life, or alter performance.
- Some components inside the fixture may not be serviceable. In the unlikely event your unit may require service, stop using the unit immediately and contact an ABL representative for assistance.
- Always read the fixtures complete installation instructions prior to installation for any additional fixture specific warnings.
- Verify that power distribution system has proper grounding. Lack of proper earth ground can lead to fixture failure and may void warranty.

All luminaires that contain electronic devices that generate frequencies above 9kHz from any component within the luminaire comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference (2) This device must accept any interference received, including interference that may cause undesired operation. Failure to follow any of these instructions could void product warranties. For a complete listing of product Terms and Conditions, please visit www.acuitybrands.com. Acuity Brands Lighting, Inc. assumes no responsibility for claims arising out of improper or careless installation or handling of its products.

EMERGENCY LIGHTING UNIT

NOTE: Product versions that are certified in the CA Title 20 Appliance Efficiency Database are marked BC on the product label.



IMPORTANT SAFEGUARDS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS AND WARNINGS MAY RESULT IN DEATH, SERIOUS INJURY OR SIGNIFICANT PROPERTY DAMAGE – For your protection, read and follow these warnings and instructions carefully before installing or maintaining this equipment. These instructions do not attempt to cover all installation and maintenance situations. If you do not understand these instructions or additional information is required, contact Lithonia Lighting or your local Lithonia Lighting distributor.

WARNING: RISK OF ELECTRIC SHOCK – NEVER CONNECT TO, DISCONNECT FROM OR SERVICE WHILE EQUIPMENT IS ENERGIZED.

WARNING: DO NOT USE ABRASIVE MATERIALS OR SOLVENTS. USE OF THESE SUBSTANCES MAY DAMAGE FIXTURE, WHICH MAY RESULT IN PERSONAL INJURY.

WARNING: RISK OF PERSONAL INJURY – This product may have sharp edges. Wear gloves to prevent cuts or abrasions when removing from carton, handling, installing and maintaining this product.

WARNING: The battery used in this device may present a risk of fire or chemical burn if mistreated. Temperature range 50 °F -104 °F (10°C – 40°C). Do not disassemble, heat above 70° C (158° F), or incinerate. Replace battery only as directed on the battery label and page 5 of these instructions. Use of unauthorized battery voids warranty and UL listing of this product and may present a risk of fire or explosion.

- Disconnect A.C. power before servicing.
- All servicing should be performed by qualified personnel.
- Consult your local building code for approved wiring and installation.
- Do not use outdoors unless used with Acuity Brands accessories appropriate to the application.
- Do not mount near gas or electric heater.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by

unauthorized personnel.

- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use.

INSTALLATION and WIRING

IMPORTANT: Provide each unit with a single-phase AC un-switched power supply from a circuit used for normal lighting. Operating voltage shown on table on page 3.

NOTE: The battery must be connected to the charger board prior to applying AC power to the unit. Battery damage may occur if the battery is connected longer than 24 hours without continuous AC power provided. See also "Important Battery Information",

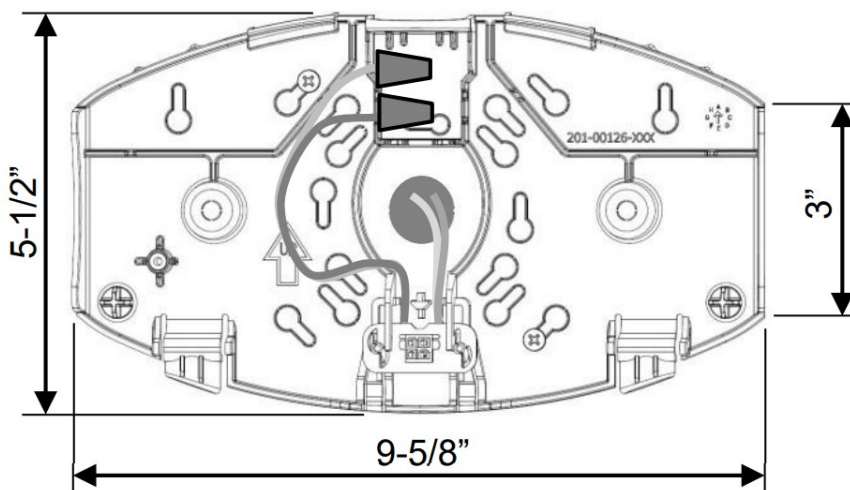
NOTE: To meet the minimum illumination requirements of NFPA 101 (current Life Safety Code), the maximum mounting height from ground of ELM4L is 26.3 feet, and of ELM6L is 32.9 feet.

NOTE: Do not connect battery or power unit until remote units (if applicable) are fully connected and wires are isolated from other potentials (i.e. remote wires shall be isolated from earth ground).

JUNCTION BOX MOUNTING

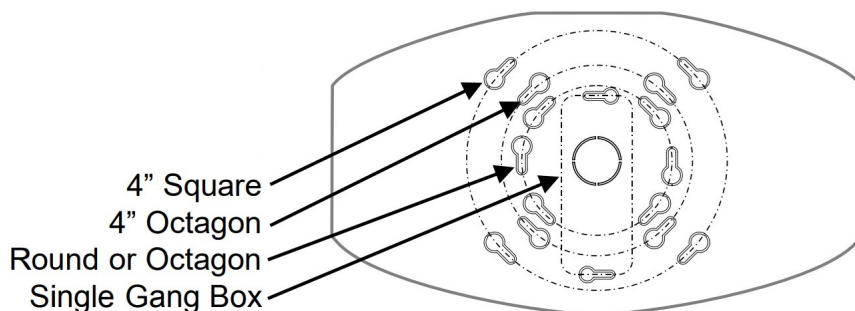
1. On the mounting plate, remove the round center knockout and the desired pair of keyhole junction box knockouts.

Mounting Plate:



2. Route leads through the center opening and use code-approved connectors to make the connections. (See Wiring Diagram, page 3). Dress wires and connectors inside junction box. Units with Remote Lamp Wires: Connections to remotes wires should also occur in the junction box. If no remote lamps are connected, remote lamp leads (+ and – low voltage DC) should be left capped and dressed in mounting plate as shown.
3. Taking care not to pinch wires or connectors dressed inside junction box, secure mounting plate to junction box screws.

NOTE: To ensure proper engagement of the mounting plate latches to the housing, DO NOT OVER-TIGHTEN THE SCREWS.



CONDUIT SURFACE MOUNTING

NOTE: to avoid interference with components in the housing, use the most compact wire connectors appropriate to the wire gauge.

1. At upper center of the mounting plate, remove the conduit connection knockout. Also remove at least three keyhole knockouts. Attach conduit and secure mounting plate to wall surface using fasteners with a minimum pullout rating of 30 lbs. each.

Figure-2

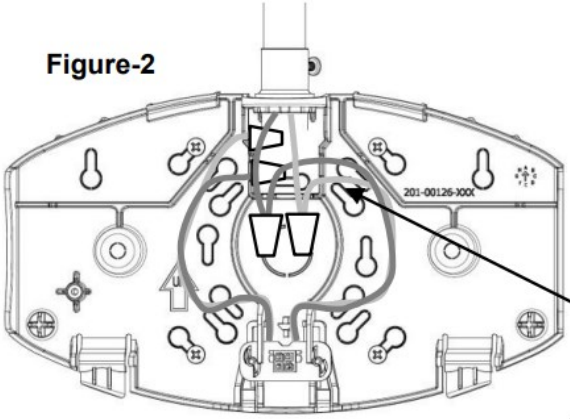
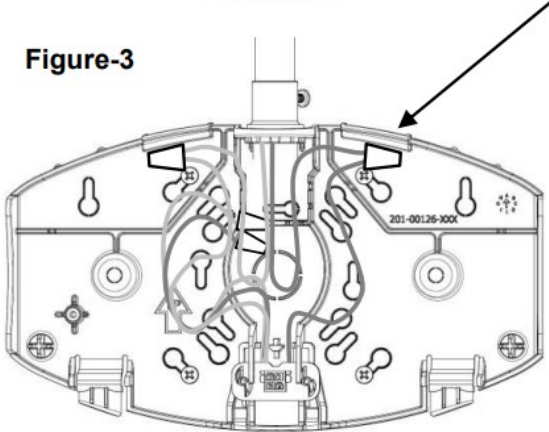
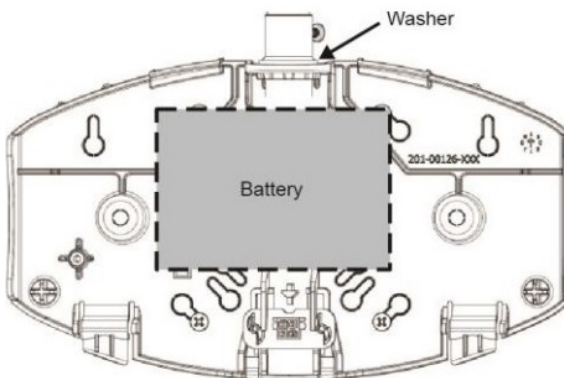
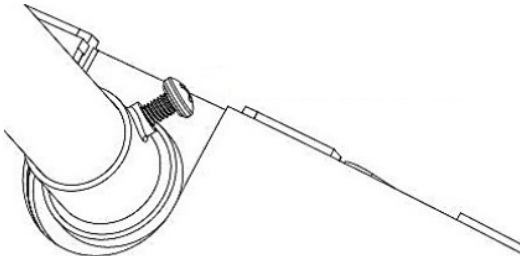


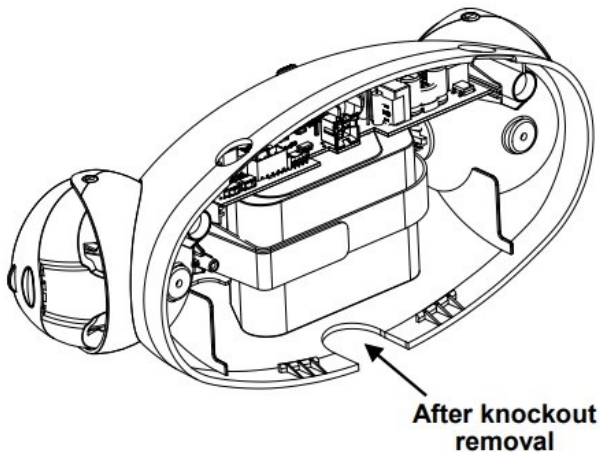
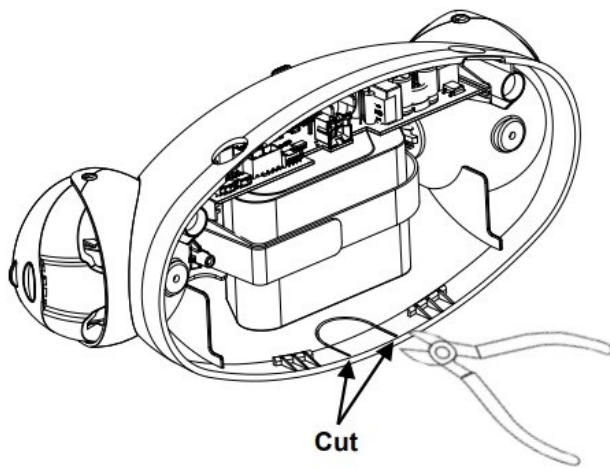
Figure-3



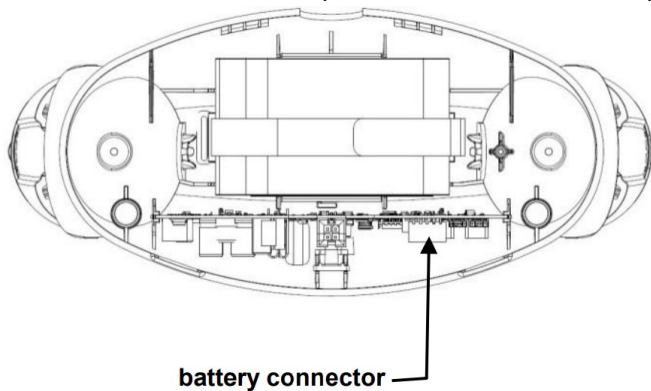
2. See Wiring Diagram, page 3. Make code-approved wire connections to the AC power supply, and remote lamps (if applicable). Dress wires into slots so that the connectors are secured as shown in Figure 2 or **Figure 3**



3. Remove U-shaped knockout from top center of housing. Hint: Use a pair of wire cutters first to start a cut in the thick portion at each side of the knockout, then finish breaking it out with pliers.

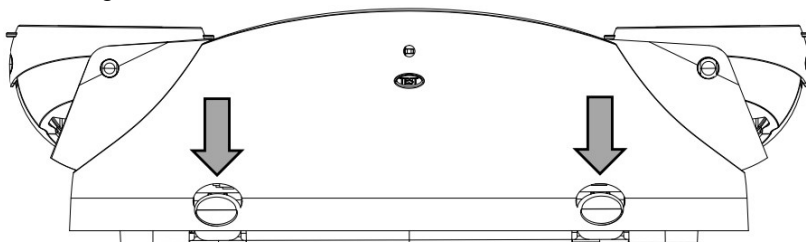


4. Connect the polarized battery plug to the charger board. Make certain that the battery cable is routed to avoid interference with the AC input connector or other components.



5. **Housing attachment to mounting plate:**

Make certain all wires and connectors are routed to avoid interference with other components. Align latch openings on underside of housing with latch buttons on mounting plate. Firmly push housing straight onto mounting plate, making certain all four latches are fully engaged, and the housing is closely aligned to the mounting surface.



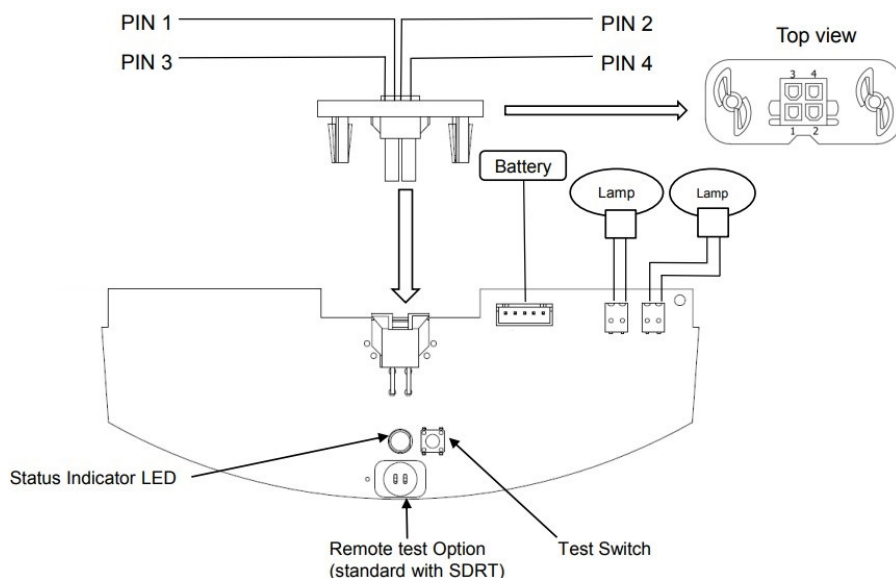
Federal Communications Commission (FCC) Requirements:

This device complies with FCC Title 47, Part 15, Subpart B. This device may not cause harmful interference.

WIRING DIAGRAM

Input from branch circuit. See label on wire pair for voltage requirement.

DC output to the remote units. Yellow or Red stripe (+) Blue or Black stripe (-)



| Input Voltage | Pin No. | Wire color | Wire Label | Battery Type |
|-------------------|---------|----------------------|---------------|--------------|
| 120V-347V | 1 | White | HOT 120V-347V | NiCd |
| | 3 | Black or Orange | | |
| 5V-30V | 2 | Yellow or Red stripe | | LTPOnly |
| | 4 | Blue or Black stripe | | |
| Battery Type | | | Total Load | |
| NiCd | | | 6.6W | |
| LiFePO4 (LTP) | | | 11.0W | |
| LiFePO4 (LTP HO) | | | 22.0W | |
| LiFePO4 (LTP EHO) | | | 33.0W | |

TESTING and MAINTENANCE

NOTE: Emergency lighting systems should be tested in accordance with NFPA 101 or as often as local codes require, to ascertain that all components are operational.

NOTE: Allow batteries to charge for 24 hours before initial testing.

Manual testing:

If the batteries are sufficiently charged, either press and release the “TEST” button or use the RTKIT (remote tester accessory, up to 40’ away for SDRT units only) on the bottom of the unit to activate a 60-second test, during which the lamps will turn on. Triggering either option a second time will enable a 90-minute tests indicated by 5 flashes of the lamps. Triggering either option a third time will disable manual testing.

Self-Diagnostics (SDRT feature)

Units with this option automatically perform a 5-minute selfdiagnostic test of the charging electronics, battery, and lamps every 30 days, and a 90-minute test every year, indicating system status as shown in the table at right. First self test occurs after 15 days of continuous AC Power.

Postponing a self-test:

If an automatic self-test occurs at a time when it is not desirable for the unit lamps to be on, it can be postponed for 8 hours either by pressing and releasing the “TEST” button or by using RTKIT (remote tester accessory, up to 40’ away).

Cancelling emergency operation:

Press and hold the “TEST” button for several seconds or deactivate using the RTKIT (remote tester accessory, up to

40' away), during which the status indicator will flash until the lamps turn off. This restores the AC Reset state in which the unit is shipped.

Load-Learning feature:

Self-Diagnostic units automatically 'learn' their total connected lamp load during the first scheduled self-test (~15 days). The load-learning process can be initiated manually and should be initiated whenever the total connected lamp load of the unit is changed, or potentially troubleshooting a lamp error (unit indicates a lamp error yet all lamps are operating correctly) or a lamp is replaced. To clear the current load-learn, press and hold the "TEST" button for 7 seconds (count flashes), during this period the lamps will turn on. After 7 seconds, release the button, the lamps will turn off within 2 seconds indicating load clear is complete. If lamps stay on longer, the load clear was not successful and the process should be repeated. A new load learn will automatically take place at the next discharge from a fully charge state (solid green status indicator).

Clearing a failure indication:

After a failure condition has been corrected and power is restored to the unit, clear the failure indication either by pressing the "TEST" button once or by using the RTKIT (remote tester accessory, up to 40' away).

IMPORTANT BATTERY INFORMATION:

Batteries are perishable items. For best results, it is recommended that the batteries receive an initial charge within the first twelve months of the manufacture date of the fixture. In many cases, batteries beyond the initial charge recommendation time frame will recover if fully charged soon after installation. If such a battery does not recover after a full initial charge, it should be replaced. The manufacture date can be found on the outside of the unit packaging and on the product label as part of the Date Code / Series. The first two digits in the date code represent the year and the second two digits represent the month.

Unit Status Indications

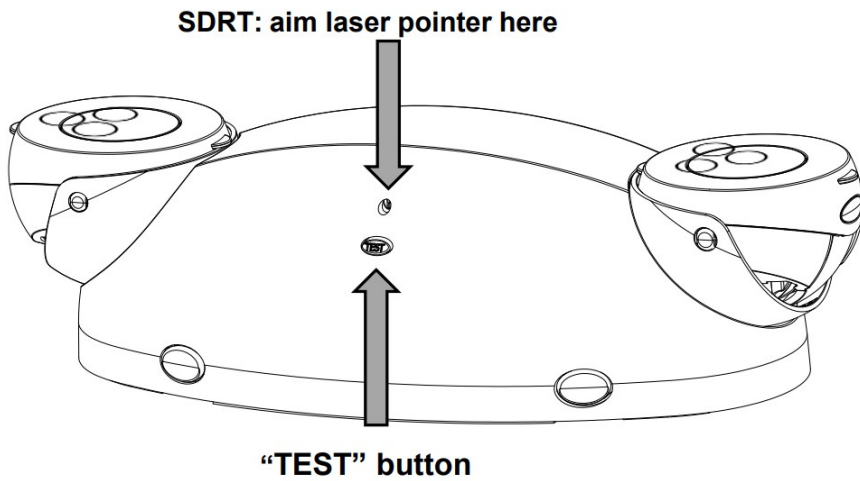
The "TEST" button illuminates to indicate the following conditions:

| Indication: | Status: |
|--------------------|--|
| Off | Unit is off |
| Flashing green | Unit is in Emergency operation or Test |
| Solid amber | Battery is charging |
| Solid green | Battery is fully charged |
| Flashing R / G | Manual test, battery not fully charged (SDRTonly) |
| 1x red flashing | Battery failure (SDRT only) |
| 2x red flashing | Lamp failure (SDRT only) |
| 3x red flashing | Charger / electronics failure (SDRT only) |
| Flashing R/Amber | Unable to charge |
| Solid Red | Battery is disconnected |

Remote Test (SDRT): (RTKIT sold separately)

Units with the self-diagnostics/remote test feature allows manual test activation using a laser pointer. Aim the laser beam straight onto the circular area labeled near the "TEST" button for a few moments to activate a 60-second test. (See also "Manual testing") A test in progress may be cancelled by aiming the beam at the test area again.

NOTE: The remote tester should not be used to initiate the Load Learning feature.



BATTERY REPLACEMENT

Unit features and battery details shown may vary. See also “Battery Connection”,

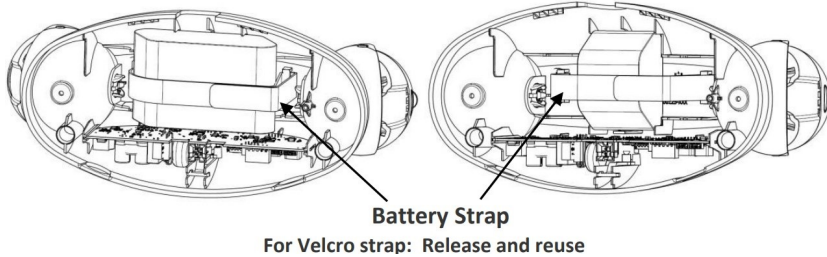
1. Disconnect battery from charger board. Release battery strap.
2. Replace battery, secure the strap snugly, and reconnect to the charger board
3. Re-assemble the unit

BATTERY HANDLING WARNINGS:

- Dispose of used batteries promptly.
- Keep away from children.
- Do not disassemble.
- Do not dispose of in fire.

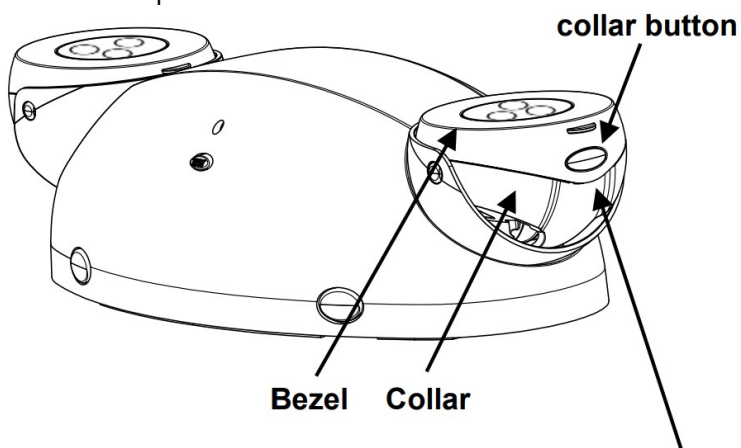
LiFePO4 Battery (LTP, HO, EHO)

NiCd Battery (standard)



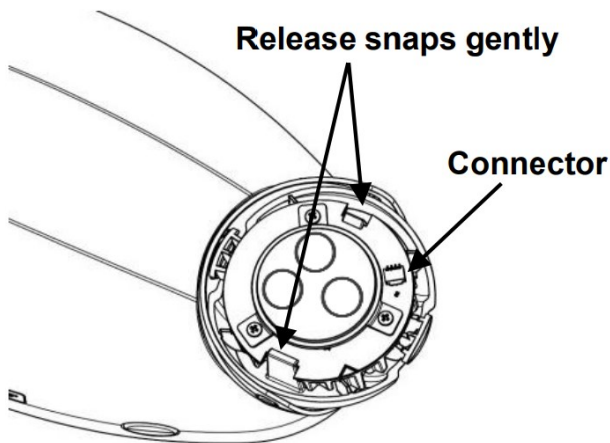
LAMP REPLACEMENT

1. Remove lamp bezel as shown below.



Carefully flex this edge free from collar button

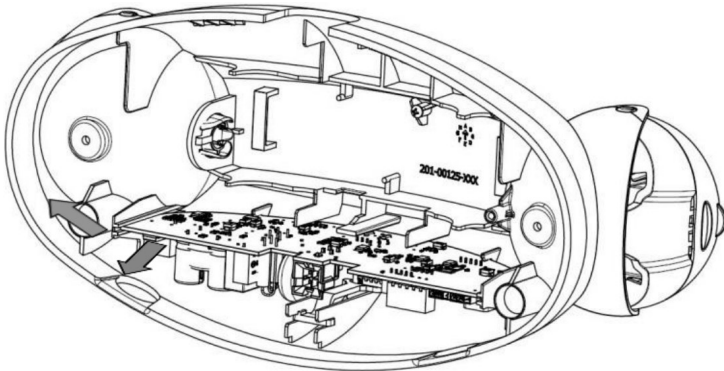
2. Gently bend the snap at each side of the collar to release the lamp assembly. Unplug the connector from the lamp assembly.



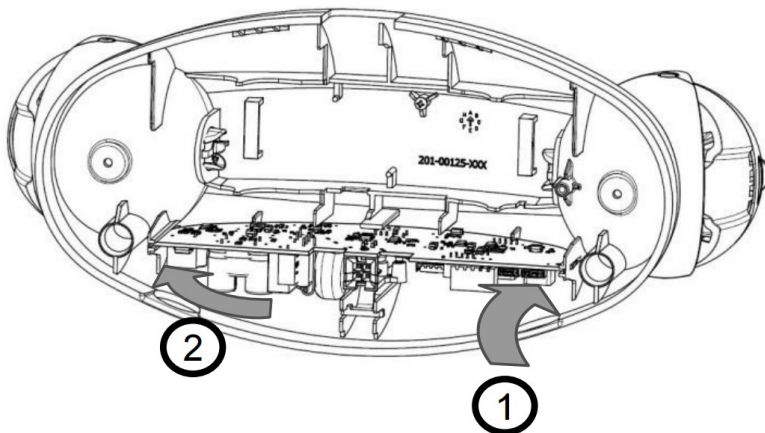
3. Route the lamp wires through one of the center spaces under the new lamp assembly, and replace it firmly under the snaps on the collar, making sure the wires are not pinched. Plug the lamp connector and replace the bezel.

CHARGER BOARD REPLACEMENT

1. With the unit oriented as in the below view, flex the channel at the left end of the charger board outward to release and remove it. Unplug the battery, lamps, and other connections.



2. Re-connect all components to the new charger board, routing wires as before. For insertion of PCB, insert right side of PCB first, followed by left side (click should be heard).
3. Make sure all wires are routed so as not to interfere with proper assembly of the housing onto the mounting plate. Re-assemble the unit







Documents / Resources



[AcuityBrands ELM4L Emergency Lighting Unit](#) [pdf] Instruction Manual
ELM4L Emergency Lighting Unit, ELM4L, Emergency Lighting Unit, Lighting Unit

References

-  [Acuity Brands | Lighting, Controls, and Building Management Solutions](#)
-  [U.S. Environmental Protection Agency | US EPA](#)
-  [Lithonia Lighting® | Best Value in Lighting](#)
-  [Lithonia Lighting® | Best Value in Lighting](#)

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