

# LITETRONICS®

## LED Emergency Battery Backup

### Installation Instructions

Ordering Code: EB10

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#### WHAT COMES IN THE BOX

- (1) EB10 unit
- (1) Installation instructions
- (8) Wire nuts

#### TOOLS NEEDED

- Wire Stripper
- Wire Cutter
- Phillips Screwdriver
- Step Ladder



#### OVERVIEW

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Litetronics Emergency Battery Backup unit (EB10) delivers 90-minutes of power to fixtures in the event of a power outage. When the normal power supply is present, the unit will fully charge and remain in stand-by mode. When a power outage occurs, the unit will switch to emergency mode and deliver 10W power for a minimum of 90-minutes. When power is restored, the unit will switch back to stand-by mode and begin recharging.

The EB10 is the main component to the backup system, but must be accompanied by one of two indicator modules, which provide a set of visible indicator lights that signify the status of operation for the EB10. Each option offers a different approach to mounting/installation based on the application.

- EBCM (Emergency Backup Ceiling-mounted Indicator Module) - This option connects to the EB10 and can be mounted in a grid panel adjacent to the fixture.
- EBAM (Emergency Backup Adhesive-mounted Indicator Module) - This option applies to any non-grid ceiling application. It includes an adhesive strip that will affix to the surface of a fixture or nearby structural element.

# SAFETY WARNING AND INSTRUCTIONS

When using electrical equipment, basic safety precautions should always be observed. Read and follow all safety instructions.

- Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED Emergency Backup. Check for enclosed wiring and components.
- Risk of fire or electric shock. This LED Emergency Backup installation requires knowledge of luminaire and electrical systems. If not qualified, do not attempt to install. Contact a qualified electrician.
- Before installation, make certain the AC power to the fixture is off.
- The electrical rating of this product is 100-277 Vac. Installer must confirm that there is 100-277 Vac to the fixture before installation.
- To prevent electrical shock, only mate unit connector after installation is complete and before the AC power to the fixture is back on.
- Do not use outdoors.
- This LED Emergency Backup unit requires an un-switched AC power source of 100-277 Vac, 50/60Hz.
- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it is not subjected to tampering by unauthorized personnel. The use of accessory equipment is not recommended by the manufacturer and may cause an unsafe condition.
- Do not use this equipment for other than its intended use.
- Use with grounded, UL/ETL listed, dry or damp location rated fixtures.

## COMPATIBILITY

The EB10 is compatible with the following Litetronics products and part numbers.

GARAGE LIGHT	LINEAR HIGH BAY	STRIP RETROFIT C-SERIES	VOLUMETRIC TROFFER C-SERIES
GL39URXXDLP	LHB78XX	SRCS4	VLCT1
GL59URXXDLP	MAGNETIC RETROFIT	SRCS8	VLCT2
SQUARE GARAGE LIGHT	RFM3T2XXA	SRCS4A	VLCT4
GL80	RFM2T4XXA	SRCS8A	VLCT440
LIGHT PANEL RETROFIT C-SERIES	RFM3T4XXB	SRCS425XX	VOLUMETRIC RETROFIT
PRCT1XX	RFM2T4XXEW	SRCS846XX	VRT1XX
PRCT2XX	RFM3T4XXDW	VIVID FRAME	VRT2XX
PRCT4XX	RFM262T1XXDL	VLFT2XX	VRT4XX
LIGHT PANEL RETROFIT	RFM131T1XXDL	VLFT4XX	VRT2XXW
PRT1XX	STAIRWELL FIXTURE	VAPOR TIGHT	VRT4XXW
PRT2XX	SWFSX	VTCS4XX	WRAP FIXTURE
PRT4XX	STRIP FIXTURE	VTCS8XX	WFSX
PRT4XXW	SF40S4XX	VT30U54XXP	
LIGHT PANEL	SF60S8XX	VT55U58XXP	
PT1XX	SELECTABLE STRIP FIXTURE	VOLUMETRIC TROFFER	
PT2XX	SFS2	VLT1XX	
PT4XX	SFS4	VLT2XX	
PT44070	SFS8	VLT4XX	
PST1	LED STRIP FIXTURE C-SERIES		
PST2	SFCS425XX		
PST4	SFCS846XX		

## COMPATIBILITY - (CONTINUED)

### UL924 STATEMENT OF COMPLIANCE AND COMPATIBILITY

PLEASE NOTE: When used with a sensor-equipped fixture from the Approved List of Litetronics fixtures above, the sensor will be bypassed and disabled by the EB10 when wired correctly per the installation instructions and cause the fixture to remain illuminated during periods of vacancy when the compatible fixture is powered by the EB10 power source. As such, EB10 is UL924 compliant.

**GL39\*\*S, GL59\*\*S with Sensor:** Not compliant with UL 924. Sensor access unavailable.

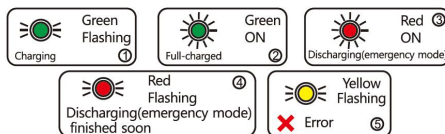
**SWFS4 with Sensor:** Compliant with UL 924 if Sensor is rewired to EB10 per Installation Wiring Diagram.

## EB10 OPERATING INSTRUCTIONS

- Make sure that installation of the EB10 includes one of the two indicator modules.
- Once installed and powered on, the battery will begin to charge. The green, flashing indicator light will remain on until fully charged, which takes approximately 24 hours.
- Once fully charged, the green indicator light will illuminate and remain on as long as the battery remains full.
- If yellow light is flashing, a problem has been detected. Contact Litetronics for troubleshooting.
- In the event of a power failure, the fixture delivers 90 minutes of emergency light, during which the red light will remain on, then flash on/off when battery is low.

### INDICATOR MODULE LIGHT REFERENCE GUIDE

1. Green/flashing = Charging
2. Green/solid on = Fully charged
3. Red/solid on = Discharging/emergency mode
4. Red/flashing = Discharging with limited battery life remaining
5. Yellow/flashing on = Error. Contact Litetronics for troubleshooting



### TESTING

- The fixture includes an automatic monthly self-testing function, which operates at 30-day intervals for 5 minutes and 360-day intervals for 90 minutes. During testing, the red indicator light will remain on.
- Additional testing and demo functionality is available via remote control, part # TR01 (sold separately).

### MAINTENANCE

Although no routine maintenance is required to keep the emergency battery backup functional, it should be checked periodically to ensure that it is working. The following schedule is recommended:

- Visually inspect the charge indicator light monthly. It should be illuminated.
- Test the emergency operation of the fixture at 30-day intervals for a minimum of 30 seconds.
- Conduct a 90-minute discharge test once a year. LED tubes should operate at up to 10W for at least 90 minutes.

### SERVICE

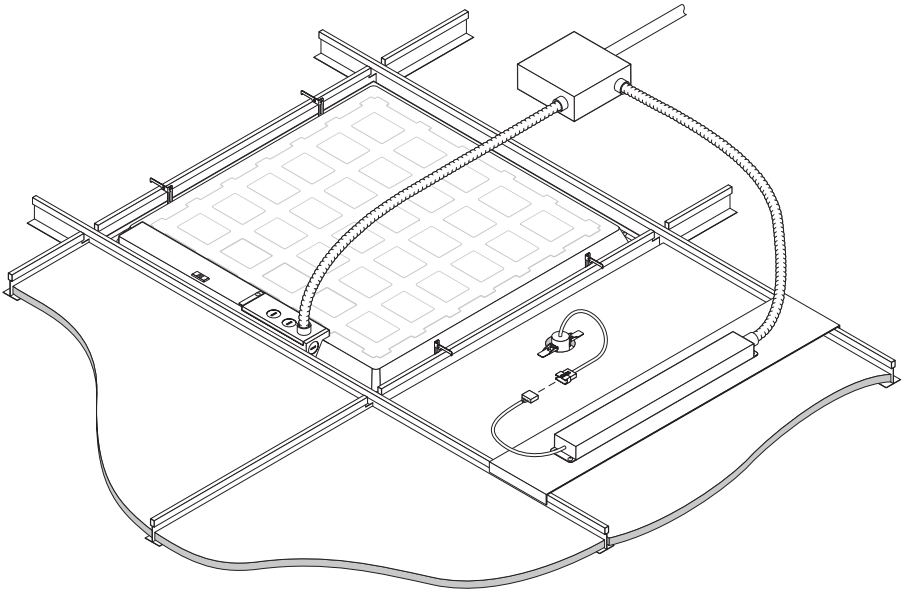
Should be performed as indicated above by qualified personnel.

## INSTALLATION - CEILING MOUNTED

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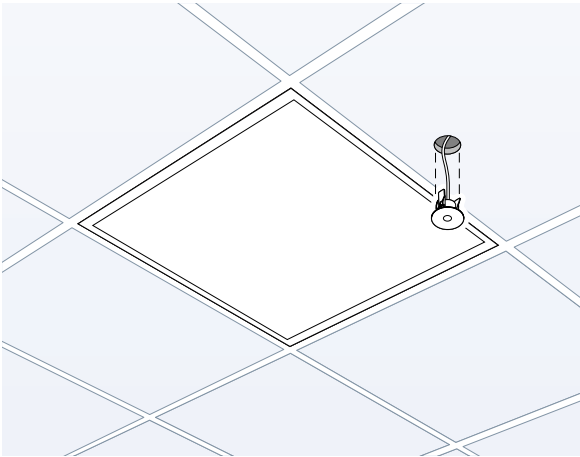
### **BEFORE BEGINNING INSTALLATION, TURN OFF POWER AT THE CIRCUIT BREAKER.**

1. Choose a location for the Emergency Battery Backup unit and indicator module. We recommend placing the unit close to the luminaire input power wires while also making sure the indicator module will reach it's desired location. See figure A for reference.
2. Once the EBB unit is secured in place, make wiring connections based on the wiring diagrams found on pages 6-7.
3. Mark the desired location for the indicator module on the adjacent ceiling panel. Drill a hole for the indicator to pass through that as is 1.75" in diameter.
4. Compress the spring clamps and pass the indicator module, wiring first, up through the panel until it sits flush with the bottom side. Release the spring clamps and they will hold the module in place. See figure B.
5. Connect the indicator module and unit via the quick connector.
6. Restore power to the fixture. When power is received, the green flashing light should appear, indicating that the unit is charging. An initial full charge could take up to 24 hours.



*Figure A*

**Note:** Grid tray not Litetronics product but for illustration only.



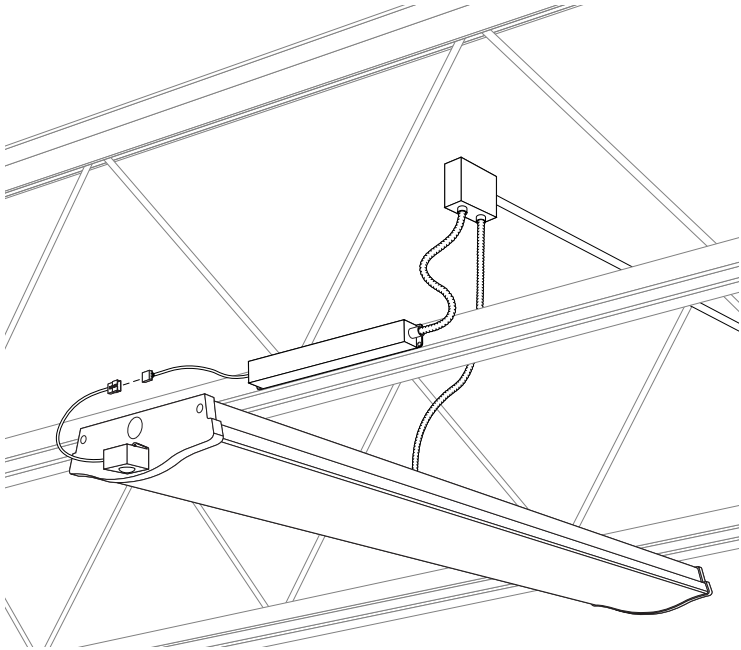
*Figure B*

## INSTALLATION - ADHESIVE MOUNTED

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### **BEFORE BEGINNING INSTALLATION, TURN OFF POWER AT THE CIRCUIT BREAKER.**

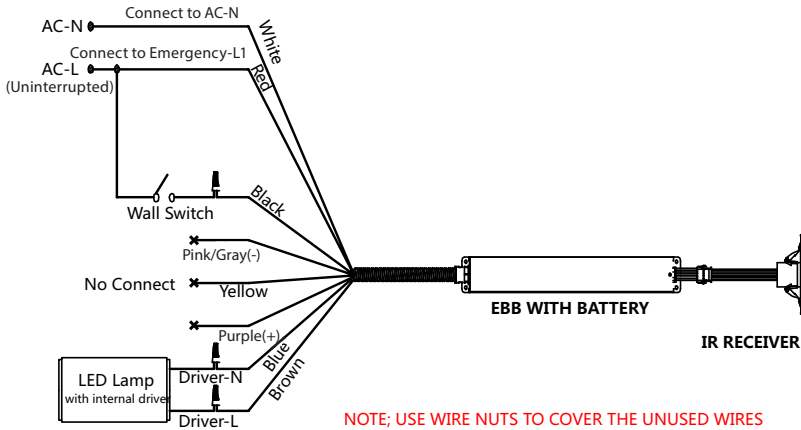
1. Choose a location for the Emergency Battery Backup unit and indicator module. We recommend placing the unit close to the luminaire input power wires while also making sure the indicator module will reach it's desired location. See figure C for reference.
2. Once the EBB unit is secured in place, make wiring connections based on the wiring diagrams found on pages 6-7.
3. Find the desired location for the indicator module on the side of the fixture or a nearby structural element, making sure that the indicator lights will be visible from below. Peel off the outside strip from the tape and apply the module to the desired location. Hold for 30 seconds.
4. Connect the indicator module and unit via the quick connector.
5. Restore power to the fixture. When power is received, the green flashing light should appear, indicating that the unit is charging. An initial full charge could take up to 24 hours.



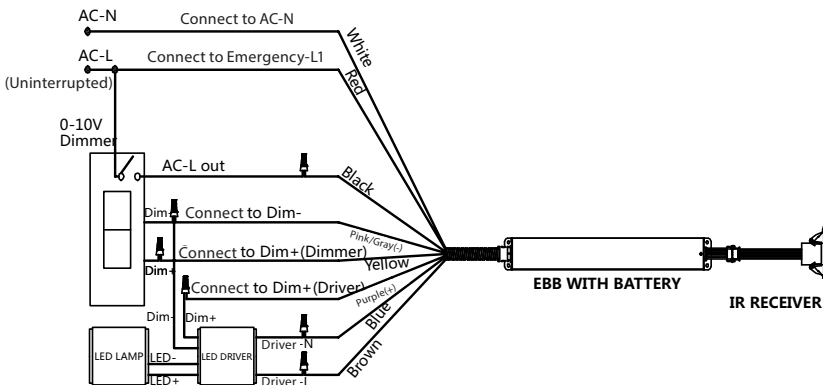
*Figure C*

# WIRING DIAGRAMS

## A WHEN THE LED DRIVER POWER IS LESS THAN 10W



## B WHEN THE LED DRIVER POWER IS GREATER THAN 10W AND USED WITH A DIMMER

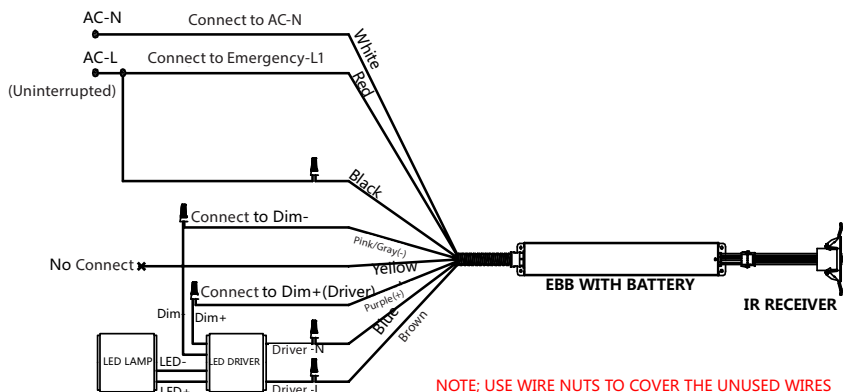


**IMPORTANT:** The purple and gray dimming wires must be connected to Luminaire or driver dimming wires

**CAUTION:** For Diagrams B, C, D, Gray & Purple Dimming leads from EB10 Must Be Connected to Driver Dim +/- leads / terminal Blocks. If connection is not made, the LED Array will flicker and shut down after 10 seconds in 99% of the cases while in emergency mode. In some cases, the EB10 will fail as it will overheat. Dimming circuit helps to limit higher driver load to 10W.



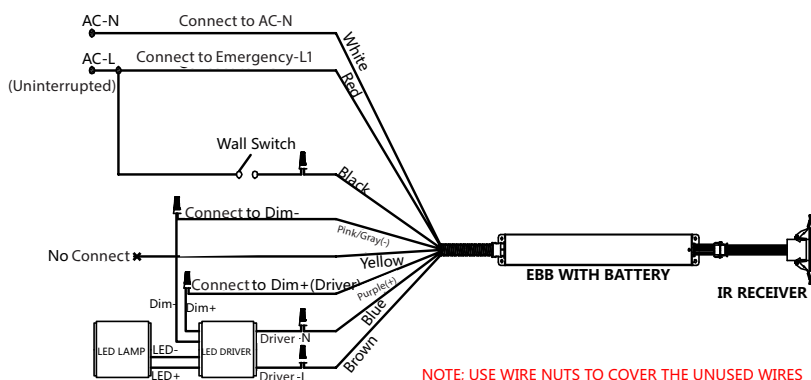
## C WHEN LED DRIVER POWER IS GREATER THAN 10W USED WITHOUT SWITCH AND WITHOUT DIMMER



**IMPORTANT:** The purple and gray dimming wires must be connected to Luminaire or driver dimming wires

**CAUTION:** For Diagrams B, C, D, Gray & Purple Dimming leads from EB10 Must Be Connected to Driver Dim +/- leads / terminal Blocks. If connection is not made, the LED Array will flicker and shut down after 10 seconds in 99% of the cases while in emergency mode. In some cases, the EB10 will fail as it will overheat. Dimming circuit helps to limit higher driver load to 10W.

## D WHEN LED DRIVER POWER IS GREATER THAN 10W USED WITHOUT DIMMER WITH SWITCH



**IMPORTANT:** The purple and gray dimming wires must be connected to Luminaire or driver dimming wires

**CAUTION:** For Diagrams B, C, D, Gray & Purple Dimming leads from EB10 Must Be Connected to Driver Dim +/- leads / terminal Blocks. If connection is not made, the LED Array will flicker and shut down after 10 seconds in 99% of the cases while in emergency mode. In some cases, the EB10 will fail as it will overheat. Dimming circuit helps to limit higher driver load to 10W.

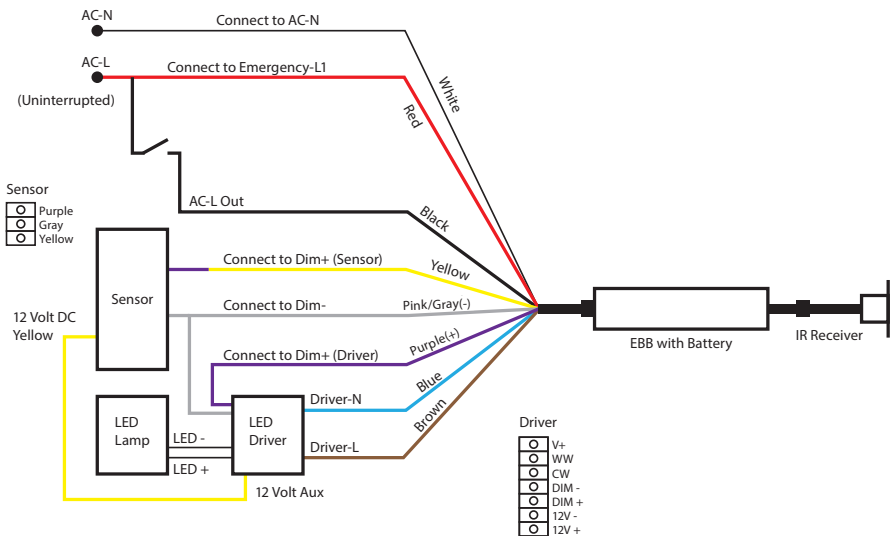
# WIRING INSTRUCTIONS FOR LED STAIRWELL FIXTURE WITH EMERGENCY BATTERY BACKUP

Stairwell Fixture Ordering Codes: SWFS4

## INSTRUCTIONS

- 1. Remove the purple sensor dimming wire (Dim+) from the driver's terminal block and connect it to the yellow emergency dimming wire (Dim+) using a wire nut.
- 2. Connect the purple emergency dimming wire (Dim+) to the driver's Dim+ terminal block.
- 3. Connect the gray emergency dimming wire (Dim-) and gray sensor dimming wire (Dim-) into the driver's Dim- terminal block.
- 4. Connect the brown and blue emergency output wires to the black and white driver input wires.
- 5. Connect the white, red and black emergency input wires in accordance with the following wiring diagram.

## WIRING DIAGRAM



**IMPORTANT:** The purple and gray dimming wires must be connected to Luminaire or driver dimming wires

WIRING INSTRUCTIONS FOR 12V SENSOR WITH EMERGENCY BATTERY BACKUP

COMPATIBILITY

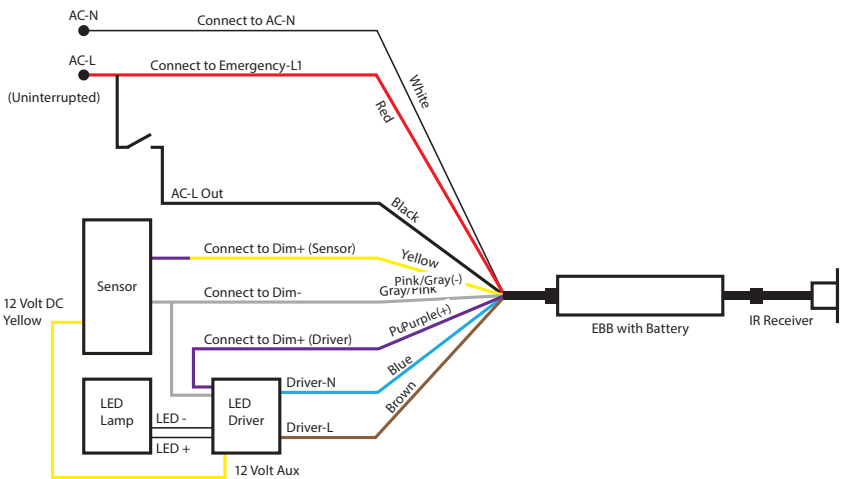
The 12V sensor with EBB is compatible with the following Litetronics products and part numbers.

SMART LIGHT PANEL	SMART LIGHT PANEL SELECTABLE CCT & TUNABLE WATTS	SMART VOLUMETRIC TROFFER SELECTABLE CCT & TUNABLE WATTS
PT1XXN-	PT1AN	VLT1AN
PT2XXN-	PT2AN	VLT2AN
PT4XXN-	PT4AN	VLT4AN
SMART LIGHT PANEL RETROFIT	SMART LIGHT PANEL RETROFIT SELECTABLE CCT & TUNABLE WATTS	SMART VOLUMETRIC TROFFER RETROFIT SELECTABLE CCT & TUNABLE WATTS
PRT1XXN-	PRT1AN	VRT1AN
PRT2XXN-	PRT2AN	VRT2AN
PRT4XXN-	PRT4AN	VRT4AN

INSTRUCTIONS

1. Remove a wire nut on purple dimming wires. Connect the label shown sensor dimming wire (Dim+) to the yellow emergency dimming wire (Dim+) using a wire nut.
2. Connect the purple emergency dimming wire (Dim+) to the label shown driver's Dim+ using a wire nut.
3. Connect the gray emergency dimming wire (Dim-) and gray dimming wire (Dim-) using a wire nut.
4. Connect the brown and blue emergency output wires to the black and white driver input wires.
5. Connect the white, red and black emergency input wires in accordance with the following wiring diagram.

WIRING DIAGRAM



**IMPORTANT:** The purple and gray dimming wires must be connected to Luminaire or driver dimming wires

Thank you for choosing

**LITETRONICS®**

6969 W. 73rd Street  
Bedford Park, IL 60638

[www.Litetronics.com](http://www.Litetronics.com)

[CustomerService@Litetronics.com](mailto:CustomerService@Litetronics.com) or 1-800-860-3392



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