

Installation Instruction Manual

ILS-S810-000

L-810(L) Solar Red
LED Obstruction Light



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Front Matter

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Introduction

Congratulations, and thank you for choosing an ILS-S810-000 solar red obstruction light.

We trust that ITL's reputation for technical excellence, experience in product development, commitment to our customers and testing will ensure your complete satisfaction.

You have chosen one of the most technologically innovative LED obstruction lights available on the market today. This product is the result of many years of engineering with extensive input from field service personnel.

This manual covers the ILS-S810-000 solar red LED Obstruction Light.

Please take the time to read and familiarize yourself with this manual. It contains the information necessary to install, test and troubleshoot the ILS-S810-000 Obstruction Light.

Product Description

The ILS-S810-000 solar red obstruction light utilizes LED technology and Fresnel Optics to provide a reliable solar power lighting solution.

The ITL, LLC L-810(L) red obstruction light complies with applicable FAA specifications for marking hazards to air navigation such as towers, smoke stacks or similar structures. It is intended for installations which require FAA L-810(L) red lights.

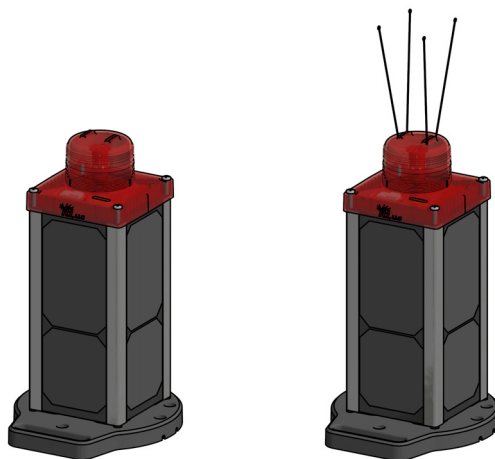


Figure 1: ILS-S810 Solar Red LED Obstruction Light

Specifications

Complies with AC150/5345-43, Type L-810 (L) and Engineering Brief 67

Intensity:	32.5 effective candelas (min.)
Beam:	360° Horizontal, 10° Vertical (min.)
Height:	16.8 Inches (42.7 cm) (bird deterrent not included)
Width:	10.5 Inches (26.7 cm)
Weight:	14.0 lbs. (6.4 Kg)
Voltage:	Battery: 6 - 12 VDC Input: 7 - 12 VDC (1 A max)
Temperature:	-40°C to +55°C
Humidity:	less than 95%, non-condensing

Installation

The following section describes how to install the LED obstruction light.

Unpacking your LED Obstruction Light

Please examine the shipping containers and their content thoroughly upon receipt and report any potential shipping damage to the carrier.

Tools for Installation

The following tools are suggested for mounting of the ILS-S810 obstruction lights.

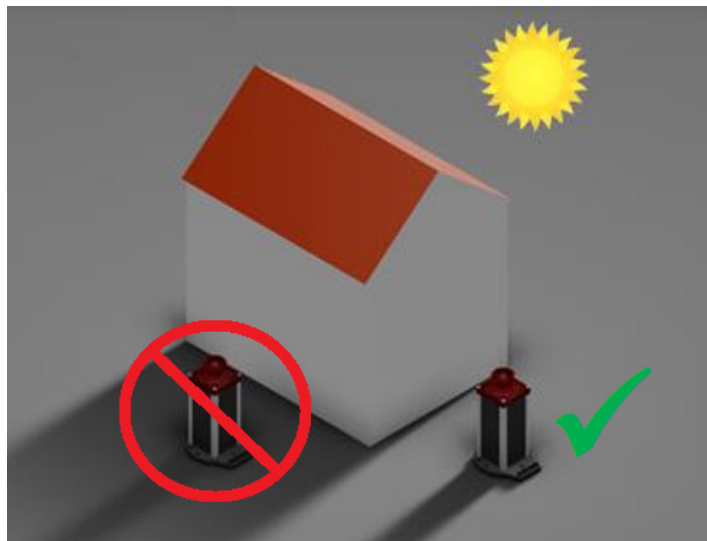
- Digital multi-meter capable of reading 600VAC/DC (Fluke 177 or 179)
- Nut Drivers and Sockets
- #2 Phillips Screwdriver
- Infrared Remote Control (Optional)

Quick Installation

The ILS-S810-000 requires direct sunlight exposure for approximately 30 minutes to activate after being removed from the packaging. The unit will indicate it is functioning by flashing red LED I3 every 5 seconds.

The ILS-S810-000 includes standard industry 3 and 4 hole mounting patterns. The ILS-S810-000 must be mounted in the upright position. Use the mounting kit to attach the base. Do not mount in an area that is often shaded. Visually verify proper day/night operation.

It is the responsibility of the installer to comply with all applicable local, state, and federal regulations for installation and operation of this device.



Infrared Remote Control

An optional infrared remote control (P/N ILS-S810-IRC) is available to communicate with the ILS-S810. For best results the Infrared Remote Control should be pointed at the IR Port at the front of the ILS-S810 as shown in the figure below. LED I1 on the ILS-S810 will blink after each button press received from the remote control. LED I1 will blink twice to confirm a command has been received.

Function	Code*	Description
Battery Level	228<Enter>	3 LEDs on = Fully Charged 2 LEDs on = Good 1 LED on = Okay 1 LED Blinking = Low
Enable Flashing	352<Chan Up>	Enables flashing operation (30FPM)
Disable Flashing	352<Chan Down>	Disabled flashing operation
Night Mode	663<Chan Up>	Operates in night mode for 5 minutes
Automatic Mode	663<Chan Down>	Automatic mode (day/night) is determined by the ILS-S810.
Power Off	769<Power>	Places the ILS-S810 in a low power state for storage. Expose to direct sun light to turn on.

*The numeric codes represent the letters of a telephone keypad. For example the code for Battery Level, 228, is B-A-T on a telephone keypad. The Channel Up button is used for turning On a function and the Channel Down for turning Off a function.

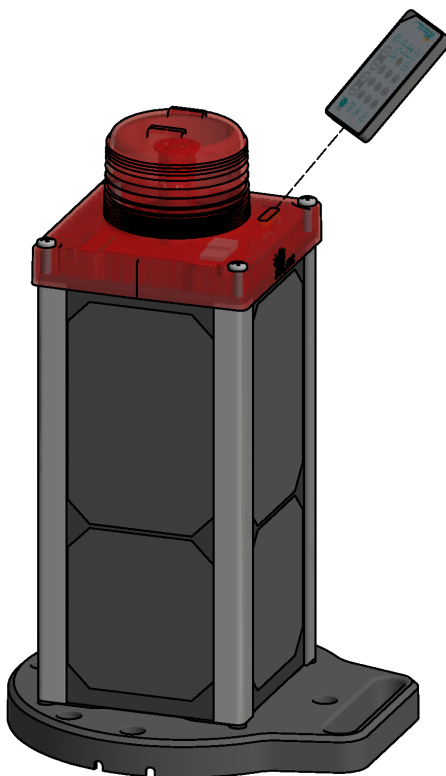


Figure 2: Infrared Remote Control Port

Leveling

The ILS-S810-000 must be leveled during installation for correct vertical beam alignment. The following diagrams detail how to use a compact “torpedo” level on two axes to ensure that the obstruction light is level mounted level. Place the level across the base as shown and repeat on an adjacent side to level both axis.

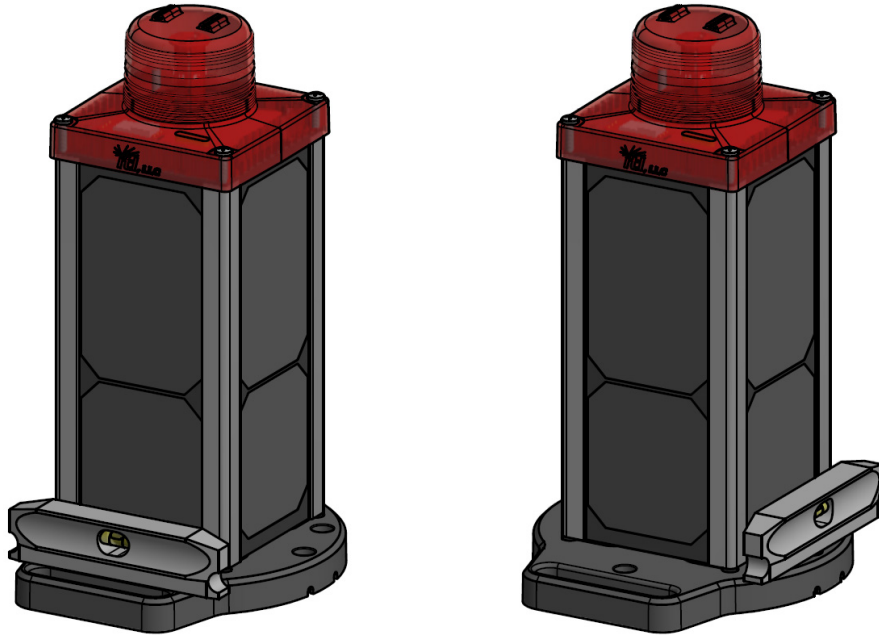


Figure 3: Leveling

Mounting Detail

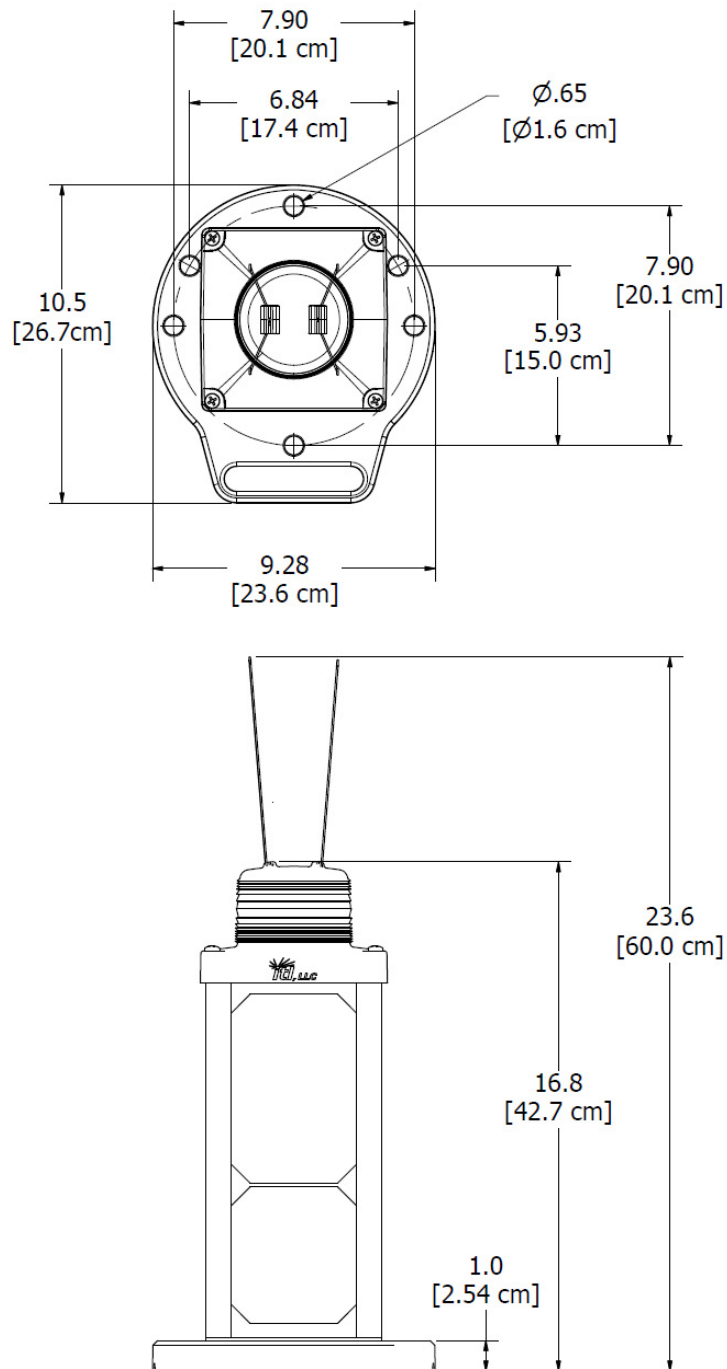
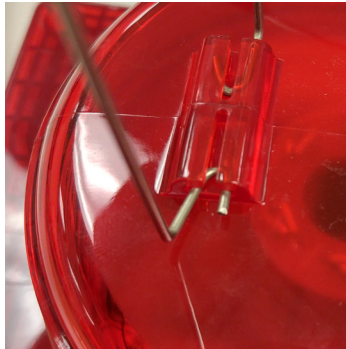


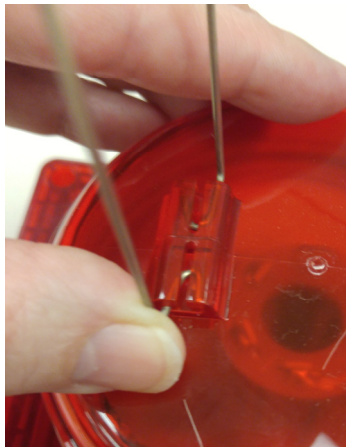
Figure 4: Outline Dimension sand Mounting Detail

Bird Deterrent Installation

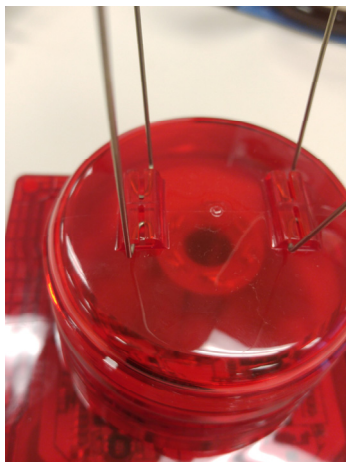
1. Align bird deterrent wires with snap-in slots



2. Snap bird deterrent wires into slots



3. Complete remaining bird deterrent wire installation



Spare Parts

ILS-S810-000 Spare Parts

ITL Order P/N	Description
ILS-S810-TOP-ASY	Combination Lens and Lamp
LEN-S180-RED	S810 Lens
ITL-S814-BAT	S810 Battery Pack
ILS-S810-CHG	Battery Charger (not shown)
HAR-S810-PWR	Battery Connector Wiring Harness
ILS-S810-IRC	Infrared Remote Control (not shown)
ILS-S810-BRD	Bird Deterrent (not shown)

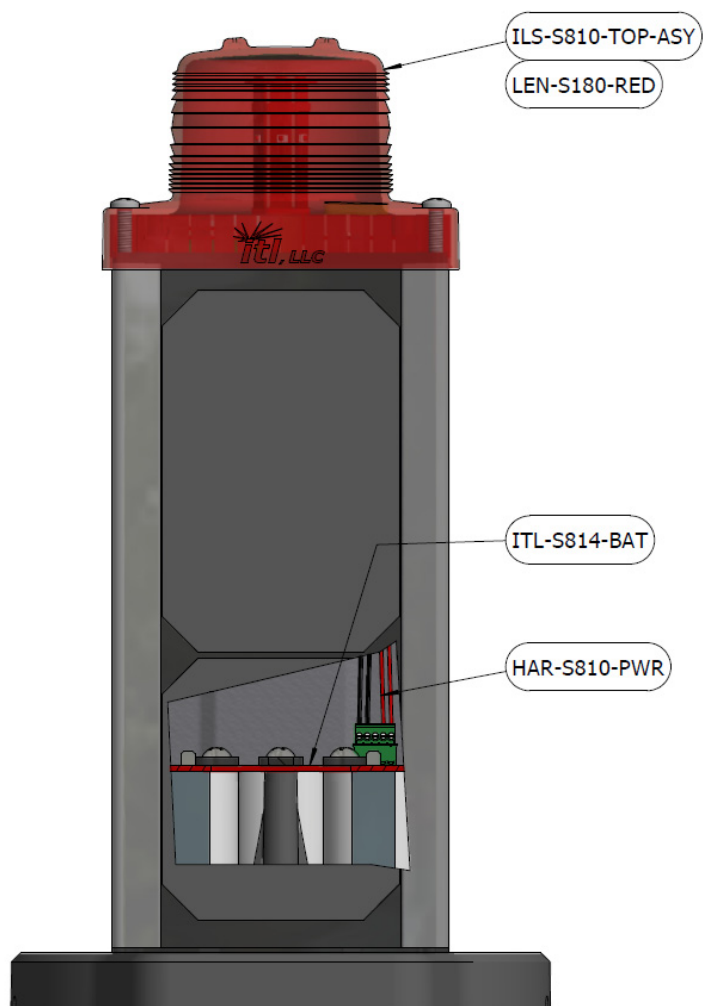


Figure 5: Spare Part Locations

Maintenance

The maintenance outlined below should be performed at least once annually.

- Verify that the fixture is functional in all operating modes with no indication of an alarm condition on alarm indicator lights, alarm dry contacts, or digital monitoring interfaces.
- Verify that the photoelectric control operates the system in the correction operating mode (day/night) when exposed to light and dark ambient lighting conditions.
- Inspect the fixture for any type of obstruction that could block light output at any point along the 360 degree horizontal output of the fixture. Note that multiple fixtures may be used to achieve 360 degree coverage.
- Inspect lenses and transparent covers for damage.
- Clean the fixture lens or transparent cover using a mild detergent and soft nonabrasive cloth.
- Check the battery voltage by removing the lens and then testing the terminals of the battery connector with a multimeter.
- Ensure that no water is present inside the housing.

Battery Replacement

The battery can be accessed by the removing the bottom of the ILS-S810.

1. Remove the base screws from the base (HDW-2520-62S).
2. Slide the base out of the fixture
3. Disconnect the battery cable from the battery (HAR-S810-PWR).
4. Remove the battery screws securing the battery to the base (HDW-2510-075S).
5. Slide the battery out of the base.
6. Slide replacement battery into base.
7. Reconnect battery cable.
8. Secure the battery with battery screws and rubber washers.
9. Ensure the gasket is flush in the gasket channel (ILS-S810-GSL).
10. Slide the battery and base back into the fixture and replace the base screws (see figure 6 for more details).

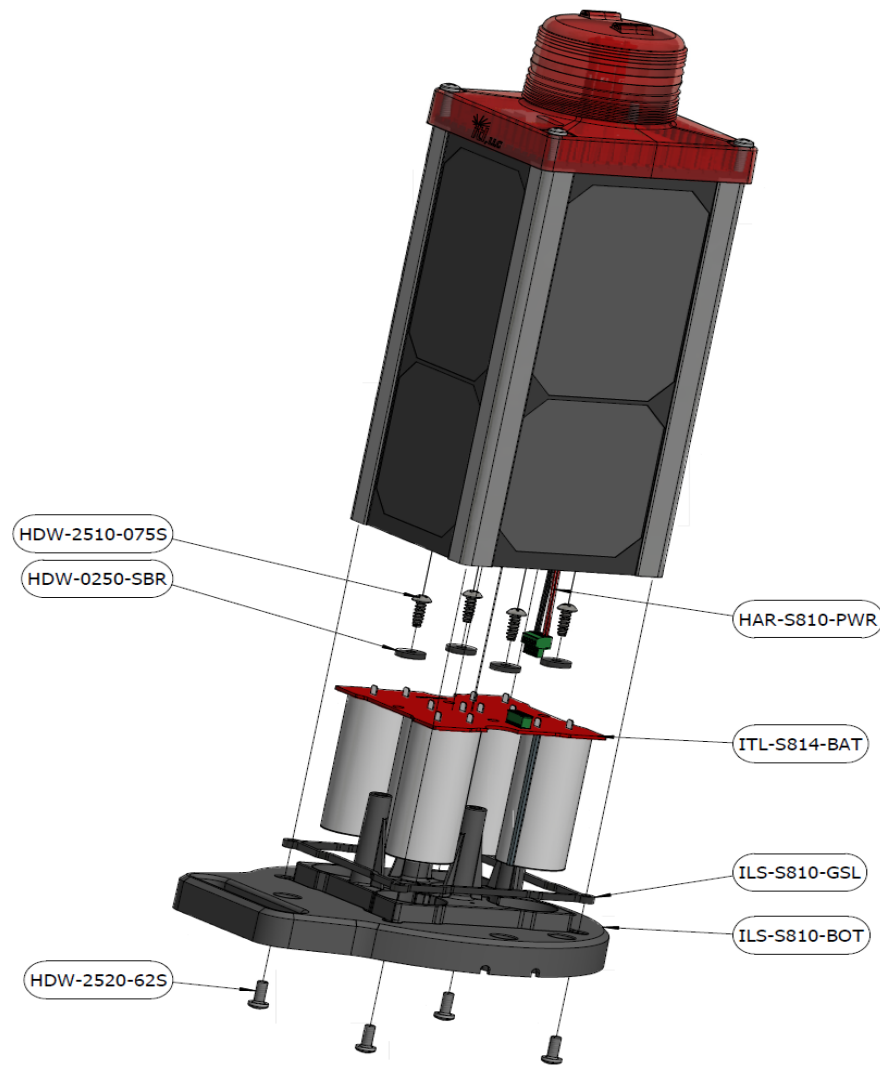


Figure 6: Battery Assembly

Battery Charging

An optional battery charger (P/N ILS-S810-CHG) is available for charging the batteries from a standard 120Vac wall outlet.

1. Remove the lens screws from the lens and fixture body (HDW-2520-125S) (not shown for clarity).
2. Disconnect the solar panel cable.
3. Connect the charger cable in place of the solar panel cable on the ILS-S810.
4. Plug the battery charger into a standard 120Vac wall outlet and allow time for the batteries to charge. Charging may take several hours. Charging will automatically stop when the batteries are fully charged.
5. Check the battery level using the Infrared Remote Control (see page 8).
6. When the batteries are fully charged unplug the charger from the wall outlet and disconnect from the ILS-S810.
7. Reconnect solar panel cable in the ILS-S810.
8. Replace the lens on the body and secure with lens screws.
(see figure 7 for more details).

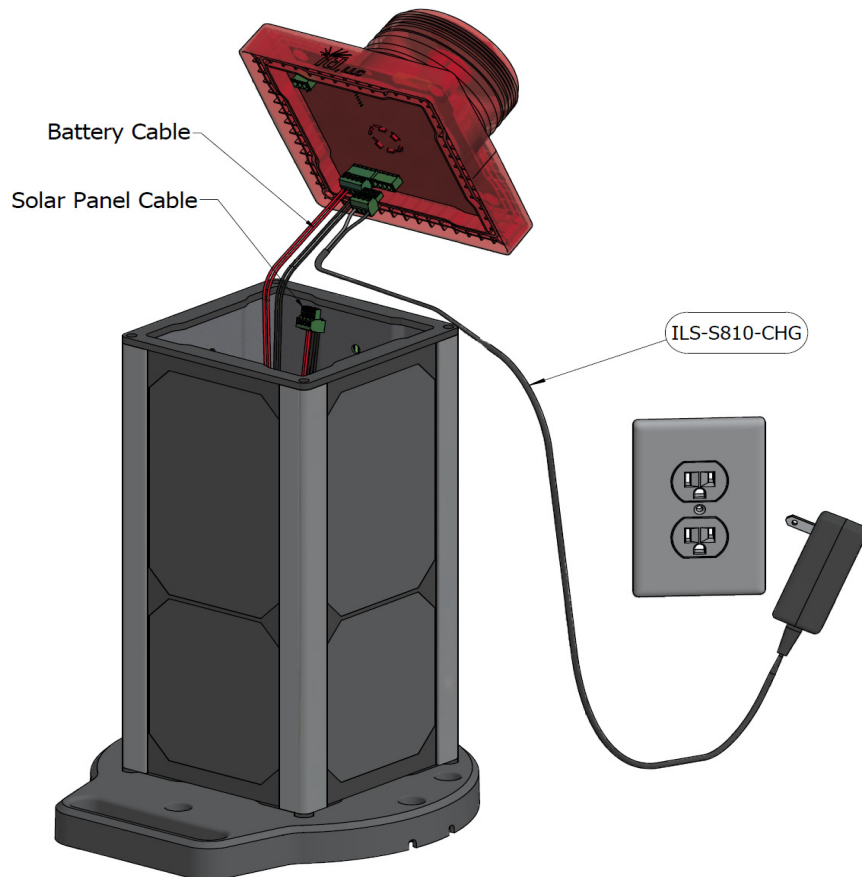


Figure 7: Battery Charging

Lens Replacement

1. Remove the lens screws from the lens and fixture body (HDW-2520-125S).
2. Disconnect the battery cable and solar panel cable.
3. Remove the PCB screws (HDW-0424-31S-TR).
4. Place PCB in new lens ensuring that the PCB orientation hole is aligned with the lens orientation indicator stud.
5. Replace PCB screws.
6. Reconnect the battery cable and solar panel cable.
7. Replace lens on body and secure with lens screws.
(see figure 8 for more details).

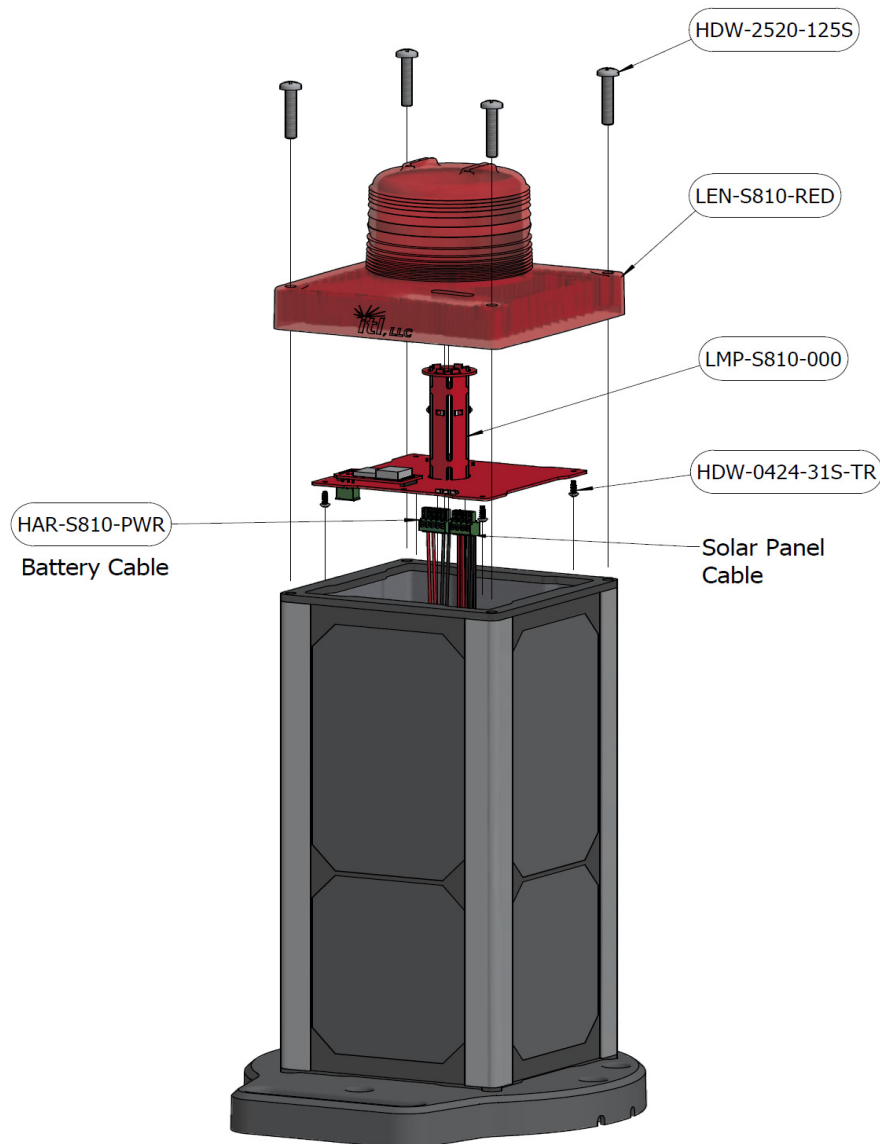


Figure 8: Lens Assembly

Technical Support and Contact Information

Contact Information

For information on the ILS-S810-000 LED obstruction lights' basic functions, refer to this manual and the accompanying drawings. For additional help with the installation or operation of any ITL products, please contact ITL, LLC at one of the following below.

Web and Internet Sites

Corporate home page: <http://www.itl-llc.com>



Customer Support Technicians
(8:00 AM - 5:00 PM Central Time)

US and Canada call: +1-615-256-6030

Toll Free: +1-866-624-8309

Email: support@itl-llc.com

RMA

Please contact ITL, LLC before returning equipment for repair and obtain a Return Material Authorization (RMA) number.

Appendix A – Troubleshooting

1. If the ILS-S810 will not turn on at night:
 - a. Ensure the light is located in a dark environment (below 30 foot candles).
 - b. Ensure that the unit has been exposed to direct sunlight for at least 30 minutes to activate by checking that LED I3 is blinking every 5 seconds.
 - c. Ensure that the battery is above the shutdown voltage.
2. If the ILS-S810 will not turn off during the day:
 - a. Ensure that the solar panel cable is connected inside the ILS-S810.
3. If the ILS-S810 does not respond to the Infrared Remote Control:
 - a. Ensure that the ILS-S810 is on by exposing it to direct sunlight for approximately 30 minutes. LED I3 will blink once every 5 seconds when the unit is on.
 - b. Replace the battery in the Infrared Remote Control.

Revision	Description of Change	Date	Preparer / Approval
2	Added Remote Control, Battery Charger & Bird Deterrent in Spare Part List. Added detail for battery charging.	6/8/2016	Prepared By: Elke Hinson Approved By: Andy Rudolph
1	Initial Release	5/13/2016	Prepared By: Ryan Gregory Approved By: Andy Rudolph