



## Installation Instructions

### Sunspot 46 LX/HX



AeroLEDs, LLC  
 8475 W. Elisa St.  
 Boise, ID, 83709  
 208-850-3294

**NOTE:** A printed copy of this document may not be the latest revision. It is the responsibility of the user to ensure that the latest revision is used. The latest revision of this document may be printed from the AeroLEDs electronic document repository. Revision history follows on page 2

This document contains proprietary information of AeroLEDs. Neither receipt nor possession thereof confer any right to reproduce or use, or disclose, in whole or in part, any such information without written permission from AeroLEDs.

| Approval                   | Name   | Intent  |                      |
|----------------------------|--|---|----------------------|
| Author                     | Mark McCormack   | Installation and Operation Instructions<br>for the Sunspot 46 LX/HX series lights |                      |
| Check                      | Nate Calvin  |   |                      |
| Quality                    | Ryan Edmark  |   |                      |
| Date:                      | 26 Oct 2021  |   |                      |
| <b>Status:</b><br>Released | Typed signatures indicate approval. Handwritten, or electronic signature approval of this document is on file at AeroLEDs, Boise, Idaho. | <b>Document Number</b><br>0010-0004   | <b>Revision</b><br>H |

## REVISION RECORD

| Rev | Description   | Date       | Author       |
|-----|---|------------|--------------|
| H   | Format, Instruction, and Image updates. Remove references to taxi lights  | 10/26/2021 | M. McCormack |
| G   | All Pages Revised, Correct PN from 01-2030 to 01-2130, Add updated top-level drawing to include taxi light with Fresnel lens, Add PN 01-2130-LX-B, Add note regarding vertical mounting of the Fresnel lens | 05/16/2018 | M. McCormack |
| F   | All Pages Revised   | 01/29/2015 | D. Wilkinson |
| E   | All Pages Revised   | 11/12/2014 | D. Wilkinson |
| D   | 1 (limitations)   | 07/05/2013 | D. Wilkinson |
| C   | All Pages Revised   | 12/06/2012 | D. Wilkinson |
| B   | 2, 4 Pages Revised  | 06/29/2011 | D. Wilkinson |
| A   | All Pages Revised   | 04/12/2011 | D. Wilkinson |
| IR  | Initial Revision  | 12/09/2010 | D. Wilkinson |

# TABLE OF CONTENTS

|          |   |          |
|----------|---|----------|
| <b>1</b> | <b>Model Numbers</b> .....                            | <b>4</b> |
| 1.1      | Modes of operation (H-Lights only).....               | 4        |
| <b>2</b> | <b>Instructions for Continued Airworthiness</b> ..... | <b>4</b> |
| <b>3</b> | <b>Installation</b> .....                             | <b>4</b> |
| 3.1      | Installation Procedures .....                         | 5        |
| 3.2      | Troubleshooting .....                                 | 5        |
| <b>4</b> | <b>Wiring Diagrams</b> .....                          | <b>6</b> |
| 4.1      | Wiring Diagram for Single Sunspot without Pulse ..... | 6        |
| 4.2      | Wiring Diagram for Single Sunspot with Pulse .....    | 6        |
| 4.3      | Wiring Diagram for Dual SunSpots with Pulse.....      | 7        |

# 1 Model Numbers

| Model         | Part Number | Description     | Voltage (Vdc) | Current (Amps)         | Power (W) | Weight (oz) |
|---------------|-------------|-----------------|---------------|------------------------|-----------|-------------|
| SunSpot 46 HX | 01-2130-LX  | Landing         | 9-30.3        | 6.5 @ 14V<br>3.0 @ 28V | 85        | 20          |
| SunSpot 46 LX | 01-2130-HX  | Landing w/Pulse |               |                        |           |             |

## 1.1 Modes of operation (H-Lights only)

| Mode  | Switch Position | Mode    | Switch Position | Function  |
|-------|-----------------|---------|-----------------|-----------|
| Pulse | Open            | Landing | Open            | Light OFF |
|       | Open            |         | Closed          | Landing   |
|       | Closed          |         | Open            | Light OFF |
|       | Closed          |         | Closed          | Pulse     |

Table 1 Refer to section 4 for switch topology

# 2 Instructions for Continued Airworthiness

Sunspot 46 LED landing light assembly contains no user serviceable items. Should any LED fail, unit must be replaced.

| Interval  | Inspection   | Remedy   | Notes  |
|---|--|--|--|
| Pre-Flight  | <ul style="list-style-type: none"> <li>Perform a functional check and observe that all LEDs are illuminated.</li> </ul>  | <ul style="list-style-type: none"> <li>If all LEDs are not illuminated replace light as soon as is practicable.</li> </ul>   | <ul style="list-style-type: none"> <li>Lights are not user serviceable.</li> <li>Lights are very bright and to reduce eye strain during inspection use an optical filter such as dark glasses or welding goggles.</li> </ul> |
| Annually, unless the OEM specifies a shorter interval | <ul style="list-style-type: none"> <li>Perform a functional check and observe that all LEDs are illuminated.</li> <li>Check mounting, connections, and wire integrity</li> </ul> | <ul style="list-style-type: none"> <li>If all LEDs are not illuminated, the light must be replaced.</li> <li>Adjust or replace wiring, and connectors as required</li> </ul> |  |

Table 2 Periodic Inspections

# 3 Installation

Consult **14CFR, §43.13-1B** for guidance on acceptable methods, techniques, and practices. Mount in approved bulb holder. For retrofit installation existing circuit breaker or fuse may typically be used. Procedures contained herein are not intended to conflict with procedures set forth by aircraft OEM, nor do they supersede FAA approved manuals and FAA regulations.

### 3.1 Installation Procedures

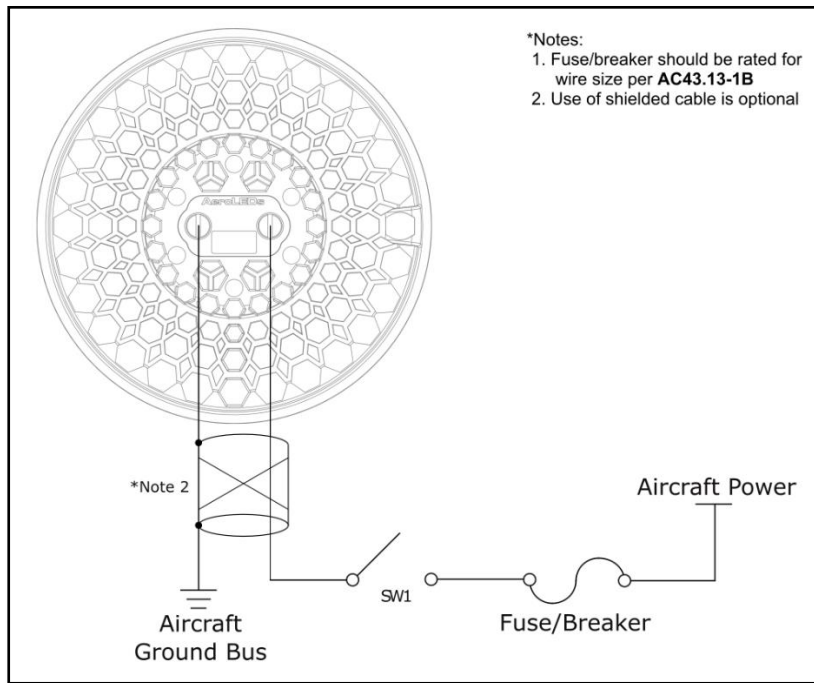
1. Reference airframe manufacturer's maintenance manual and remove light covers to gain access to lamp assembly(s) and bracket(s)
2. This installation procedure is for single or multiple light installations. Wiring diagrams are provided for single and dual light installations. For lights without pulse, existing aircraft wiring, switches and breakers may be utilized.
3. **Versions with Pulse:** Pulse function is a self-contained feature and does not require use of external control circuitry. An additional wire and switch will be required to enable pulse mode. For multiple lights operated in Wig-Wag mode an additional synchronization wire installation will be required.
4. Refer to aircraft manufacturer's service manual and/or illustrated parts catalog to identify landing and/or taxi light system installed in your aircraft. This will provide information on location of components and assembly details
5. Mount LED light with a minimum 4-inch clearance to exhaust system components unless adequate heat shielding is utilized to block radiant heat.
6. Reference airframe manufacturer's current maintenance manual and install LED light(s) in brackets using retained hardware
7. Ensure alignment key is fitted to bracket
8. Install suitable aircraft approved connectors or splices to connect landing light assemblies to wires routed from switch in accordance with wiring diagram(s).
9. Screw terminals are not polarity sensitive
  - a. Yellow wire is used to enable pulse mode. Follow wiring diagrams for connecting blue and green synchronization wires for Wig-Wag operation on multi-light installations.
  - b. Install an appropriate aircraft approved switch and circuit breaker of correct rating for lights installed for pulse function. Original landing light switch/switches may be used.
10. Placard switches appropriately.
11. Verify proper operation of LED light(s), in both pulsing and steady functions (as appropriate to installation)
12. Using appropriate aircraft maintenance manual, verify light angle has not changed, and is oriented & aimed in accordance with manufacturer's instructions
13. Reinstall associated light hardware IAW aircraft maintenance manual
14. Record installation with appropriate logbook entry

### 3.2 Troubleshooting

1. Check for proper voltage at power input wire to light
2. Ensure light is adequately grounded
3. Check for continuity in wiring and connections
4. If wiring is verified, remove light and bench-check with appropriately sized power supply

## 4 Wiring Diagrams

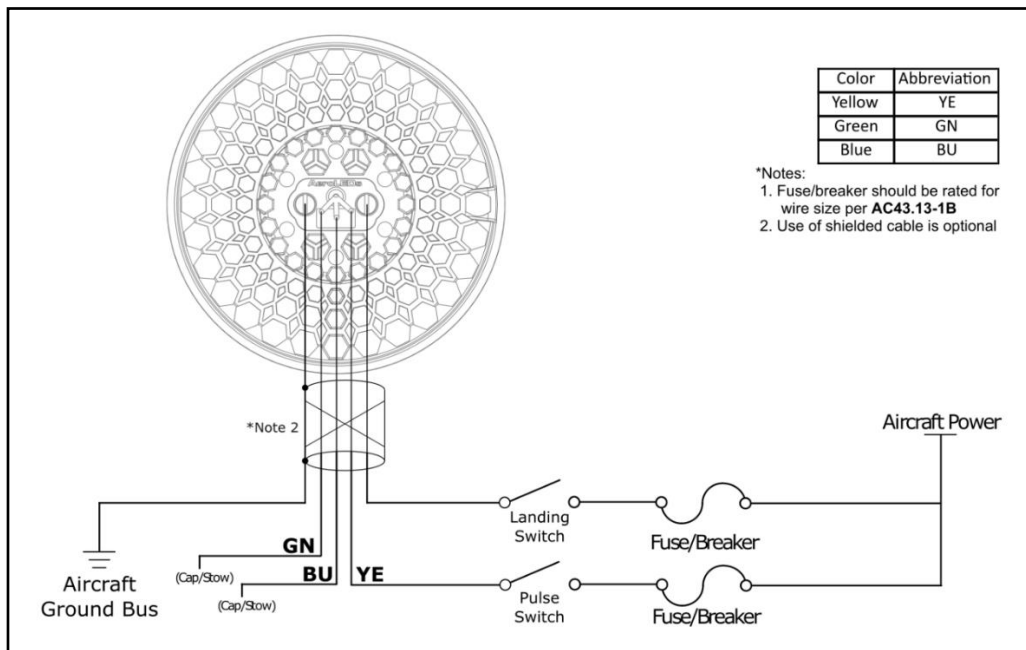
### 4.1 Wiring Diagram for Single SunSpot 46 LX (without Pulse)



**Photo 4-1**

**Note:** Fuse/breaker should be rated for wire size per **AC43.13-1B**

### 4.2 Wiring Diagram for Single SunSpot 46 HX (with Pulse)



**Photo 4-2**

**Note:** Fuse/breaker should be rated for wire size per **AC43.13-1B**

### 4.3 Wiring Diagram for Dual SunSpots with Pulse

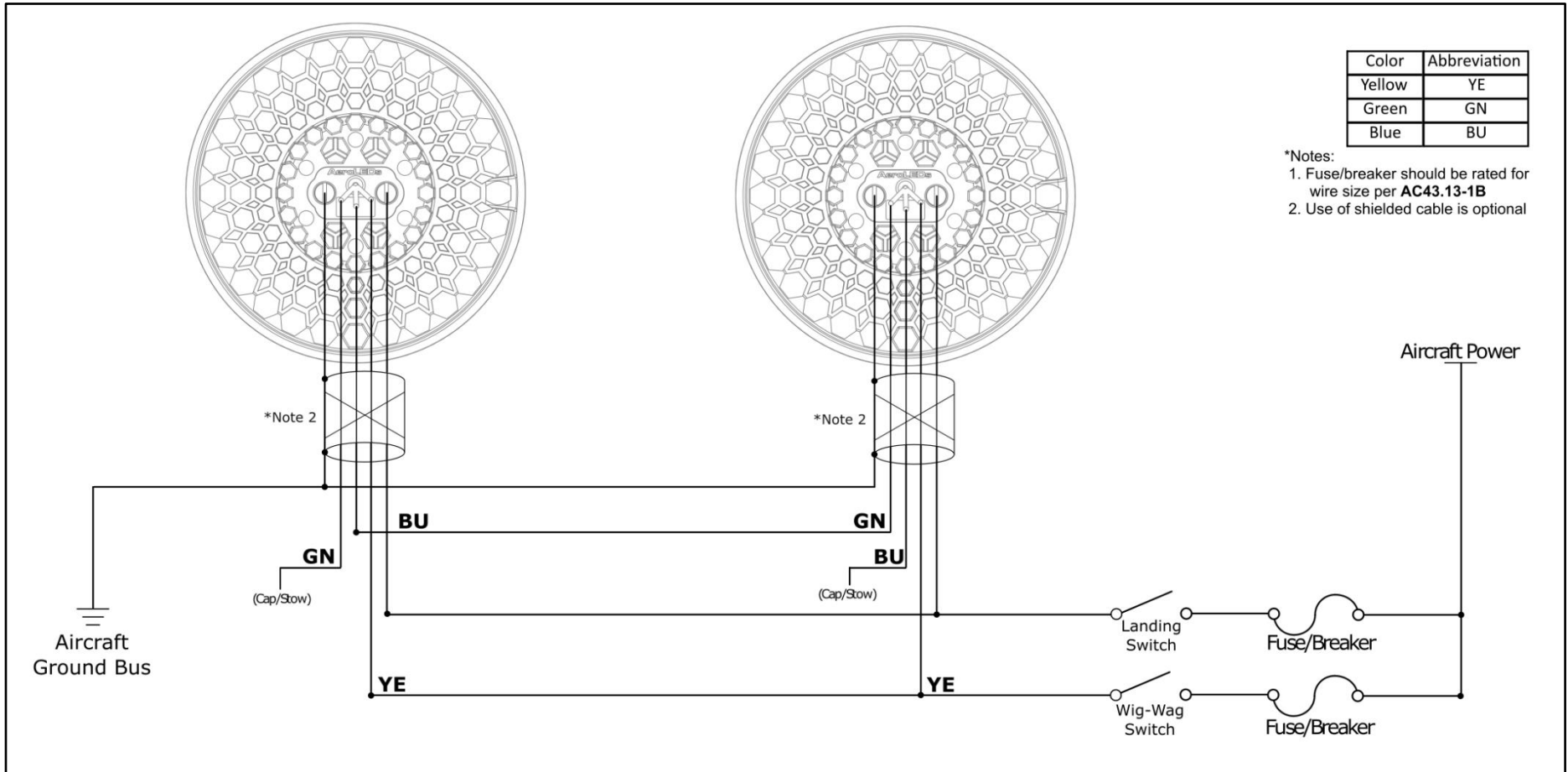


Photo 4-3

**Note:** Fuse/breaker should be rated for wire size per **AC43.13-1B**

If lights are installed in close proximity (within ~2' of each other), use sync circuit, AeroLEDs PN 00-8120.