



Installation Instructions

Sunspot 36- HX/LX



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Approval	Name	Intent	
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1 Part Number Matrix

The table below shows part numbers that this installation document is applicable to

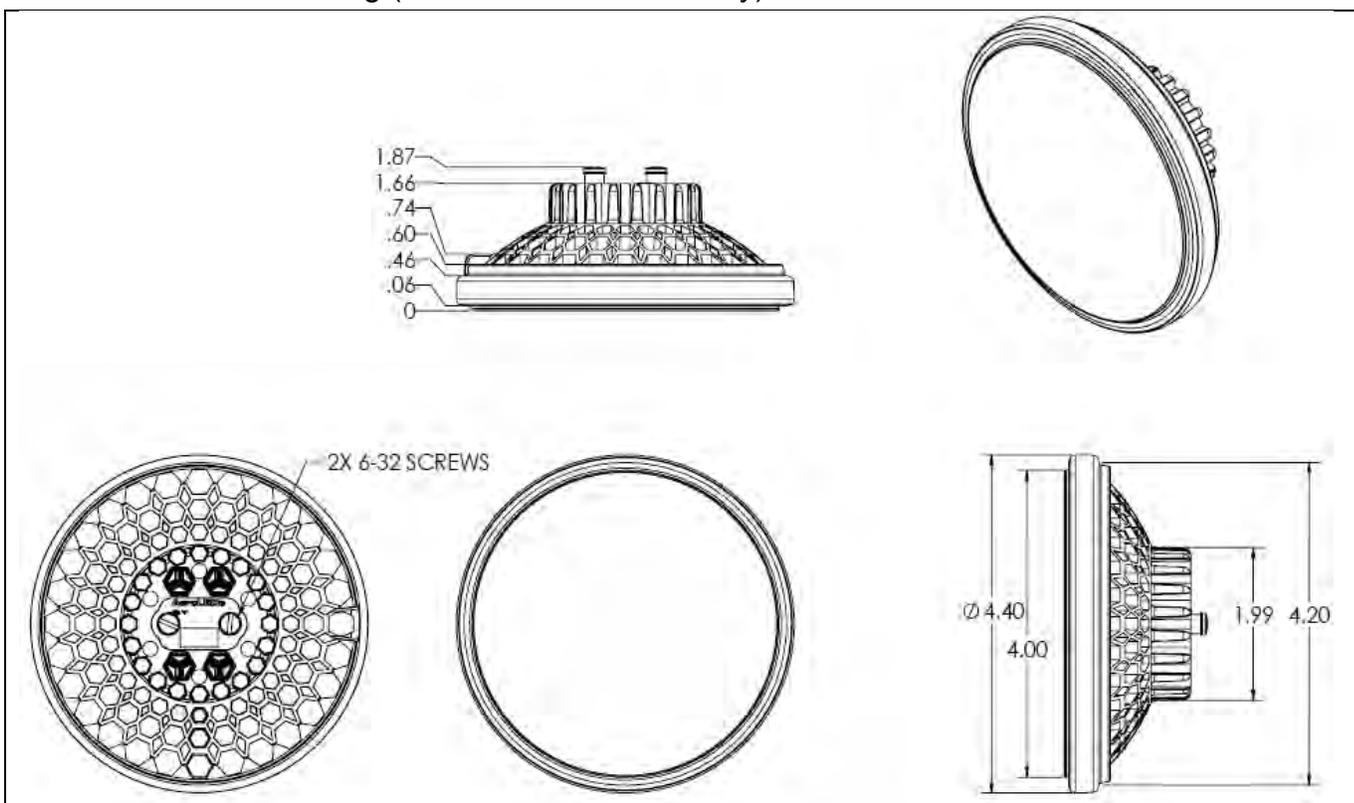
Table 1-1: Applicable Part Numbers

Part Number	Description
01-1030-L-A	Landing Light
01-1030-H-A	Landing Light with Recognition
01-1030-L-B	Taxi Light
01-1030-H-B	Taxi Light with Recognition

2 Specifications

- Operational Voltage: 9-40 VDC nominal
- Input Current: 3.2 Amps Peak at 14VDC
- Power: 45 Watts

Table 2-1: Dimensional Drawing (Shown for reference only)



3 Instructions for Continued Airworthiness

The Sunspot 36 LED landing or taxi light assembly is designed with LEDs mounted behind a lens. The lights contain no user repairable items. Should more than two LEDs fail the unit must be replaced.

Interval	Description	Notes
50 hr.	<ul style="list-style-type: none">• Perform functional check on landing light(s)• Replace components as required	Landing and taxi lights are not field repairable and should be sent to manufacturer for repair/replacement if defective
100 hr.	<ul style="list-style-type: none">• Perform functional check on landing light(s) / replace unit if defective• Inspect for discoloration of lens• Inspect mounting for security• Inspect all connectors for good engagement• Inspect wiring for chaffing / defects• Replace components as required	
Annually	--SAME AS 100 HOUR--	

4 Limitations and Installations

4.1 Equipment Limitations:

Consult **14CFR, §43.13-1B** for guidance on acceptable methods, techniques, and practices. Mount in approved PAR36 bulb holder with circuit breaker or fuse appropriate for rated current. For retrofit installation existing circuit breaker or fuse can typically be used. The procedures contained herein are not intended to conflict with the procedures set forth by aircraft and engine manufacturers, nor do they supersede the FAA approved manuals and FAA regulations.

4.2 Airworthiness Limitations:

The Airworthiness Limitations section is FAA approved and specifies maintenance required under **14 CFR, §43.16** and **14 CFR, §91.403** of the Federal Aviation Regulations unless an alternative program has been FAA approved. There are no new (or additional) airworthiness limitations associated with this equipment and/or installation.

4.3 Installation Procedures

- 4.3.1 This installation procedure is for single or multiple light installations. Wiring diagrams are provided for single, dual, and quad light installations. For lights without recognition (non -H models), existing aircraft wiring, switches and breakers may be utilized.
- 4.3.2 -H Versions with Recognition: The recognition function of the -H model landing and/or taxi light(s) is a self-contained feature and does not require the use of external control circuitry. An additional wire and switch will be required to enable the recognition mode, and for multiple lights an additional synchronization wire will be required.
- 4.3.3 Refer to the aircraft manufacturer's service manual and/or illustrated parts catalog to identify the landing and/or taxi light system installed in your aircraft. This will provide information on the location of the components and the assembly details.

- 4.3.4 Note, if the aircraft being modified incorporates a remote sensor (flux gate) compass do not mount the LED light within 24 inches of the remote compass components. After installation of the LED lighting system, a compass swing procedure must be performed with the landing/taxi lights on & off. The position error card must be annotated accordingly.
- 4.3.5 Mount the LED light with a minimum 4-inch clearance to exhaust system components unless adequate heat shielding is utilized to block radiant heat.

4.4 Wire Sizes

- 4.4.1 Reference: **AC43.13-1B, Chapter 11, §4 and §5** for appropriate wire sizing and fuse/breaker protection

4.5 Removal

- 4.5.1 Prepare the aircraft for maintenance:
- Disconnect aircraft power and ground.
 - Ensure all switches are in the OFF position
 - Attach maintenance warning tags
 - Pull landing/taxi light circuit breakers.
 - Reference airframe manufacturer's maintenance manual and remove light covers to gain access to lamp assembly(s) and bracket(s).
 - Remove existing lamp(s) from brackets, mark and retain hardware.
 - Record weight of removed lamps.

4.6 Installation

- 4.6.1 Reference airframe manufacturer's current maintenance manual and install LED light(s) in brackets using retained hardware.
- 4.6.2 Ensure alignment key is fitted to bracket
- 4.6.3 Install suitable aircraft approved connectors or splices to connect landing light assemblies to wires routed from switch in accordance with wiring diagram(s) shown below.
- 4.6.4 Screw terminals are sized for #6 ring terminals. The screw terminals are not polarized, so the power and ground can be connected to them in either order. The positive wire for powering the pulse mode is connected to the yellow wire. Follow the wiring diagrams for connecting the blue and green synchronization wires for two and four light installations.
- 4.6.5 If necessary, install an appropriate aircraft approved switch and circuit breaker of correct rating for the lights installed for the pulse function. Original landing light switch/switches may be used.
- 4.6.6 Placard switches appropriately.
- 4.6.7 Power up aircraft and verify proper operation of LED light(s), in both pulsing and steady functions (as appropriate to the installation)
- 4.6.8 Using the appropriate aircraft maintenance manual, verify that the light angle has not changed, and is oriented & aimed in accordance with manufacturer's instructions.
- 4.6.9 Perform EMI test to verify there is no interference caused by light installation.
- 4.6.10 Reinstall any light covers removed to gain access to lamp assemblies and brackets.
- 4.6.11 Enter appropriate logbook entry detailing work, and if necessary, fill out and submit appropriate form 337 for work accomplished.
- 4.6.12 Perform an operational check of the landing/taxi light(s) in accordance with **14CFR, §91.407 (b) (c)** to determine that the installed landing/taxi light(s) provide enough light for night operations in accordance with **14CFR, §23.1383**.

4.6.13 Weight & balance change from standard position light assemblies to LED landing light assemblies is considered negligible.

4.7 Troubleshooting

4.7.1 Check for bus voltage at power input wire to the light, reestablish power if inadequate power is found. Check for excessive resistance at light ground and repair if necessary. Remove and bench check light if wiring is verified good.

5 Wiring Diagrams

5.1 Wiring Diagram for Single Sunspot without Pulse

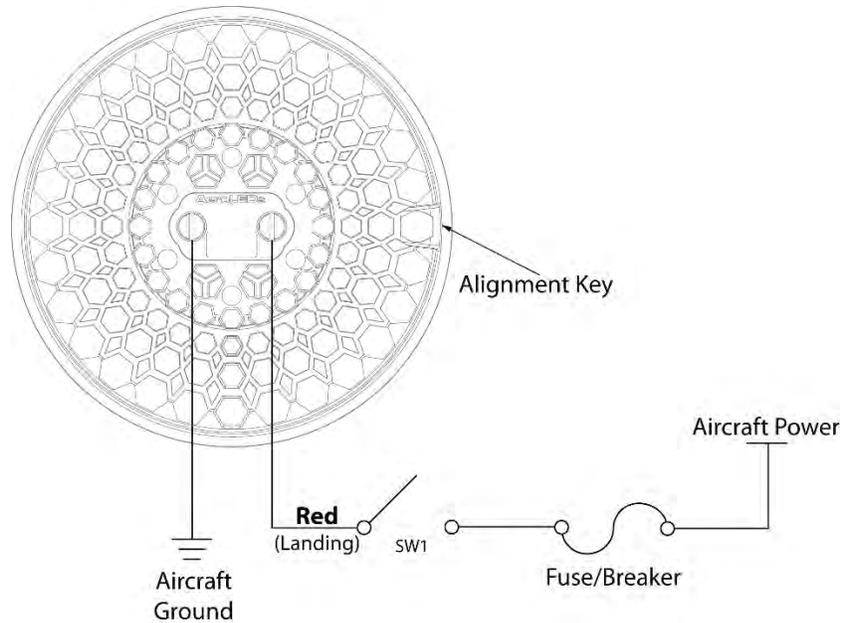


Photo 5-1

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

5.2 Wiring Diagram for Single Sunspot with Recognition

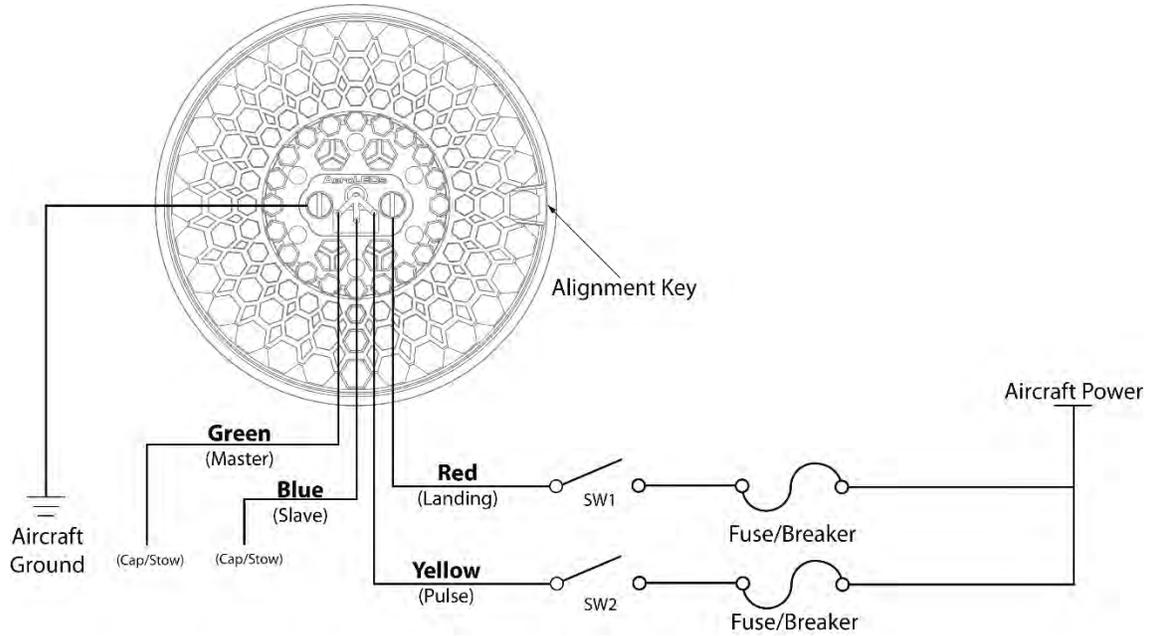


Photo 5-2

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

5.3 Wiring Diagram for Dual SunSpots with Recognition

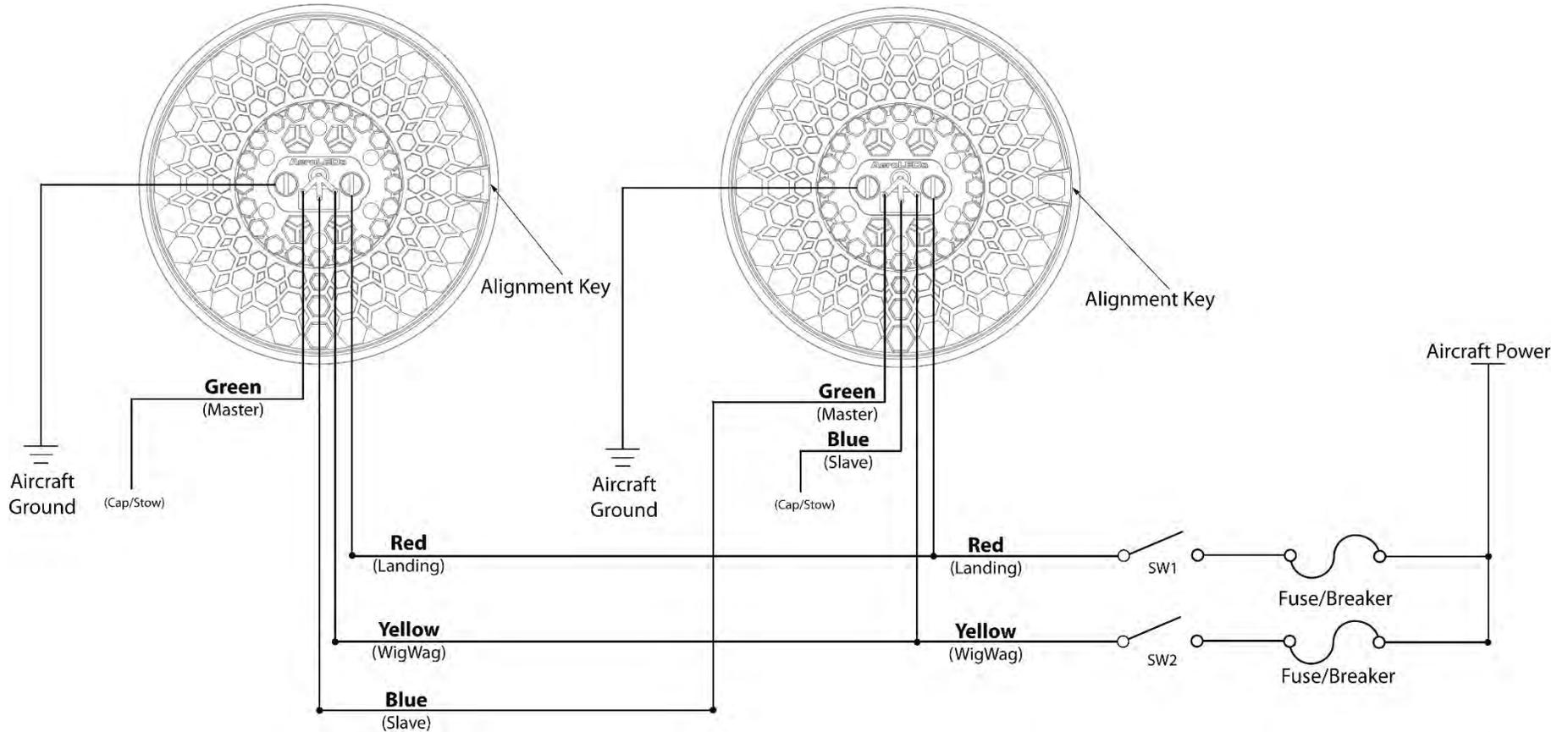


Photo 5-3

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

If lights are installed in close approximation, within two feet of each other use additional synch circuit.

5.4 Wiring Diagram for Four LED SunSpots with Recognition

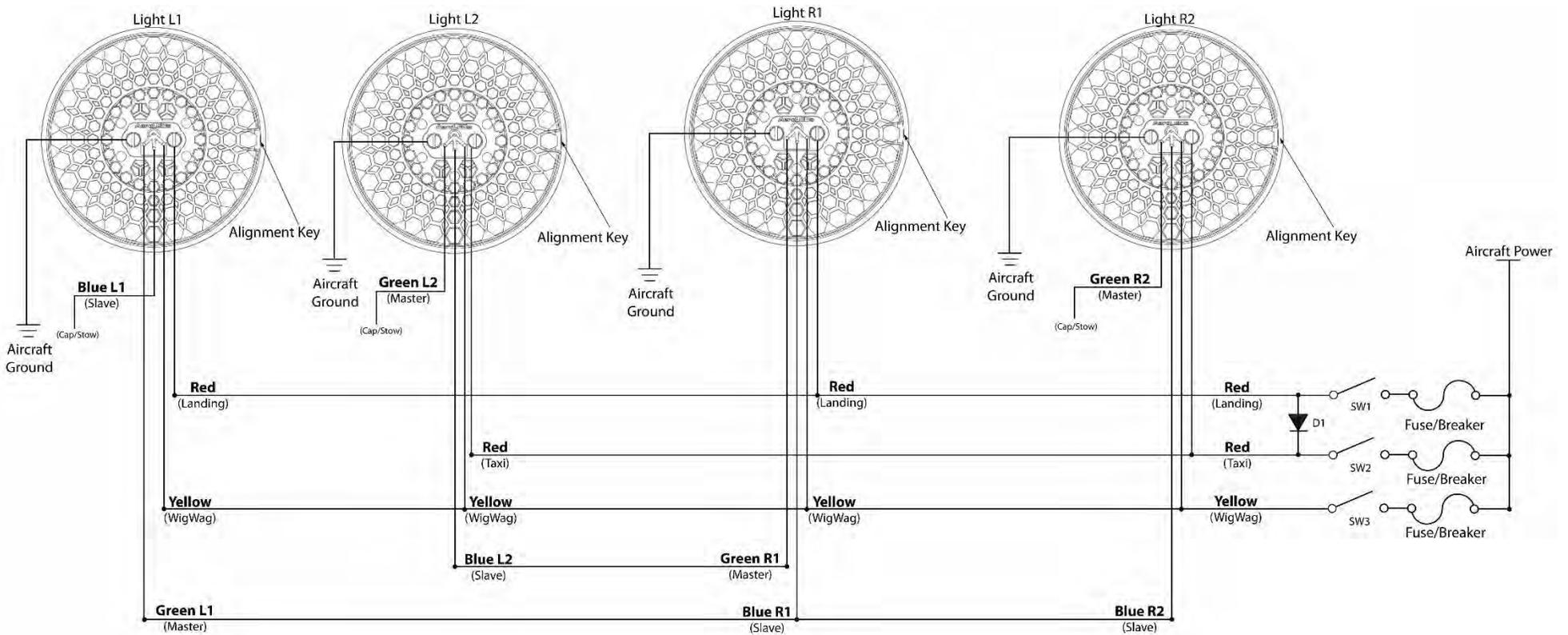


Photo 5-4

Optional Diode (D1): If all four lights are desired to turn on when landing, place a Diode rated for 15 Amps at 14V between the landing and taxi wires

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

6 DO-160 Compliance

DO-160E Section	Compliance Level
4	F2
5	S2
6	B
7	A
8	U
9	H
10	S
11	F
12	S
13	F
14	T
15	A
16	Z
17	A
18	Z
19	ZC
20	RR
21	H
22	A3E3
24	C