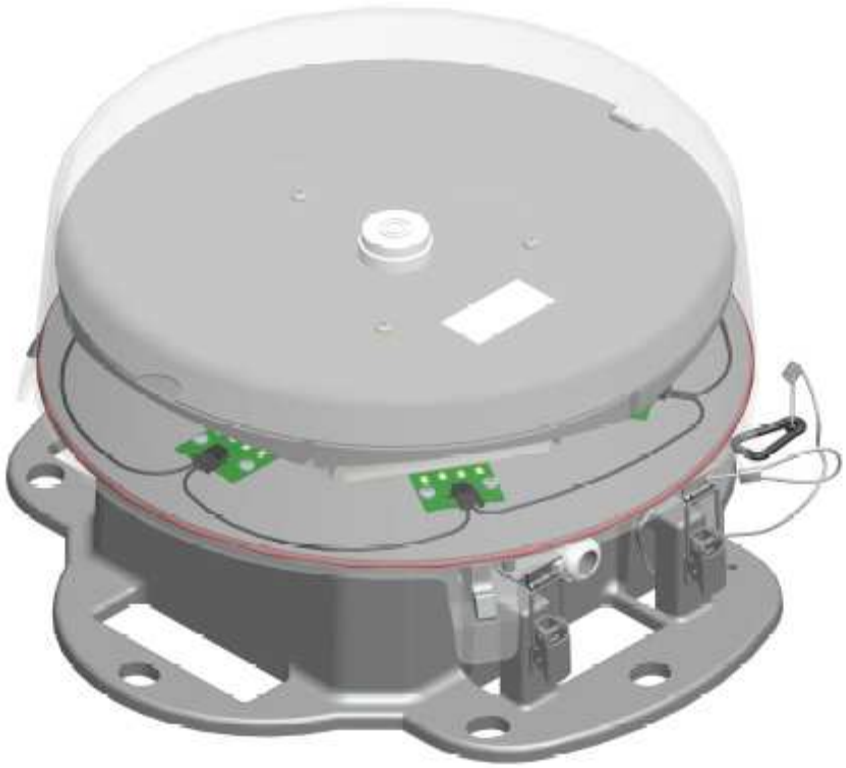
INSTALLATION AND MAINTENANCE MANUAL FOR P/N: D564-A13-001 120/240VAC, 50/60 Hz, L864 RED MEDIUM INTENSITY BEACON



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Section 1: Overview

The Dialight Flashing Red Beacon is designed for the lighting of radio towers, wind generators and other obstructions to aerial navigation, as specified by the FAA, FCC, ICAO and Transport Canada.

The L-864 Flashing Red Beacon as shown in Figure 1, (hereafter referred to as the Beacon) operates from 120 / 240VAC 50/60 Hz. The beacon consists of High Performance LED's that provide the light output equivalent to an incandescent fixture while consuming a fraction of the electrical power. This manual provides guidance and recommendations for the installation and testing of the beacon assembly. Please read this document in its entirety before installing the Beacon.

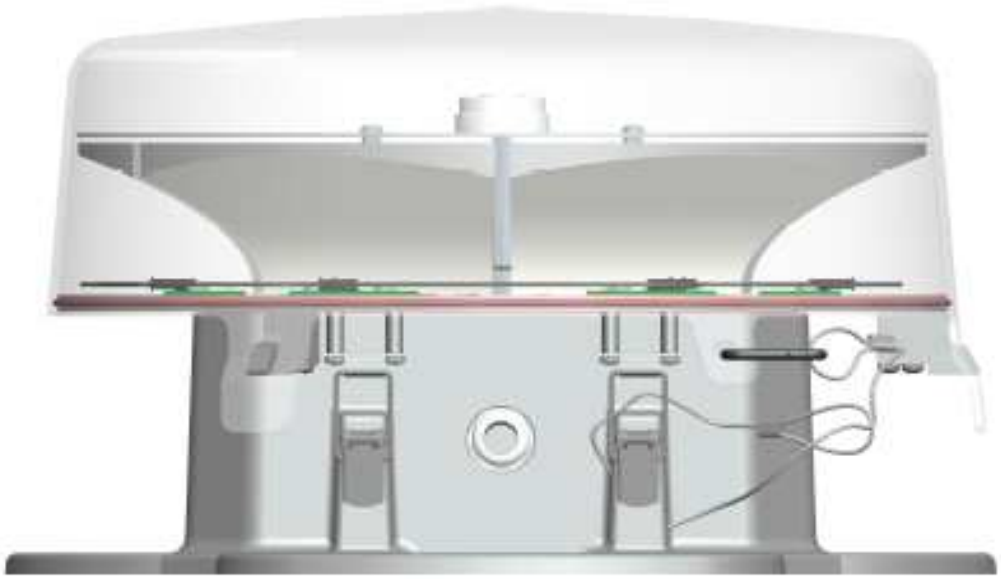


Figure 1
L-864 Flashing Red Beacon Assembly

Section 2: Wiring and Mounting

Warning:
Remove power from all wiring and circuitry before installing or working on the Beacon.

Wiring the Beacon
The Beacon only requires a connection to 120 / 240 VAC, 50/60 Hz power. The ground wire must be connected for proper operation and protection of the Beacon.

Mounting the Beacon
Dialight recommends the installation of one or more lightning rods near the installed Beacon. The lightning rods should extend a minimum of three feet above the height of the Beacon.

The Beacon is mounted to the tower pedestal utilizing customer supplied ½" hardware. Six mounting holes are provided on the Beacon base (Figure 2). These mounting holes will align with most tower pedestals. The Beacon must be installed level according to the bulls-eye level inside the light engine to maintain light output in accordance with FAA requirements.

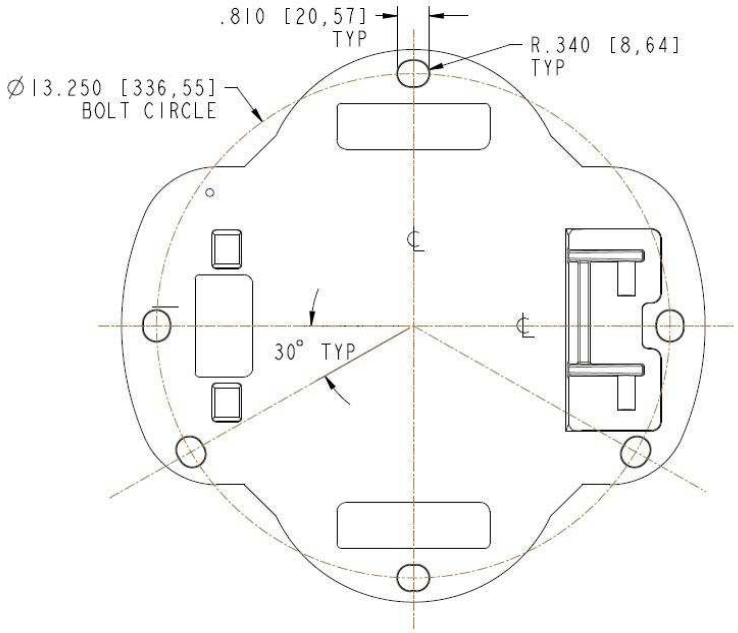


Figure 2
Base - Bottom View

Section 3: Operation and Test

Prior to installation, it is recommended that the unit be tested to ensure no damage was incurred during shipping. This is accomplished by applying power to the beacon. Visual verification of the functioning of the Beacon will indicate proper performance.
WARNING: Do not look directly in to LED's. Adequate eye protection should always be used.
NOTE: Beacon is supplied as a steady burn unit and thus will not flash unless other modifications were requested and supplied with the unit.

Upon completion of this test, the installation may proceed.

Section 4: Beacon Theory of Operation

4.0 System Overview

The block diagram in Figure 4 shows the major components of a typical Beacon installation. The parts of the system are the LED Beacon and Controller. The LED Beacon is made up of one LED module, which lights when current passes through it. The LED Beacon contains its own internal power supply. The Beacon is designed for use with an external controller. This external controller provides the properly timed flashing signal, fault monitoring and alarm interfaces.

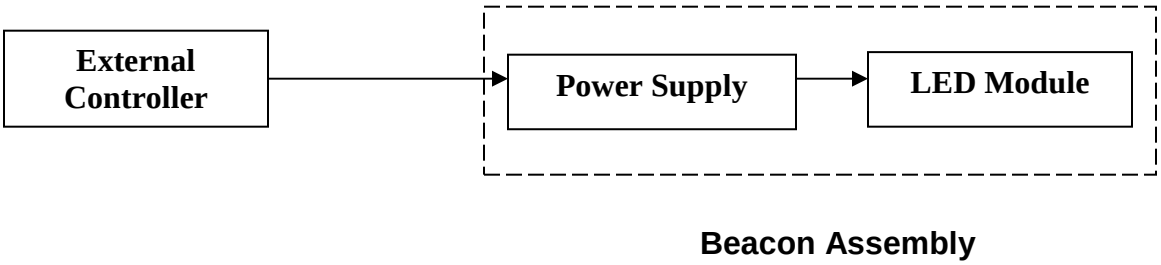


Figure 3 - System Block Diagram

4.1 Lightning Protection

The Beacon incorporates protection against voltage surges (as induced by nearby lightning strikes for example) by means of a multi stage protection circuit utilizing the latest in arresting protective components

Section 5: Maintenance and Troubleshooting

No regularly scheduled maintenance is required for the Beacon.

General cleaning of the Dome Assembly should be done using soapy water. No other cleaning solutions are recommended. Abrasive compounds will scratch the Dome Assembly.

Table 1 Lists possible faults and repair procedures for the L-864 Red Beacon

Table 1 Troubleshooting

Symptom	Possible Cause	Corrective Action
Beacon does not light	No AC power	Verify proper AC levels from power source thru supply lines.
	LED Failure	Replace LED Module
	Power supply Failure	Replace power supply
Beacon does not flash	Refer to controller documentation supplied by the manufacturer.	_____

Repair and Replacement

Refer to Table 1 for troubleshooting procedures.

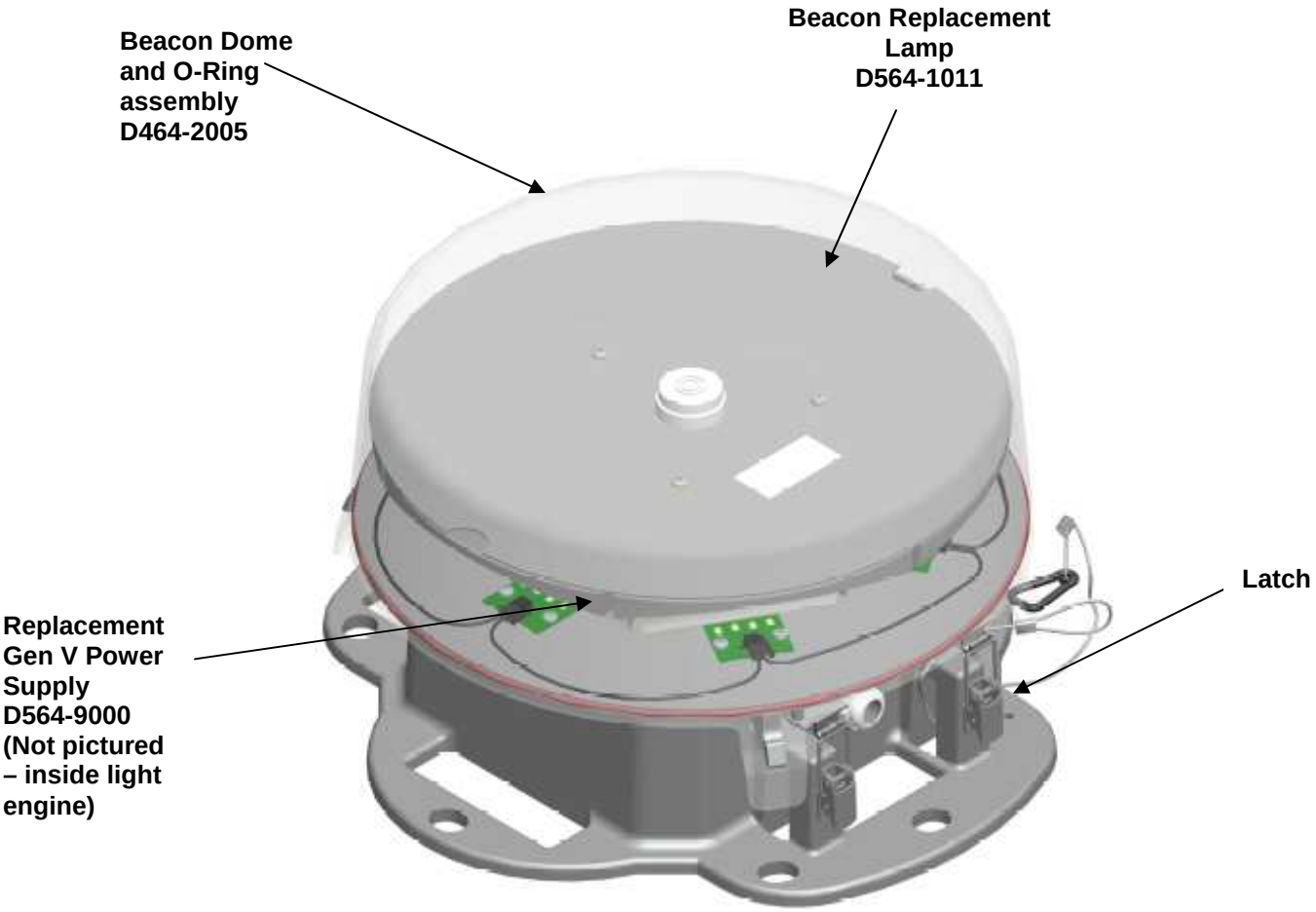


Figure 4 Beacon – External View

Recommended spare parts, User replaceable parts

Description	Dialight Part Number
Beacon Replacement Lamp	D564-1011
Beacon Dome and O-ring	D464-2005
Gen V Power Supply (Inside Light Engine)	D564-9000

NOTE: The only parts that are serviceable on the Beacon are the Replacement Lamp and Power Supply.

Procedure for Installing the Replacement Lamp

Step 1 **WARNING:** Power to the Beacon must be removed prior to servicing.

Step 2 Unclamp the two latches holding the lamp down.

Step 3 Rotate the lamp back to its open position.

Step 4 Disconnect the line and neutral wires from the terminal block, and than unscrew the grounding strap from the lamp to the base. Be careful not to lose the screw for the ground strap.

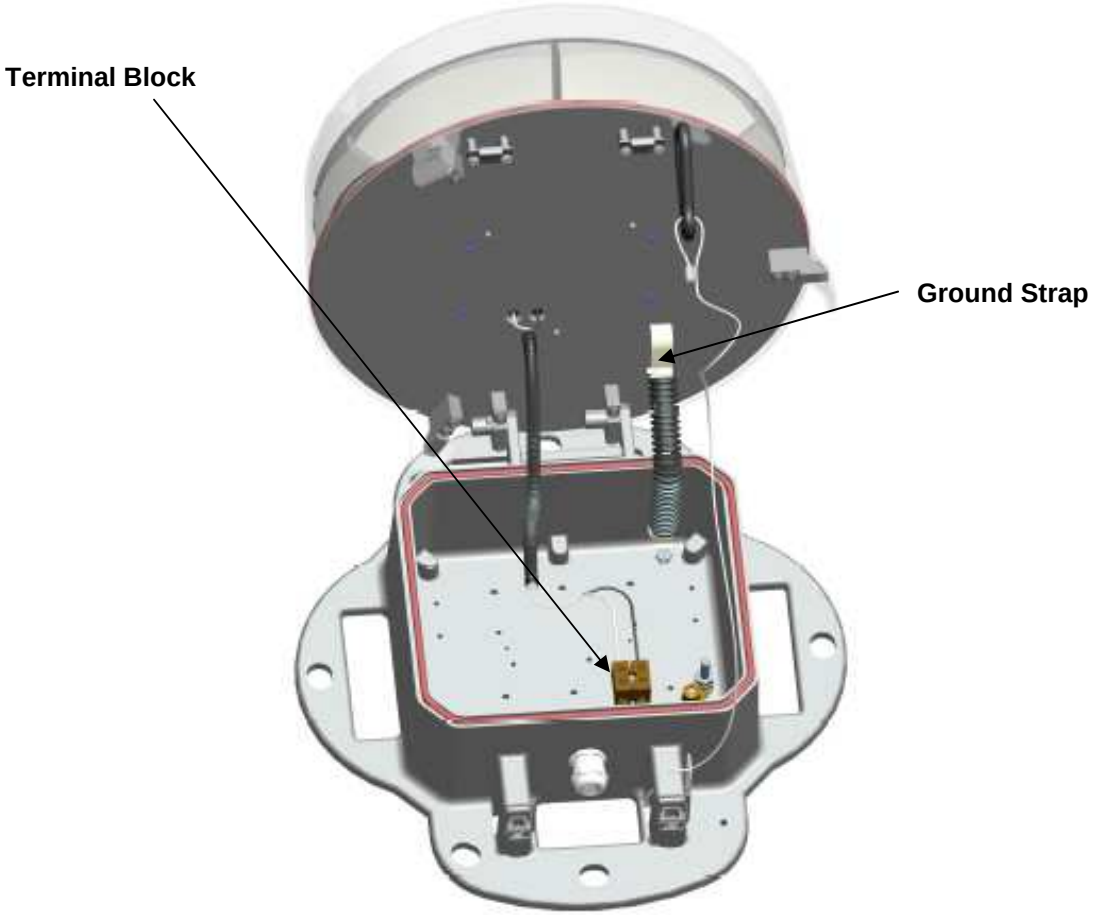


Figure 5 – Beacon in Open Position

Step 5 Rotate the lamp downwards to approximately 10 degrees from the closed position. The key should line up with the keyway on the hinge and allow for the lamp to be pulled off of its pins.

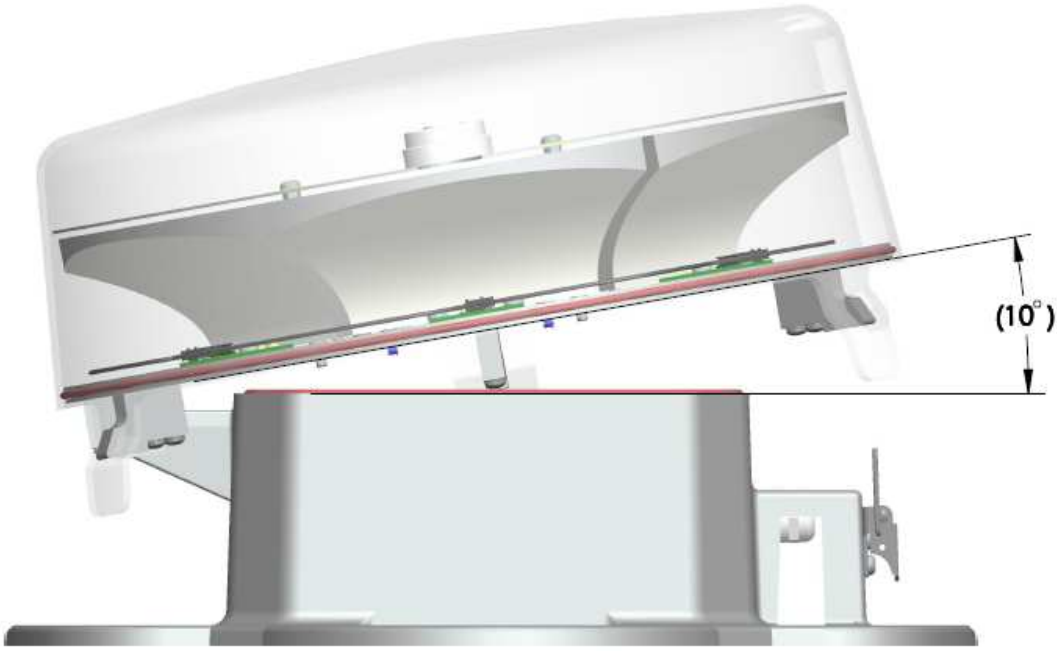


Figure 6 – Lamp Install/Removal Position

Step 6 Slide the new lamp onto the pins to line it up. Rotate it to approximately 10 degrees from closed to again line up the keyway. Push the light engine past the key until it clears and than rotate it back to the open position.

Step 7 Reconnect the line and neutral wires to the terminal block, followed by the grounding strap.

Step 8 Rotate the lamp down to the closed position and secure the two latches to complete installation. Apply power to ensure the beacon lights up correctly.

Replacement Procedure for the Power Supply

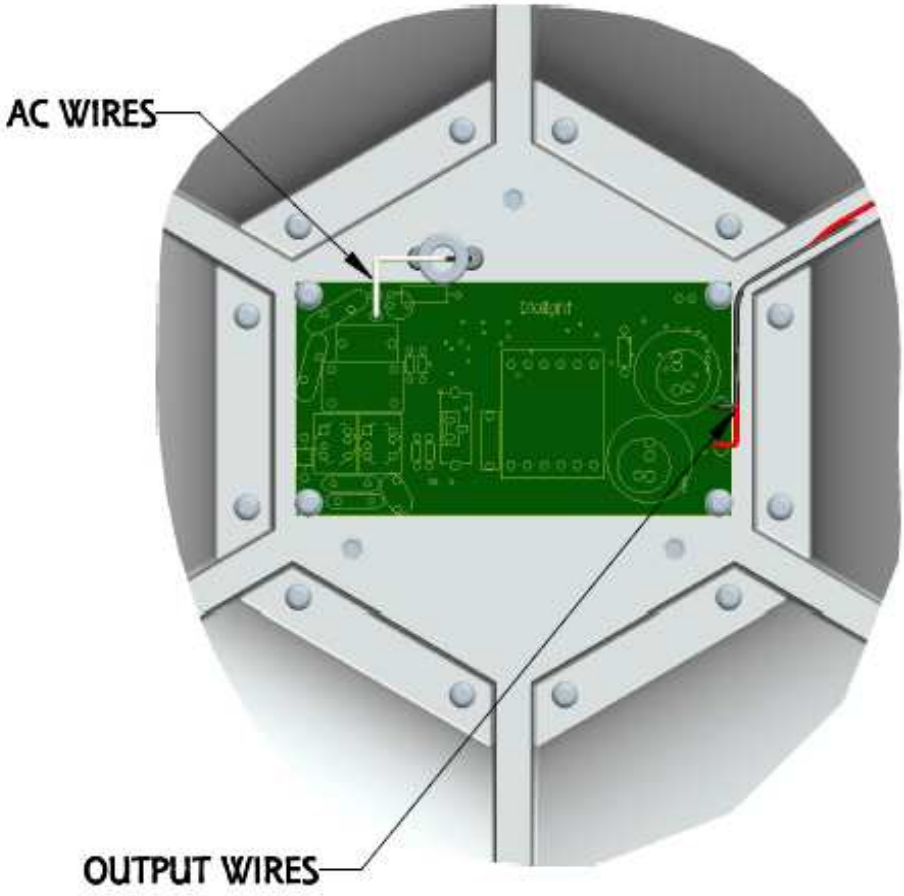
Step 1 **WARNING:** Power to the Beacon must be removed prior to servicing.

Step 2 Unclip 3 tabs holding the dome down and place it out of the way (dome is tethered to pedestal).

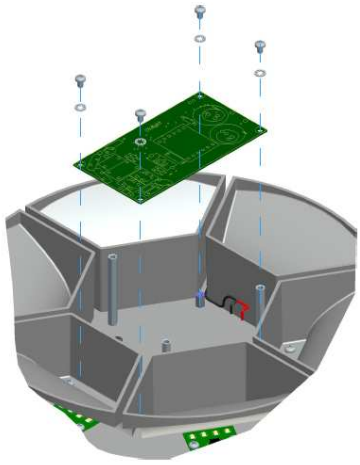
Step 3 Remove 3 Phillips head screws (8-32 x ¼ inch) and accompanying lockwashers holding the Aluminum cover plate down and place it out of the way. Be careful not to misplace the hardware and cover plate.

Step 4 Cut the Black/White AC wires as close to PCB as possible ensuring ferrite remains unaffected.

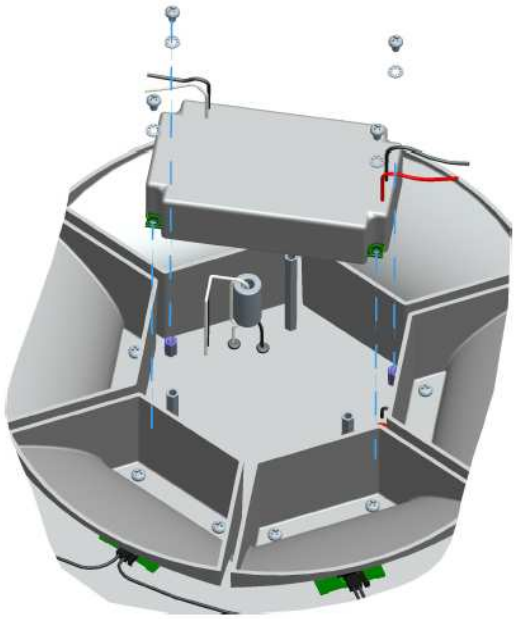
Step 5 Cut the Red/Black output wires as close to PCB as possible.



Step 6 Remove 4 Phillips head screws (8-32 x ¼ inch) and accompanying lockwashers holding the power supply down. Remove the existing power supply. Be careful not to misplace the hardware.



Step 7 Install the NEW potted power supply in same orientation as the existing supply using 4 Phillips head screws (8-32 x ¼ inch) and lockwashers.



Step 9 Re-connect output and AC wires to the new supply using wire nuts or another suitable connection.

Step 10 Apply power to ensure the beacon lights up correctly.

Section 6: Specifications

Power Supply Specifications (D564-9000)

Input Voltage Range	120-240VAC at 50/60Hz
Nominal Input Power	19W (steady burn)
Power Factor	>0.9
ATHD	<20%

Beacon Specifications

Light Color	Red
Weight	18 Pounds
Height	8.4 Inches
Width	15.0 Inches
Bolt Hold down Pattern	Standard Pattern provided (See Fig. 2)

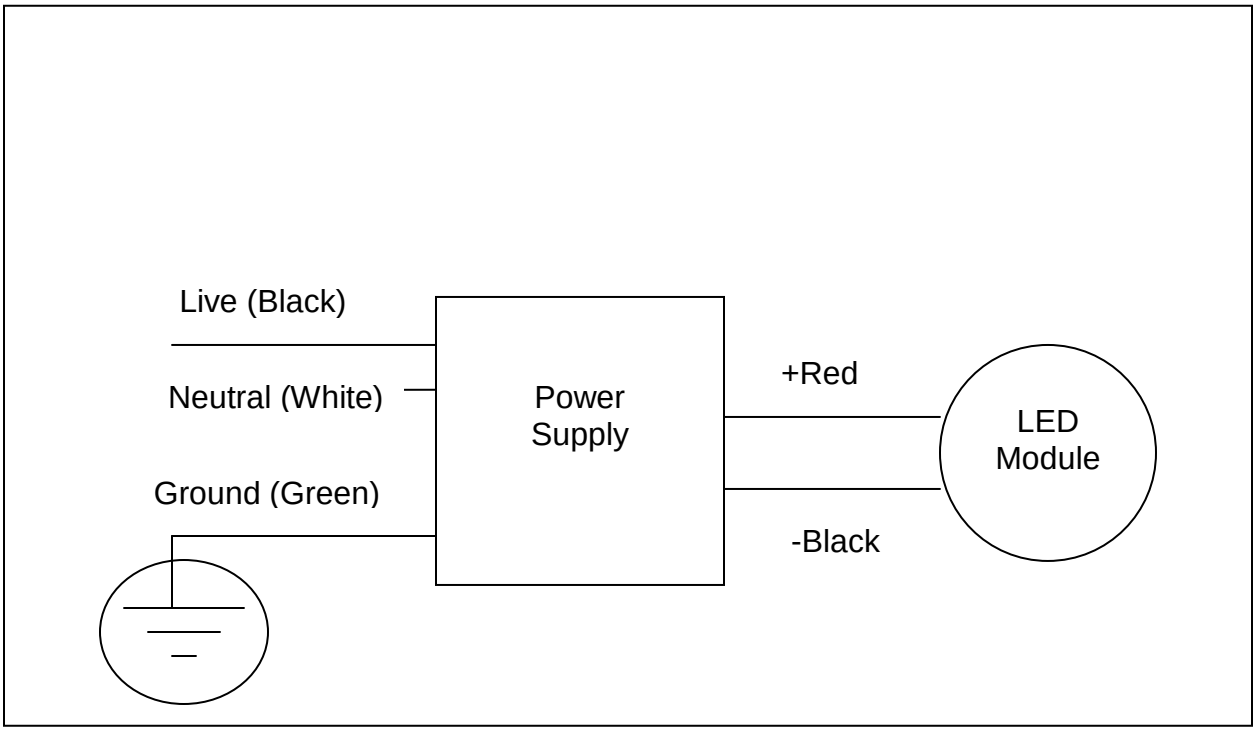
Section 7: Regulatory Compliance and Certifications

7.1 ETL Certified to: Federal Aviation Administration (FAA): AC No. (150/5345-43). Refer to website for latest certifications.

Section 8: How to Obtain Warranty Service

Refer to www.dialight.com

Beacon Wiring Diagram



REVISION HISTORY

REV	ECO No.	DRN	CKD	APP	QA	CM	DATE
A	----	SA	DW	JP	RL	JN	6-19-13