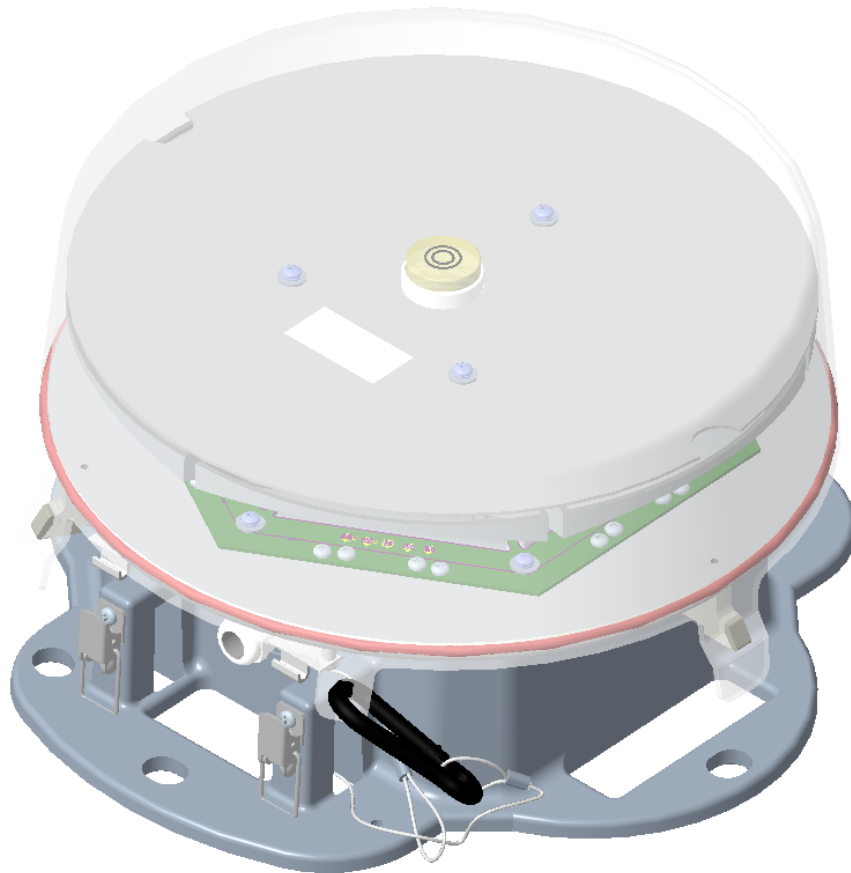

INSTALLATION AND MAINTENANCE MANUAL
FOR
P/N: D664-XXX-XXX
L864 RED MEDIUM INTENSITY BEACON



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Reference Drawings

Beacon Wiring Diagram

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. D664R models incorporate both Red and IR LEDs in a single unit to ensure visibility around military bases, airfield perimeters, buildings, towers and other obstructions for aircraft pilots, both during normal flight or when aided by night vision systems. Night Vision Goggles (NVGs) and Aviator's Night Vision Imaging System (ANVIS) often employ Class A, B, and C filters. These filters can reduce LED sources that emit light in the visible spectrum. The Vigilant L-864 D664 Series overcomes this obstacle by combining visible red LEDs and IR LEDs in a single unit.

The L-864 Flashing Red Beacon as shown in Figure 1, (hereafter referred to as the Beacon) operates from 120 / 240VAC 50/60 Hz or 24-48Vdc depending on the model number. 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.

WARNING:

- Unit should not be lifted from the tabs.
- Dome should not be removed nor manipulated.

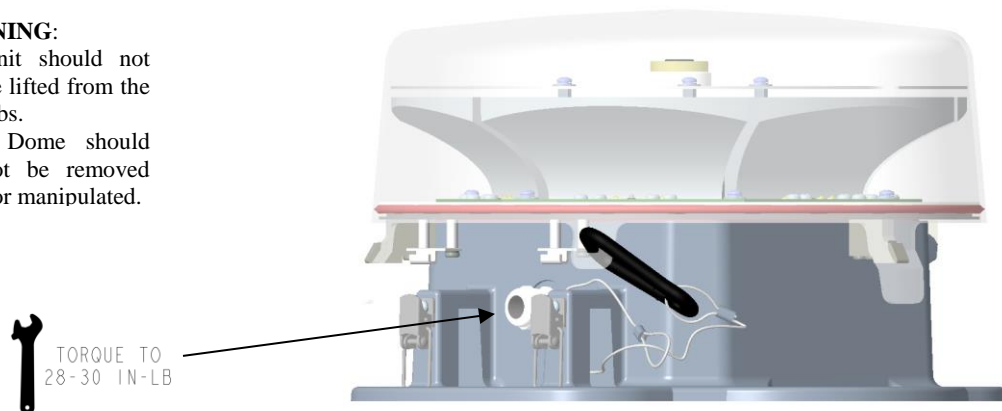


Figure 1
L-864 Flashing Red Beacon Assembly

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 or 24-48Vdc power depending on the model. The ground wire must be connected for proper operation and protection of the Beacon.

NOTE: If there is a possibility of water or moisture entering through the external power cable then the installer must install a wire loop or adequate protection to ensure the IP rating of the fixture is maintained in the installed environment.

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 1/2" 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.

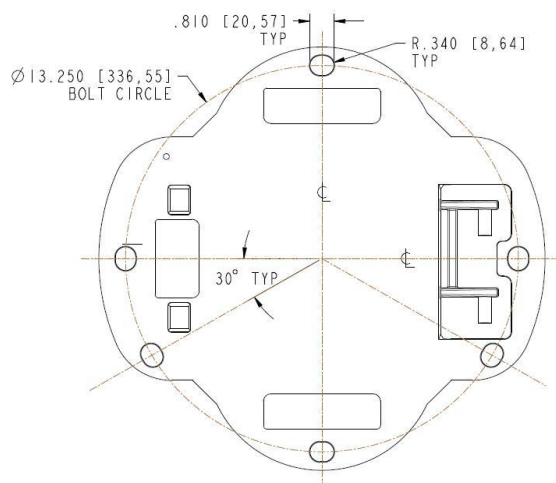


Figure 2
Base - Bottom View

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 into 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.

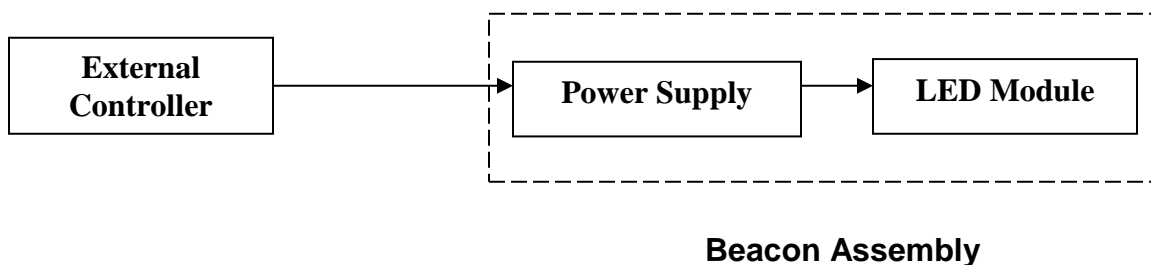


Figure 3 - System Block Diagram

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
DC Beacon does not light	No external DC power Red and black wires reversed Broken connector	Verify proper DC levels from power source thru supply lines.
AC Beacon does not light	No AC power	Verify proper AC levels from power source thru supply lines.
Beacon does not flash	Refer to controller documentation supplied by the manufacturer.	

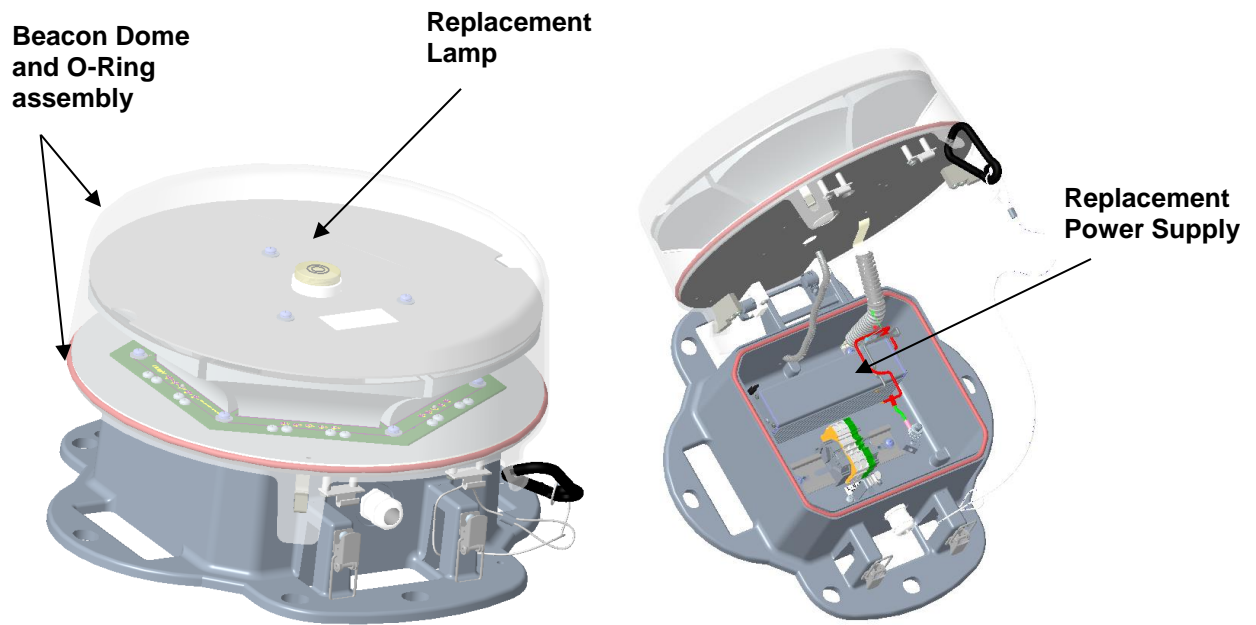


Figure 4 - Replacement Parts

Recommended spare parts, User replaceable parts

Description	Dialight Part Number
Beacon Dome and O-ring	D4642005
Beacon Replacement Lamp	D6641011
Gen VI Power Supply (Inside Light Engine)	D6649000 (AC) D6649001 (DC)

Section 6: Beacon Specifications

Light Color	Red
Weight	22 Pounds
Height	8.4 Inches
Width	15.0 Inches
Input Voltage (D664-R13-001)	120 - 277 VAC, 50/60Hz
Power Consumption (D664-R13-001)	30W, 0.24A (steady on mode)
Input Voltage (D664-R54-001)	24 - 48 VDC
Power Consumption (D664-R54-001)	32W, 1.2A (steady on mode)
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

REVISION HISTORY

<u>REV</u>	<u>ECO No.</u>	<u>DRN</u>	<u>CKD</u>	<u>APP</u>	<u>QA</u>	<u>CM</u>	<u>DATE</u>
A	66967	TLD	AV	AR	YS	JN	2/27/20
B	68528	TLD	AV	AR	YS	JN	4/17/20
C	68542	HP	JPC	AV	YS	JN	6/19/20