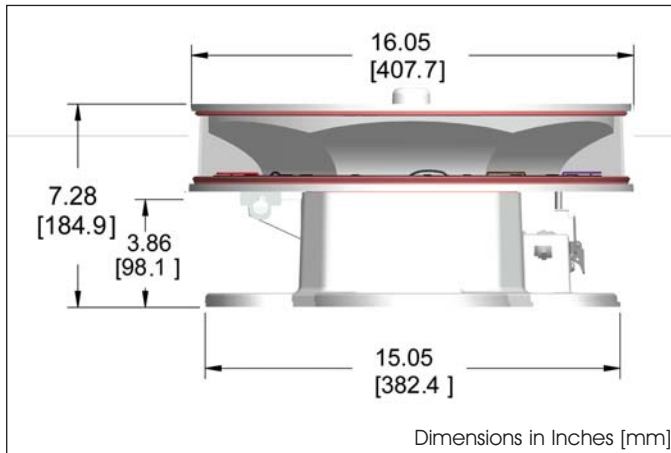


Vigilant® Series LED Based Obstruction Lights



US Patents #7,208,881 #7,568,821 7,604,380 #7,777,424

Vigilant® Series LED Based L-864/L-865 Flashing Dual (White/Red) Strobe



Certifications & Ratings

- FAA AC NO: 150/5345-43F
- FAA Engineering Brief No. 67
- UL1598
- UL8750
- CSA C22.2
- IP66 rated

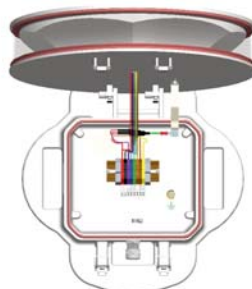
Qualified By

- Intertek ETL
- CSA
- DGAC Mexico

Compliant to

- ICAO Annex 14, 5th Edition, July 2009
- ICAO Aerodromes Design Manual, Chapter 18
- Canadian Aviation Regulation CAR 621.19 (Transport Canada)

Flip top design for simple installation



Application:

The all LED Dialight Vigilant® medium intensity white strobe and red beacon is designed for the lighting of communication towers, smoke stacks wind generators and other obstructions to aerial navigation, as specified by the FAA and FCC. The Dual L864 / L865 uses LED technology for light output from both the red beacon and white strobe.

Unlike conventional Xenon flashtube technology, little or no maintenance is required during its lifetime. Working voltages of less than 200VDC are significantly less than those of Xenon flashtube designs; therefore, this system represents an advance in safety. The Dialight Dual L864 / L865 LED beacon operates from a 48VDC supply. The power supply / control box can be located up to 550 ft away from the light engine, such as at the base of the tower.

Unit Weight:	26 lbs
Operating Voltage:	Universal 120-240 VAC 50/60Hz power factor corrected supply
Effective Intensity:	White Day 20,000 cd White Night 2,000 cd Red Night 2,000 cd
Wattage:	White Day 85W White Night 35W Red Night 25W
Power Factor:	>0.9
Operating Temp:	-40°F to +131°F (-40°C to +55°C)
Synchronization:	Multiple unit sync from single controller (Operates with other manufacturers of GPS sync devices)

Order code:

Part Number	Description
D1RW-C13-008	48VDC FAA OEM
D1RW-C13-008-EU	120-240VAC, European Version

Dialight also offers these LED strobes



Vigilant® Series L-866/L-885
LED Based Dual Red / White Catenary Strobe



SafeSite® Series L-864/L-865
Flashing Dual LED (White/Red) Strobe
For Hazardous Locations (Class I, Div. 2)

Vigilant® LED Based L-864/L-865 Flashing Dual (White/Red) Strobe

Features and Benefits

Industry's Longest Warranty

Full performance 5 year warranty
(Xenon technology only 2 years)

All LED Flash Head = 10+ Years Life Expectancy

Long life and resistant to shock and vibration
High impact polycarbonate lens with specialised lens coating for superior UV, scratch & chemical resistant lens coating
Rugged metal base
Reduction in expensive tower climbs and maintenance costs / unplanned site visits

No More Dangerous High Voltage Power Supply Required

Enables the use of low voltage flexible cable
Uses standard low voltage supply, providing considerable safety advantages
Eliminates the need to send high voltage up a tower
Eliminates corrosion due to ozone effects

Excellent protection against lightning and surges

Designed to withstand IEC61000-4-5, 6kV/3000A, 1.2/50s, 8/20s,
2 ohm output impedance, combination wave, line-line and line-ground

Smallest Flash Head in the Industry

7.28" high
Significantly less wind loading than Xenon dual strobes

Very Precise Patented Optics

Minimum ground scatter light
Community friendly lighting system

Uses State-of-the-Art LED Technology

Replaces high maintenance Xenon tubes
Resistant to shock and vibration (no fragile Xenon tubes)
Does not generate lens deteriorating ozone

LED's Produce No Radio Frequency Blast

Eliminates RF interference with cell networks associated with Xenon technology

IP66 Rated

Completely sealed from the outside environment
Factory sealed

Lightest Flash Head in the Industry

26lbs

Easy to Handle and Install

Replaceable flashhead
Light module is detachable from base for easy replacement at end of life



2007



2008



2009

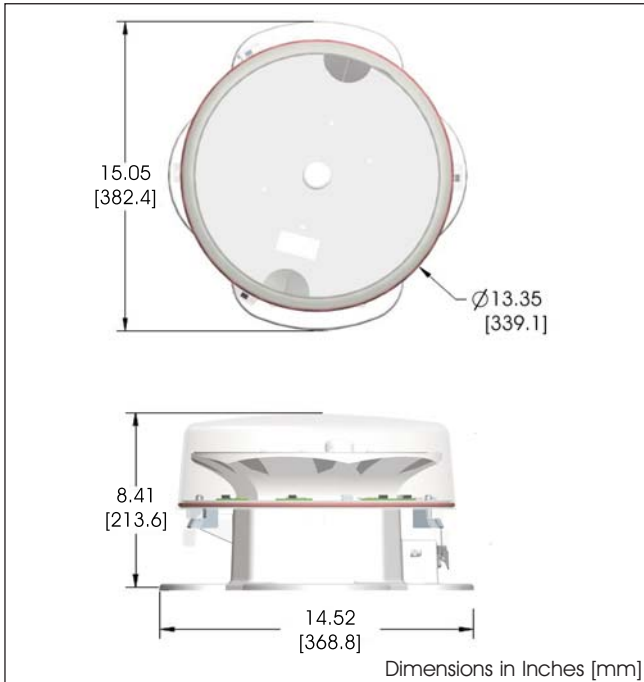


Present



US Patents # 7,281,821 # 7,568,821 other patents pending

Vigilant® LED Based L-864 Red Medium Intensity Beacon



Certifications & Ratings:

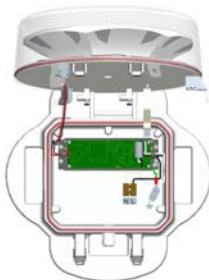
- FAA AC NO: 150/5345-43F
- FAA Engineering Brief No. 67
- UL 1598
- UL 8750
- CSA C22.2
- IP66 rated

Qualified By:

- Intertek ETL
- CSA
- DGAC Mexico

Compliant to:

- ICAO Annex 14, 5th Edition, July 2009
- ICAO Aerodromes Design Manual, Chapter 18
- Canadian Aviation Regulation CAR 621.19 (Transport Canada)



Flip top design for simple installation

Application:

The Dialight Vigilant® Series D464 LED based medium intensity red beacon utilizes state-of-the-art optical design to achieve the most compact, efficient, FAA compliant L-864 device in the market. While it readily interfaces into existing installations, its robust, low power design will provide years of maintenance free service.

The D464 has extremely low RF interference and is ideal for the most difficult environments, including "hot" AM towers.

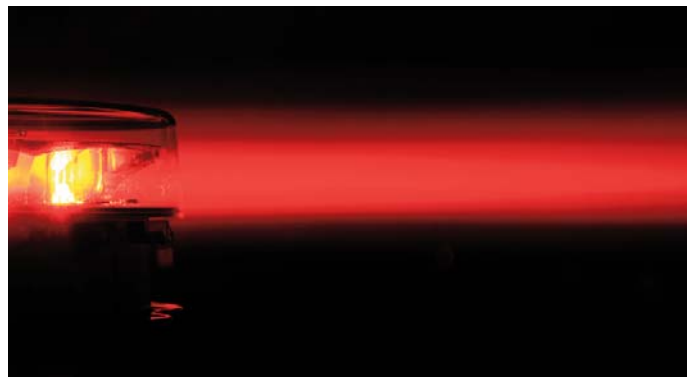
Unit Weight:	20lbs (9Kg)
Operating Voltage:	Universal 120-240 VAC 50/60Hz power factor corrected supply
Effective Intensity:	2,000 cd
Wattage:	20W rated 20W (steady burn) 3.33W (16.7% duty cycle) 20 flashes per minute with 0.5 second on time
Operating Temp:	-40°F to +131°F (-40°C to +55°C)
Power Factor:	>0.9

Order code:

Part Number	Description
D464-A13-001	120 - 240 VAC FAA
D464-A13-001-EU	120 - 240 VAC ICAO
D464-3002	D464 retro fit adaptor

Patented Optics

Provides minimum ground scatter for a "community-friendly" lighting system



Dialight also offers these LED Beacons



SafeSite® Series L-864
Red LED Beacon for
hazardous locations (Class I, Div. 2)



Vigilant® Series L-864 Infrared (IR)
LED Based Medium Intensity Red Beacon
for use with aviator night vision goggles

Vigilant® LED Based L-864 Red Medium Intensity Beacon

Features and Benefits

Industry's Longest Warranty

Full performance 5 year warranty
(Xenon technology only 2 years)

All LED Flash Head = 10+ Years Life Expectancy

Resistant to shock and vibration
High impact polycarbonate lens, UV, scratch & chemical resistant lens coating
Rugged metal base
Reduction in expensive tower climbs and maintenance costs / unplanned site visits

Environmentally Friendly

20 Watt Power Consumption
Lowest power consumption L-864 on the market, over 90% more efficient than incandescent
Requires smaller gauge wire than a traditional 1200W incandescent beacon

Smallest Flash Head in the Industry

8.41" high
Significantly less wind loading than Xenon dual strobes

Lightest Flash Head in the Industry

20lbs
Easy to install
Replaceable flashhead is detachable from base for easy replacement at end of life

Very Precise Patented Optics

Minimum ground scatter light
Community friendly lighting system

Uses State-of-the-Art LED Technology

Replaces high maintenance Xenon tubes
Resistant to shock and vibration (no fragile Xenon tubes)
Does not generate lens deteriorating ozone

New Hinged Lid Design

Easy access to terminal block wiring

IP66 Rated

Completely sealed from the outside environment
Factory sealed



Dialight's LED Technology Innovations Over the Years



2000



2004



2006

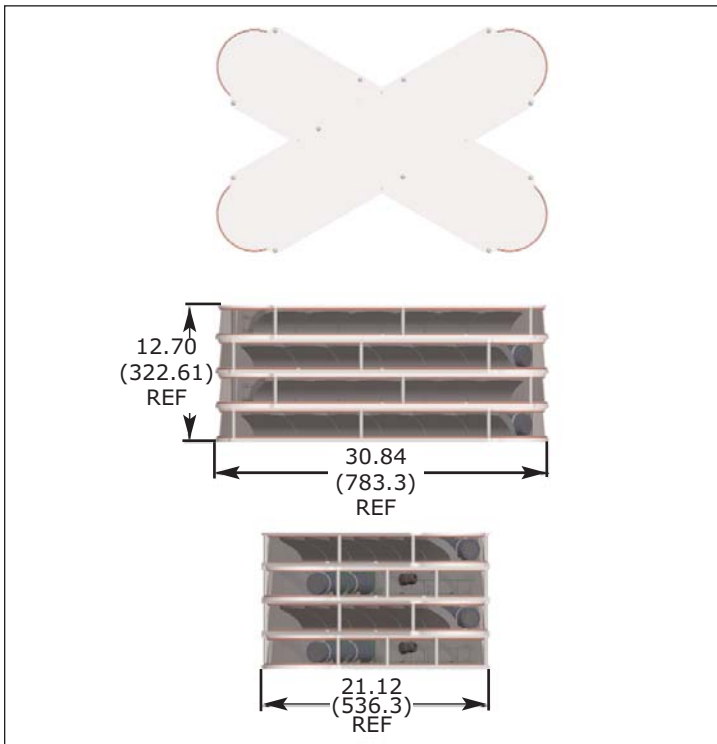


Present



US Patent #7,281,821 other patents pending

Vigilant® Series LED Based L-856 High Intensity (White) Strobe



Certifications & Ratings

- FAA AC NO: 150/5345-43F
- FAA Engineering Brief No. 67
- IP66 rated

Qualified By

- Intertek ETL

Compliant to

- DGAC Mexico

Features & Benefits

- Full performance 5 year warranty
- Shock and vibration resistant
- Patented optic with sharp beam cutoff
- Minimum ground scatter (community friendly light pattern)
- High impact polycarbonate lens
- Specialized lens coating providing superior UV, scratch, and chemical resistance
- Rugged metal design
- Extremely low RF interference

Application:

The Dialight Vigilant® Series High Intensity LED White Strobe is the first all LED L-856 unit designed for the lighting of communication towers, smoke stacks, broadcast towers and other tall obstructions to aerial navigation, as specified by the FAA. A high intensity system consists of 3 flash heads, 3 power supplies per level and 1 controller for the entire system. The flash heads will be placed on up to six levels of the structure for a maximum of 18 synchronized flash heads for a single tower. The 3 flash heads will provide 360 degrees of coverage.

Unlike conventional Xenon flashtube technology, Dialight's LED system requires little or no maintenance during its lifetime, drastically reducing costs associated with tower climbs. Working voltages of less than 200VDC are significantly less than those of Xenon flashtube designs; therefore, this system represents an advance in safety. Use of LED technology also provides a more shock and vibration resistant design, ensuring consistent flash intensity every time.

This IP66 rated product is factory sealed to ensure water tight seals are not compromised over the life of the strobe. Additionally, like all of Dialight's Obstruction Lights, patented optics provide sharp cutoff drastically minimizing light pollution and ground scatter.

Unit Weight:	85 lbs
Operating Voltage:	Universal 120 - 277 240VAC 50/60Hz
Effective Intensity:	White Day 270,000 cd White Twilight 20,000 cd White Night 2,000 cd
Wattage:	White Day 250W White Twilight 30W White Night 10W
Power Factor:	>0.9
Ambient Temp:	-40°F to +131°F (-40°C to +55°C)
Synchronization:	Multiple unit sync from single controller (Operates with other manufacturers of GPS sync devices)

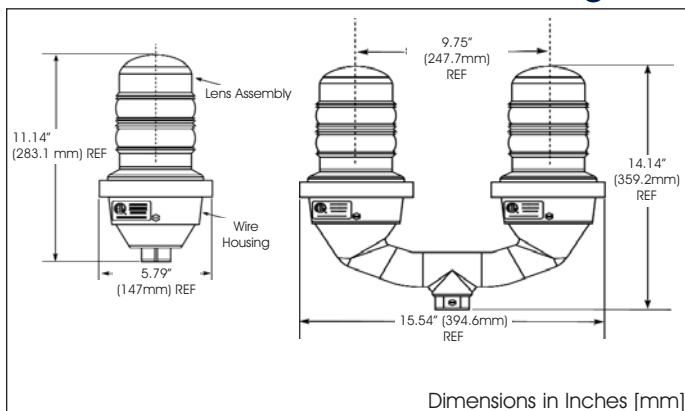
Order codes:

Part Number	Description
D156-A33-270	(1) - L-856 flash head and supply
D156-A33-CTR	(1) - Controller
D156-6000NT	(1) - Night photocell
D156-6000TW	(1) - Twilight photocell
D156-6001JBX	(1) - Junction box
D156-A33-SYS	(3) - L-856 flash heads and supplies, (1) - Controller, (1) Junction Box
D156-REDINT	(1) - Set of boards needed to connect an external red system to a high intensity system
D1RW-C13-AL8	(1) - L-864/L-865 antenna obstruction light and AOL interface boards



US Patent #6,425,678 other patents pending

Vigilant® Series LED Based 860 L-810 Red LED Obstruction Lights



Certifications & Ratings

- FAA AC NO: 150/5345-43F
- FAA Engineering Brief No. 67
- IP65 rated
- IP66 rated
- NEMA 4X Rated

Qualified By

- Intertek ETL
- Lighting Sciences Canada

Compliant to

- DGAC Mexico
- ICAO Annex 14, 5th Edition, July 2009
- ICAO Aerodromes Design Manual, Chapter 18
- Canadian Aviation Regulation CAR 621.19 (Transport Canada)
- Nachrichten für Luffahrer Teil I Langen, 6. Januar 2005
- German Air Traffic Control Notices For Pilots Part I 6, January 2005
- CASA

Features & Benefits

- Full performance 5 year warranty
- Shock and vibration resistant
- Patented optic with sharp beam cutoff
- Available as a single or dual unit
- Available in 12VDC, 24VDC, 48VDC, 120VAC, and 230VAC versions (50 or 60HZ)
- Unique optically designed lens to enhance LED operation and provide 360° visibility
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Threaded 1" and 3/4" bottom hub for mounting
- Can be operated steady or flashed (controller not supplied)
- Complete Performance 5 year warranty
- Rugged metal design

Application:

The Dialight Vigilant® 860 series is an FAA type L-810 red LED obstruction light. Designed for steady burning, this fixture is used to mark any obstacle that may present hazards to aircraft navigation.

Unit Weight:	7.14 lb (3.23 kg) (Single Unit) 16.06 lb (7.28 kg) (Dual Unit)
Supply voltage ranges:	Nominal +/- 10%
Wattage:	15W / 120mA (120 VAC Units) 16W / 120mA (230 VAC Units - 60 Hz) 16W / - (230 VAC Units - 50 Hz) 24W / 2.0A (12 VDC Units - Standard) 20W / 920mA (24 VDC Units) 13W / 275mA (48 VDC Units)
Operating Temp:	-67°F to +131°F (-55°C to +55°C)

Order codes:

Part Number	Configuration	Compliance	Operating Voltage
860-1R01-001	Single Fixture	FAA	120 VAC
860-1R03-001	Single Fixture	FAA	12 VDC
860-1R04-001	Single Fixture	FAA	48 VDC
860-1R05-001	Single Fixture	FAA	24 VDC
860-1R02-001	Single Fixture	FAA	230 VAC
860-5R02-001	Single Fixture	ICAO, 10cd	230 VAC
860-6R01-001	Single Fixture	TC	120 VAC
860-1R02-001-EU	Single Fixture	ICAO	230 VAC
860-4R02-001-EU	Single Fixture	ICAO, 50cd	230 VAC
860-1R01-002	Dual Fixture	FAA	120 VAC
860-1R03-002	Dual Fixture	FAA	12 VDC
860-1R04-002	Dual Fixture	FAA	48 VDC
860-1R05-002	Dual Fixture	FAA	24 VDC
860-1R02-002	Dual Fixture	FAA	230 VAC
860-5R02-002	Dual Fixture	ICAO, 10 cd	230 VAC
860-6R01-002	Dual Fixture	TC	120 VAC
860-7R02-002	Dual Fixture	CASA, 100 cd	230 VAC
860-1R02-002-EU	Dual Fixture	ICAO	230 VAC
860-4R02-002-EU	Dual Fixture	ICAO, 50cd	230 VAC

Dialight also offers these LED obstruction lights for use in Hazardous Locations (Class I, Div. 2)



SafeSite® Series L-810 Red LED Obstruction Lights



SafeSite® Series 860 LED Steady Burn Visual Signals

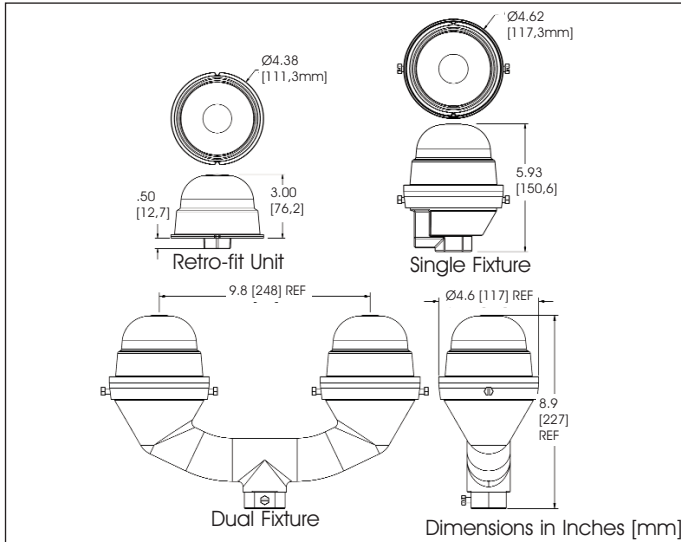


SafeSite® Series FLS Series Flashing Visual Signals



US Patent #7,604,384

Vigilant® Series LED Based RTO L-810 Red LED Obstruction Lights



Ordering Codes:

Part Number	Configuration	Compliance	Infrared (IR)	Wattage	Operating Voltage
RTO-1R07-001	Single Fixture	FAA		6.5W	120-240 VAC
RTO-6R07-001	Single Fixture	TC		8.5W	120-240 VAC
RTO-1R06-001	Single Fixture	FAA		8.0W	277 VAC
RTO-1R08-001	Single Fixture	FAA		3.5W	12-48 VDC
RTO-1R18-001	Single Fixture Low Power	FAA		1.5W	12-48 VDC
RTO-CR07-001	Single Fixture Red / Infrared (IR)	FAA	•	5.5W	120-240 VAC
RTO-CR08-001	Single Fixture Red / Infrared (IR)	FAA	•	5.0W	12-48 VDC
RTO-6CR7-001	Single Fixture Red / Infrared (IR)	TC	•	9.0W	120-240 VAC
RTO-1R07-001-EU	Single Fixture	ICAO		6.5W	120-240 VAC
RTO-1R07-002	Dual Fixture	FAA		6.5W	120-240 VAC
RTO-6R07-002	Dual Fixture	TC		8.5W	120-240 VAC
RTO-1R06-002	Dual Fixture	FAA		8.0W	277 VAC
RTO-1R08-002	Dual Fixture	FAA		3.5W	12-48 VDC
RTO-1R18-002	Dual Fixture Low Power	FAA		1.5W	12-48 VDC
RTO-CR07-002	Dual Fixture Red / Infrared (IR)	FAA	•	5.5W	120-240 VAC
RTO-CR08-002	Dual Fixture Red / Infrared (IR)	FAA	•	5.0W	12-48 VDC
RTO-6CR7-002	Dual Fixture Red / Infrared (IR)	TC	•	9.0W	120-240 VAC
RTO-1R07-002-EU	Dual Fixture	ICAO		6.5W	120-240 VAC
RTO-1R07-004	Single Retro-Fit Fixture	FAA		6.5W	120-240 VAC
RTO-6R07-004	Single Retro-Fit Fixture	TC		8.5W	120-240 VAC
RTO-1R06-004	Single Retro-Fit Fixture	FAA		8.0W	277 VAC
RTO-1R08-004	Single Retro-Fit Fixture	FAA		3.5W	12-48 VDC
RTO-1R18-004	Single Retro-Fit Fixture Low Power	FAA		1.5W	12-48 VDC
RTO-CR07-004	Single Retro-Fit Fixture Red / Infrared (IR)	FAA	•	5.5W	120-240 VAC
RTO-CR08-004	Single Retro-Fit Fixture Red / Infrared (IR)	FAA	•	5.0W	12-48 VDC
RTO-6CR7-004	Single Retro-Fit Fixture Red / Infrared (IR)	TC	•	9.0W	120-240 VAC
RTO-1R07-004-EU	Single Retro-Fit Fixture	ICAO		6.5W	120-240 VAC

Dialight reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: http://www.dialight.com/Assets/Brochures_And_Catalogs/Signaling/Obstruction_Brochure.pdf

Warranty Statement: EXCEPT FOR THE WARRANTY EXPRESSLY PROVIDED FOR [HEREIN/ABOVE/BELOW], DIALIGHT DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NONINFRINGEMENT.

Disclaimer: Night Vision Goggles (NVG) and Aviator Night Vision Imaging Systems (ANVIS) sense infrared (IR) light at various wavelength ranges. Accordingly, Dialight makes no claim or representation that the IR light emitted by the Vigilant L-864 is visible to any make or model of any NVG or ANVIS. In no event shall Dialight or any of its representatives be liable for any damages, including, without limitation, direct, consequential, indirect, punitive, incidental or special damages, in connection with the IR light emitted by the Vigilant L-864 and/or whether any NVG or ANVIS can sense such IR light or whether the IR light emitted by the Vigilant L-864 is visible to any NVG or ANVIS, regardless of the form of action.

Application:

The Dialight Vigilant® RTO Series obstruction light utilizes a unique optical, electrical and mechanical design. The RTO series is the most universal, compact and efficient obstruction light in the world. ETL Certified to the FAA requirements, the RTO series fixture is also ICAO and Transport Canada compliant. Also available as a single fixture for direct replacement of incandescent lamp/lens technology.

Unit Weight: 1.25lbs (0.56 kg) (Retro Unit)
2.00lbs (0.91 kg) (Single Unit)
4.60lbs (2.09 kg) (Dual Unit)

Supply Voltage Ranges: Nominal +/- 10%

Power Factor: >0.9 (All AC units)

Operating Temp: -40°F to +131°F (-40°C to +55°C)

Certifications & Ratings

- FAA AC NO: 150/5345-43F
- FAA Engineering Brief No. 67
- IP66 rated
- NEMA 4X

Qualified By

- Intertek ETL
- Lighting Sciences Canada
- DGAC Mexico

Compliant to

- ICAO Annex 14, 5th Edition, July 2009
- ICAO Aerodromes Design Manual, Chapter 18
- Canadian Aviation Regulation CAR 621.19 (Transport Canada)
- Nachrichten für Luffahrer Teil I Langen, 6. Januar 2005
- German Air Traffic Control Notices For Pilots Part I 6, January 2005

Features & Benefits

- Full performance 5 year warranty
- Available in 120 - 277 VAC and 12 - 48 VDC
- Simple retro-fit using existing wiring and housing
- Weather/corrosion resistant lamp assembly and housing
- Self-contained wiring compartment eliminates additional boxes
- Threaded 1" and 3/4" bottom hub for mounting
- Can be operated steady or flashed (controller not supplied)
- Uses 95% less energy than incandescent
- Resistant to shock and vibration
- UV, scratch & chemical resistant lens coating