

Vigilant<sup>®</sup> LED Based Obstruction Lights



A az WA

# On when it matters most.

# Products and solutions that protect your business



# **Dialight's LED Technology Innovations Over the Years**

## First ever FAA certified LED obstruction light



#### **Features & Benefits**

- 5 year warranty
- Resistant to shock and vibration
- High impact polycarbonate lens with UV, scratch and chemical resistant coating
- Reduction in tower climbs for lower maintenance costs/unplanned site visits
- Smallest flash head in the industry
- Community friendly lighting system utilizing patented optics

#### **Dialight Timeline**

- 1999 First ever FAA certified LED L810
- 2001 First ever FAA certified LED L864
- 2007 First ever FAA certified LED L865/L864
- 2011 First ever FAA certified LED L856
- 2012 First ever FAA certified LED L856/L864

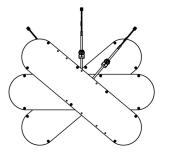
Dialight (LSE: DIA.L) is leading the energy efficient LED lighting revolution around the world for industrial and hazardous areas as well as transportation and infrastructure applications. For 40 years it has been committed to the development of LED lighting solutions that enable organizations to vastly reduce energy use and maintenance needs, improve safety, ease disposal and reduce CO2 emissions.

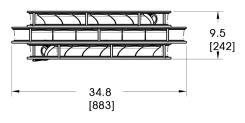
#### Vigilant

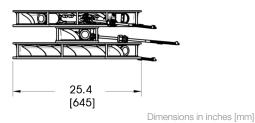
# Vigilant LED Based L-856 / L-864

High Intensity (White / Red) Strobe









#### **Certifications & Compliance**

- FAA AC 150 / 5345 43G
- Transport Canada CAR 621.1
- FAA EB No. 67D
- ICAO Annex 14
- DGAC Mexico

#### Features & Benefits

IP66

- ETL verified to FAA standards
- Superior surge and lightning protection
- Patented optics for minimal down light / ground scatter
- Ideal for broadcast towers, stacks and other tall structures
- 360 degree coverage using three (3) flash heads
- Maximum of 18 synchronized flash heads for each controller
- Shock and vibration resistant
- Lighting and hardware kits available for standard towers

#### **Mechanical Information:**

Flash head weight:	63 lbs (30 kg)
Operating voltage:	208 - 277V AC 50/60Hz
Effective intensity:	White Day - 270,000 cd White Twilight - 20,000 cd White Night - 2,000 cd Red - 2,000 cd
Wattage:	White Day - 160W White Twilight - 30W White Night - 23W Red Night - 30W
Power factor:	> 0.9
Ambient temperature:	-40°F to +131°F (-40°F to +55°F)
Synchronization:	Multiple unit sync from single controller

All values typical unless otherwise stated (tolerance +/- 10%)

US Patent #7,281,821 (other patents pending)

Part Number	Description	Voltage	Certification / Compliance
D266-A57-270	Flash head and power supply	208 - 277V AC	FAA (TC) L-864/L-856
D266-A57-CTRAC	Base controller with display (for use with AC side markers)	208 - 277V AC	FAA (TC) L-864/L-856
D256-6000-PEC	Twilight / Night photocell with enclosure and 3/4 inch conduit entry		FAA (TC) L-864/L-856
D1RW-C13-009CVT	Aviation obstruction light (AOL) flash head and power supply - 4 Conductors	120 - 277V AC	FAA (TC) L-864/L-865

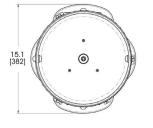
• Transport Canada CAR 621.19

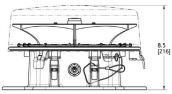
ICAO Annex 14DGAC Mexico

# Vigilant LED Based L-865 / L-864 (+IR) (+GPS)

#### Medium Intensity (White / Red) Strobe - Infrared (IR) or GPS models available

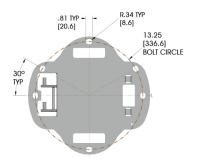






Dimensions in inches [mm]

#### Flip top design for simple





#### **Certifications & Compliance**

- FAA AC 150 / 5345 43G
- FAA EB No. 67D
- IP66

#### Features & Benefits

- ETL verified to FAA standards
- Superior surge and lightning protection
- · Patented optics for minimal down light / ground scatter
- Remote monitoring options available
- Compact, low power design
- Ideal for towers, stacks, wind turbines, buildings, etc.
- 360 degree coverage for each flash head
- Shock and vibration resistant
- Lighting and hardware kits available for standard towers
- GPS synchronized controller available

#### **Mechanical Information:**

Flash head weight:	21 lbs (9.5 kg)	
Operating voltage:	120 - 277V AC 50/60Hz or 48V DC power factor corrected supply (see below for options)	
Supply voltage ranges:	Nominal +/- 10%	
Effective intensity:	White Day - 20,000 cd White Night- 2,000 cd Red Night - 2,000 cd	
Flash head power:	White Day - 36W (system = 75w) White Night - 4W (system = 10w) Red Night - 12W (system = 25w)	
Power factor:	> 0.9	
Operating temperature:	-40°F to +131°F (-40°C to +55°C)	
Synchronization:	Multiple unit sync from single controller	
All values typical unless otherwise stated (tolerance +/- 10%)		

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



Class I, Div 2 modelss available

Part Number	Description	Voltage	Certification / Compliance	
	Standard Modelss			
D1RW-C13-409SYS	Medium intensity dual (white / red) AC system	120 - 277V AC	FAA (TC) L-865 / L-864	
D1RW-C14-409SYS	Medium intensity dual (white / red) DC system	+/- 48V DC	FAA (TC) L-865 / L-864	
Infrared (IR) Modelss				
D1CW-C13-409SYS	Medium intensity dual (white / red) +IR AC system	120 - 277V AC	FAA (TC) L-865 / L-864 +IR	
D1CW-C14-409SYS	Medium intensity dual (white / red) +IR DC system	+/- 48V DC	FAA (TC) L-865 / L-864 +IR	

1GPS synchronized controller available

#### www.dialight.com | Dialight\_LED\_Obstruction-Main\_FAA\_Jan2018

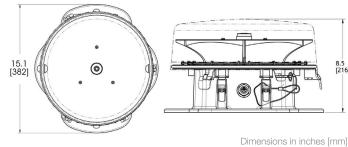
#### Vigilant

# Vigilant LED Based L-864 (+IR)

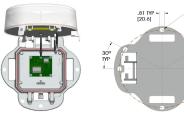
#### Medium Intensity (Red) Beacon - Infrared (IR) models av

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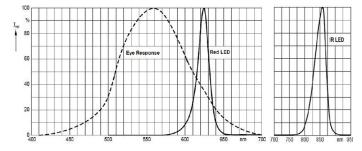
Flip top design for





[336.6] BOLT CIRCLE

SafeSite Class I, Div 2 - modelss available



#### Certifications & Compliance

- FAA AC 150 / 5345 43G
- Transport Canada CAR
- FAA EB No. 67D
- ICAO Annex 14

DGAC Mexico

• IP66

#### Features & Benefits

- ETL verified to FAA standards
- Superior surge and lightning protection
- · Patented optics for minimal down light / ground scatter
- Controllers available for all applications
- Compact, low power design
- Ideal for towers, stacks, wind turbines, buildings, etc.
- 360 degree coverage for each flash head
- · Shock and vibration resistant
- · Lighting and hardware kits available for standard towers

#### **Mechanical Information:**

Unit weight:	18 lbs (8.2 kg)
Operating voltage:	AC: 120 - 240V AC 50/60Hz power factor corrected supply DC: 24 - 48V DC -/+ 10%
Supply voltage ranges:	Nominal +/- 10%
Effective intensity:	2,000 cd
Wattage:	3.3W (16.7% duty circle) - standard 7.0W (16.7% duty circle) - IR models 20W flashes per minute with 0.5 sec. on time
Operating temperature:	-40°F to +131°F (-40°C to +55°C)
Power factor:	> 0.9
All values typical upless other	wise stated (telerance 1/- 10%)

All values typical unless otherwise stated (tolerance +/- 10%)

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

Class I, Div 2 modelss available



Part Number	Description	Voltage	Certification / Compliance	
Standard Modelss				
D564-A13-001	Flash head	120 - 240V AC	FAA (TC) L-864	
D464-A54-001	Flash head	24 - 48V AC	FAA (TC) L-864	
Infrared (IR) Models				
D464-R13-001	Flash head - Red + Infrared (IR)	120 - 240V AC	FAA (TC) L-864	

1Night 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 light is visible to any make or models 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 light and/or whether any NVG or ANNS can sense such IR light or whether the IR light emitted by the Vigilant light is visible to any NVG or ANVIS, regardless of the form of action.

• Transport Canada CAR 621.19

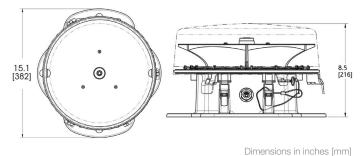
• ICAO Annex 14

DGAC Mexico

# Vigilant LED Based L-864

Medium Intensity (Red) GPS Beacon





.81 MP -[20.6] [8.6] [336.6] BOLT CIRCLE

Patented Optics Minimum ground scatter for a "community-friendly" lighting system



#### **Certifications & Compliance**

- FAA AC 150 / 5345 43G
- FAA EB No. 67D
- IP66

#### Features & Benefits

- ETL verified to FAA standards
- Superior surge and lightning protection
- Self-contained unit (no exterior controller)
- Patented optics for minimal down light / ground scatter
- Integrated photocell and GPS synchronized flasher
- Ideal for MET towers, wind turbines, bridges, buildings, etc.
- 360 degree coverage for each flash head
- Shock and vibration resistant
- Lighting kits available for standard towers
- 6kV of surge protection

#### Mechanical Information:

Unit weight:	20 lbs (9 kg)	
Operating voltage:	120 - 240V AC, 50/60Hz; Switch selectable	
Flash rate:	20, 30, or 40 (+/- 1%) flashes per minute (switch selectable); (1/2 ON and 1/2 OFF)	
Effective intensity:	2,000 cd	
Wattage:	3.3W (16.7% duty cycle); 20 flashes per minute with 0.5 on time	
Power factor:	> 0.9	
Operating temperature:	-40°F to +131°F (-40°C to +55°C)	
All values typical unless otherwise stated (tolerance +/- 10%)		

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

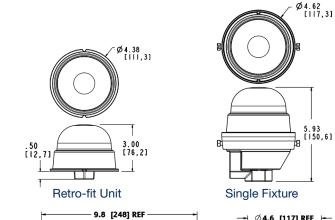
Part Number	Description	Voltage	Certification / Compliance
D564-A13-001-GPS	Flash head - integrated GPS, Photocell, Monitoring	120 - 240V AC	FAA (TC) L-864

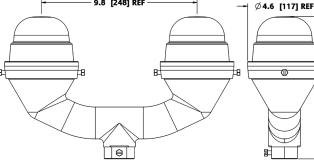
#### www.dialight.com | Dialight\_LED\_Obstruction-Main\_FAA\_Jan2018

# Vigilant LED Based L-810

Low Intensity (Red) RTO Side Light - Infrared (IR) models available







**Dual Fixture** 

Dimensions in inches [mm]

8.9 [227] REF

#### **Certifications & Compliance**

- FAA AC 150 / 5345 43G
- FAA EB No. 67D
- IP66
- German Air Traffic Control Notices for Pilots Part I 6, January 2005
- Transport Canada CAR 621.1
- ICAO Annex 14
- DGAC Mexico
- Nachrichten für Luftfahrer Teil I Langen, 6. Januar 2005
- ETL verified to FAA standards

**Features & Benefits** 

- Superior surge and lightning protection
- Controllers available for all applications
- Compact, low power design
- Ideal for towers, stacks, wind turbines, buildings, etc.
- 360 degree coverage for each flash head
- Shock and vibration resistant
- Lighting kits available for standard towers

#### **Mechanical Information:**

Unit weight:	1.25 lbs (0.56 kg) (Retro unit) 2.00 lbs (0.91 kg) (Single unit) 4.60 lbs (2.09 kg) (Dual unit)
Supply voltage ranges:	Nominal +/- 10%
Power factor:	> 0.9 (All AC units)
Operating temperature:	-40°F to +131°F (-40°F to +55°F)
Input AC frequency:	50/60Hz

All values typical unless otherwise stated (tolerance +/- 10%)

US Patent #7,604,384

### Vigilant

# Vigilant LED Based L-810

Low Intensity (Red) RTO Side Light Ordering Information



Part Number	Description	Voltage	Certification / Compliance	Wattage
RTO-1R06-001	Single Light	277V AC	FAA (TC) L-810	8.0
RTO-1R07-001	Single Light	120-240V AC	FAA (TC) L-810	6.5
RTO-1R08-001	Single Light	12-48V DC	FAA (TC) L-810	3.5
RTO-1R18-001	Single Light - Low Power	12-48V DC	FAA (TC) L-810	1.5
RTO-1R06-002	Dual Light	277V AC	FAA (TC) L-810	8.0
RTO-1R07-002	Dual Light	120-240V AC	FAA (TC) L-810	6.5
RTO-1R08-002	Dual Light	12-48V DC	FAA (TC) L-810	3.5
RTO-1R18-002	Dual Light - Low Power	12-48V DC	FAA (TC) L-810	1.5
RTO-1R06-004	Single Retro-fit Light	277V AC	FAA (TC) L-810	8.0
RTO-1R07-004	Single Retro-fit Light	120-240V AC	FAA (TC) L-810	6.5
RTO-1R08-004	Single Retro-fit Light	12-48V DC	FAA (TC) L-810	3.5
RTO-1R18-004	Single Retro-fit Light - Low Power	12-48V DC	FAA (TC) L-810	1.5
RTO-CR07-001	Single Light Red / Infrared (IR)	120-240V AC	FAA (TC) L-810	5.5
RTO-CR08-001	Single Light Red / Infrared (IR)	12-48V DC	FAA (TC) L-810	5.0
RTO-CR07-002	Dual Light Red / Infrared (IR)	120-240V AC	FAA (TC) L-810	5.5
RTO-CR08-002	Dual Light Red / Infrared (IR)	12-48V DC	FAA (TC) L-810	5.0
RTO-CR07-004	Single Retro-fit Light Red / Infrared (IR)	120-240 V AC	FAA (TC) L-810	5.5
RTO-CR08-004	Single Retro-fit Light Red / Infrared (IR)	12-48V DC	FAA (TC) L-810	5.0
RTO-1R07-001-EU	Single Light	120-240V AC	ICAO only, 32cd	6.5
RTO-1R07-002-EU	Dual Light	120-240V AC	ICAO only, 32cd	6.5
RTO-1R07-004-EU	Single Retro-fit Light	120-240V AC	ICAO only, 32cd	6.5
RTO-6CR7-001	Single Light Red / Infrared (IR)	120-240V AC	TC only L-810	9.0
RTO-6CR7-002	Dual Light Red / Infrared (IR)	120-240V AC	TC only L-810	9.0
RTO-6CR7-004	Single Retro-fit Light Red / Infrared (IR)	120-240V AC	TC only L-810	9.0

ICAO Annex 14

DGAC Mexico

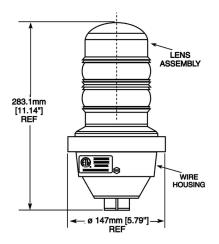
Nachrichten für Luftfahrer Teil

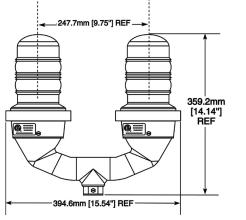
CASA

# Vigilant LED Based L-810

Low Intensity (Red) Light







#### **Certifications & Compliance**

- FAA AC 150 / 5345 43G
- FAA EB No. 67D
- IP66German Air Traffic Control Notices for Pilots Part I 6, January 2005
  - , January 2005 Langen, 6. Januar 2005
- Transport Canada CAR 621.19

#### **Features & Benefits**

- ETL verified to FAA standards
- Superior surge and lightning protection
- Controllers available for all applications
- Ideal for towers, stacks, wind turbines, buildings, etc.
- 360 degree coverage for each flash head
- Shock and vibration resistant
- · Lighting kits available for standard towers
- 6kV of surge protection

#### **Mechanical Information:**

7.14 lbs (3.23 kg) (Single unit) 16.06 lbs (7.28 kg) (Dual unit)
15W / 120mA (120V AC ) +/-10% 16W / 120mA (230V AC-60Hz) +/-15% 16W / (230V AC - 50 Hz) 24W / 2.0A (12V DC - Standard) 20W / 920mA (24V DC) 13W / 275mA (48V DC)
44 VA (120V AC) +/-10% 67 VA (230V AC) +/-15%
-67°F to +131°F (-55°F to +55°F)

All values typical unless otherwise stated (tolerance +/- 10%)

US Patent #6,425,678 (other patents pending)

Dimensions in inches [mm]

# Vigilant LED Based L-810

Low Intensity (Red) Light Ordering Information



Vigilant

Part Number	Description	Voltage	Certification / Compliance
860-1R01-001	Single Light	120V AC	FAA (TC) L-810
860-1R02-001	Single Light	230V AC	FAA (TC) L-810
860-1R03-001	Single Light	12V DC	FAA (TC) L-810
860-1R04-001	Single Light	48V DC	FAA (TC) L-810
860-1R05-001	Single Light	24V DC	FAA (TC) L-810
860-1R01-002	Dual Light	120V AC	FAA (TC) L-810
860-1R02-002	Dual Light	230V AC	FAA (TC) L-810
860-1R03-002	Dual Light	12V DC	FAA (TC) L-810
860-1R04-002	Dual Light	48V DC	FAA (TC) L-810
860-1R05-002	Dual Light	24V DC	FAA (TC) L-810
860-5R02-001	Single Light	230V AC	ICAO only, 10cd
860-5R02-002	Dual Light	230V AC	ICAO only, 10cd
860-4R02-001-EU	Single Light	230V AC	ICAO only, 50cd
860-4R02-002-EU	Dual Light	230V AC	ICAO only, 50cd
860-1R02-001-EU	Single Light	230V AC	ICAO only, 32cd
860-1R02-002-EU	Dual Light	230V AC	ICAO only, 32cd
860-6R01-001	Single Light	120V AC	TC only L-810
860-6R01-002	Dual Light	120V AC	TC only L-810
860-7R02-002	Dual Light	230V AC	CASA only, 100cd

<sup>1</sup>All candela's are minimums. See www.dialight.com for more information

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



SafeSite L-810 Red LED Side Light

SateSite L-810 LED Steady Burn Visual Signals

SafeSite FLS Flashing Visual Signals

www.dialight.com | Dialight\_LED\_Obstruction-Main\_FAA\_Jan2018

#### **North American HQ**

1501 Route 34 South Farmingdale, NJ 07727 Tel: 732-919-3119 Fax: 732-751-5778 info@dialight.com

#### **EMEA Technical Centre**

Ejby Industrivej 91 B 200 Glostrup Tel: +45 8877 4545 (Denmark) Tel: +44 1638 666541 (UK) Tel: +49 89 12089 5713 (Germany) Tel: +33 3 23 22 62 58 (France) sales-europe@dialight.com

#### Houston

16830 Barker Springs Rd Ste 407 Houston, TX 77084 Tel: 732-919-3119 Faz: 281-492-1531 info@dialight.com

#### Middle East

Level 42 Emirates Towers (Office Tower) Sheikh Zayed Road Dubai, United Arab Emirates Fax: +971 (0) 4319 7686 Tel: +971 (0) 4319 7686

#### Australia

38 O'Malley Street Osborne Park, WA 6017 Tel: +61 (0) 8 9244 7600 Fax: +61 (0) 8 9244 7601 info@dialight.com.au

#### **Southeast Asia**

33 Ubi Avenue 3 #07-72 Vertex (Tower A) Singapore 408868 Tel: +65 6578 7157 Fax: +65 6578 7150 enquiry@dialight.com.sg

#### Brazil

Alameda Mercurio, 225 – American Park Empresarial NR Indaiatuba – SP – 13347– 662 Tel: +55 (19) 3113-4300 Fax: +55 (19) 3113-4300 brasil@dialight.com

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