

Important Information:

These instructions contain safety information; read and follow them carefully. Dialight will not accept any responsibility for injury, damage, or loss which may occur due to incorrect installation, operation, or maintenance.

Operating Instructions



Languages

Page Number

English

1

Note: Save these instructions for future use

WARNING:

To avoid the risk of fire, explosion, or electric shock, this product should be installed, inspected, and maintained by a qualified electrician only, in accordance with all applicable electrical codes.

Safety Instruction:

To avoid electric shock:

- Be certain electrical power is OFF before and during installation and maintenance.
- Luminaire must be connected to a wiring system with an equipment-grounding conductor.
- Make sure the supply voltage is the same as the rated luminaire voltage.
- The technical data indicated on the LED luminaires are to be observed.
- Changes of the design and modifications to the LED luminaire are not permitted.
- Observe the national electrical safety rules and regulations during installation.
- No field replaceable parts.
- No user serviceable parts inside.

Introduction

This High Bay / Low Bay / Flood light is designed for illumination of industrial location and uses the latest in solid state lighting technology for long life, low maintenance, and high efficiency.

The unique optical design focuses light downward to where it is needed, giving improved efficiency over a conventional HID luminaire.

FOR MODELS: ***2(A/E)*******

An internal switch-mode supply allows it to be used from any nominal 100-277VAC or 347-480VAC 50/60Hz or 120-250VDC without any variation in light output.

Models with 4th character R, S, T, U, V, W, Y, Z are suitable for applications where high pressure wash-down is used to clean and sanitize equipment.

To maintain seal integrity, a suitably rated cord grip must be used in accordance with manufacturer recommendations.

WARNING: If the fixture is equipped with a strain relief. Tampering with this strain relief may compromise IP rating of luminaire

Recommended mounting height:

- High Bay: 25-40ft [6-12m]
- Low Bay: 12-25ft [3.5-6m]

General Mounting Information

For maximum long term reliability and light output, the light must be installed in free air. The luminaire design incorporates an over-temperature control circuit that reduces input power should internal temperatures reach a maximum level. As a result, light output may be temporarily reduced at higher ambient temperatures.

Technical Data

Nominal Supply Voltage

| | |
|------------------|--------------------------------------|
| *****2***** | 100-277 VAC, 50/60 Hz 120-250 VDC |
| ***** (A/E)***** | 347-480 VAC, 50/60 Hz |

Supply Current

(Nominal @230V/415V*)

| | |
|-------------------|--------|
| (H/F)*****2E***** | 0.9 A |
| (H/F)*****2C***** | 0.6 A |
| (H/F)*****2B***** | 0.5 A |
| (H/F)*****2A***** | 0.4 A |
| FD***2M***** | 1.6 A |
| FD***2H***** | 1.1 A |
| L*****2C***** | 0.7 A |
| L*****2B***** | 0.5 A |
| L*****29***** | 0.4 A |
| L*****26***** | 0.2 A |
| L*****24***** | 0.2 A |
| H**** (A/E)E***** | 0.5 A* |
| H**** (A/E)C***** | 0.4 A* |
| H**** (A/E)B***** | 0.3 A* |
| H**** (A/E)A***** | 0.3 A* |
| FD***AM***** | 1.0 A* |
| FD***AH***** | 0.7 A* |
| L**** (A/E)C***** | 0.4 A* |
| L**** (A/E)B***** | 0.4 A* |
| L**** (A/E)9***** | 0.4 A* |
| L**** (A/E)6***** | 0.2 A* |
| L**** (A/E)4***** | 0.2 A* |

Power consumption*

Wattages are nominal values ±10%

| | |
|-------------------|-------|
| (H/F)*****2E***** | 186 W |
| (H/F)*****2C***** | 129 W |
| (H/F)*****2B***** | 102 W |
| (H/F)*****2A***** | 81 W |
| FD***2M***** | 372 W |
| FD***2H***** | 258 W |
| L*****2C***** | 154 W |
| L*****2B***** | 114 W |
| L*****29***** | 81 W |
| L*****26***** | 56 W |
| L*****24***** | 42 W |
| H**** (A/E)E***** | 206 W |
| H**** (A/E)C***** | 149 W |
| H**** (A/E)B***** | 122 W |
| H**** (A/E)A***** | 101 W |
| FD***AM***** | 412 W |
| FD***AH***** | 298 W |
| L**** (A/E)C***** | 174 W |
| L**** (A/E)B***** | 134 W |
| L**** (A/E)9***** | 101 W |
| L**** (A/E)6***** | 76 W |
| L**** (A/E)4***** | 62 W |

Operating Specs

| | |
|---------------------|--------------------|
| Power factor | >0.9 |
| ATHD | <20% @ 230/240 VAC |

| | |
|------------------|--------------------|
| Dimension | in [cm] |
| Diameter | 1.6 [40.6] |
| Height | 5-14.5 [12.7-36.8] |

| | |
|------------------|----------------------------|
| Weight | |
| FD***2(H/M)***** | 56 lbs [25.4 kg] |
| FD***A(H/M)***** | 73 lbs [33.1 kg] |
| All other models | 17 - 36 lbs [7.7 -16.3 ka] |

Mounting Information

Luminaires fitted with a mounting hook must be hung from an appropriately sized mounting point. Rear alignment mark should be observed when installing model type ****(7/E)*****.

Swivel Bracket/Stirrup Bracket

The 'Stirrup Bracket' is fixed into place using 2 bolts and the threaded holes on the side of the luminaire. When secured into the desired position the 2 bolts should be tightened to 8.0 – 10.0Nm [6 – 8ft-lb].

Locking Bracket

-The locking bracket is fixed into place using a bracket subassembly, 2 bolts for positioning, and 2 bolts for pivot and attachment.
 -Ensure bracket subassembly bolts and nuts (4x) are tight before adjusting main bracket position. **Do not loosen bracket subassembly bolts.**
 -Remove M6 bolts (2x) and loosen M8 bolts (2x). Move main bracket to desired position and lock into place by reinstalling M6 screws (2x). Tighten M8 bolts to 14.0-16.0 Nm [11-12 ft-lb]. Tighten M6 bolts to 8.0-10.0 Nm [6-7 ft-lb].

Locking Bracket (Dual Flood)

Loosen center pivot M10 hex bolt (See Figure 1) (**do not remove**) on both sides of light fixture.

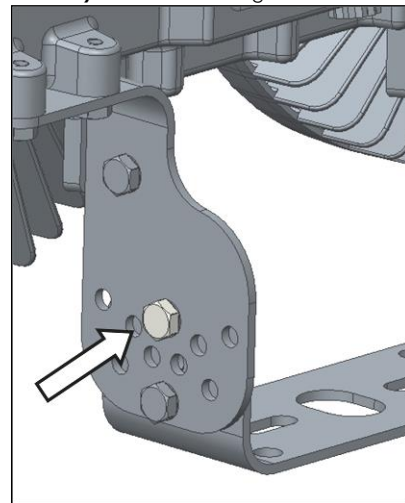


Figure 1 - Pivot Bolt

Remove the angle locking M10 hex bolt on both sides (see Figure 2).



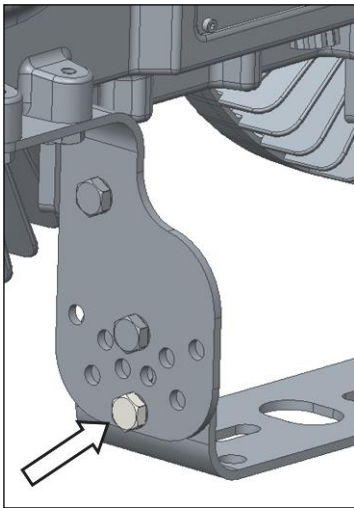


Figure 2 - Angle Locking Bolt

Aim light fixture to desired angle (see Figure 3).

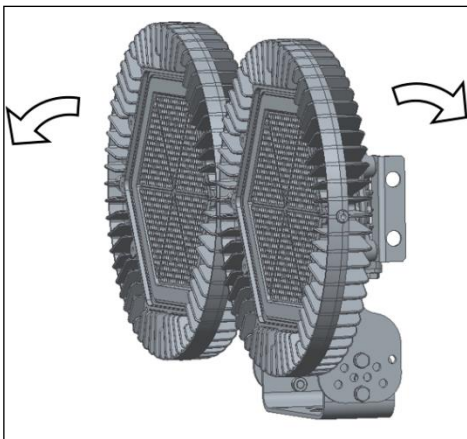


Figure 3 - Position Fixture

Reinstall angle locking bolts on both sides (see Figure 2). Torque to 25 ft-lb [33.9Nm]
Tighten pivot bolts on both sides (see Figure 1). Torque to 25 ft-lb [33.9Nm]

Installation of Luminaire (Electrical Connection)

The luminaire may be supplied with a 3 or 5 core colored cable or have a factory installed wiring compartment. Luminaires fitted with 5 core cable or a factory installed wiring compartment are capable of dimming. Luminaires fitted with a factory installed wiring compartment (except Dual Flood) are capable of interfacing with Dialight controls and automation products; see controls and automation product manuals for additional information.

WARNING: If a power cord plug is factory fitted, the IP rating of the luminaire is derated to that of the plug.

0-10VDC Dimming

Dimming is controlled by means of a 0-10 VDC signal (to be provided by the installer) to control the level of dimming. At 10 volts, the output of the unit is 100%; at 0 volts, the output will be approximately 5%. The DC dimming voltage should not exceed 15 VDC. Increasing the voltage from

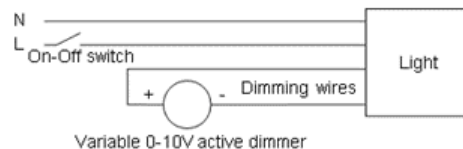
10VDC to 15VDC will not result in additional light output.

Important Notes

- The low voltage Dimming wires are connected to the grounded output section of the driver inside the light. Never connect either one to the Hot or Neutral supply wires.
- Violet wire connects to DIM+
- Grey wire connects to DIM -

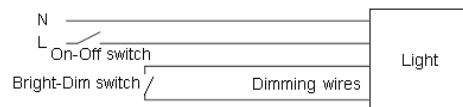
1) Variable Voltage Control

- An analog 0-10V active dimmer may be connected to the two wires to control the light output of the fixture. Multiple lights may be connected to the same dimmer, as long as the maximum current rating of the dimmer is not exceeded.
- The dimmer must be capable of sinking 0.5mA per light. Light output will vary approximately linearly with control voltage, with 10V corresponding to 100% light output.



2) Step dimming

Simply shorting the two wires together will cause the light to dim to a low level. When this is done, the light will dim down to approximately 5% of its full light output, with a corresponding decrease in input power.



Power Input

For single phase units, 100-277VAC connecting the fitted power cable conductors is as follows:

- Green wire connects to Safety Ground (Earth).
- Black wire connects to Live.
- White wire connects to Neutral.

For 120-250VDC connecting the fitted power cable conductors is as follows:

- Green wire connects to Safety Ground (Earth).
- White wire connects to Negative (-).
- Black wire connects to Positive (+).

For two phase units, 415VAC connecting the fitted power cable conductors is as follows:

- Green wire connects to Safety Ground (Earth).
- Red or white wire connects to Line 1.
- Black wire connects to Line 2.

Electrical Installation - Junction Box

The push terminal block (WAGO 862 series)* is suitable for multi-stranded and single core cables 20-12 AWG, strip length 0.393". Push down at the 'cross point', insert correct cable and release, ensuring the cable has been securely retained. Terminal block positions are labeled to assist in making the correct wire connections.

Torque screws on rectangular junction box cover to 20 in-lb.

Torque screws on hexagonal junction box cover screws to 70 in-lb.

* All product names, logos, and brands are property of their respective owners. All company, product and service names used in this document are for identification purposes only. Use of these names, logos, and brands does not imply endorsement.

Electrical Installation - 347-480V Junction Box

- Green or Green/Yellow wire connects to Safety Ground (Earth).
- Red or White wire connects to Line 2.
- Black wire connects to Line 1.
- Re-attach the Fuse Block Covers.
- Dimming (0-10V) can be connected to the violet and grey wires using connectors (WAGO 222 series)* provided.
- Torque all 3 wiring box locking nuts to 20 ft-lb [27 N-m].

Interfacing to a PIR or Occupancy Sensor

The Dialight fixture is ideally suited for control by an occupancy sensor in order to maximize energy savings based on its instant-on behavior and low power consumption. Instructions for connecting the fixture to an occupancy sensor are listed below.

WARNING: To be installed and/or used in accordance with appropriate electrical codes and regulations.

WARNING: Controlling a load in excess of the specified ratings of the occupancy sensor could damage the unit and pose risk of fire, electric shock, personal injury, or death. Check load ratings to determine the unit's suitability for your application.

WARNING: To avoid fire and electrical shock, turn off power at circuit breaker or fuse and test that the power is off before wiring.

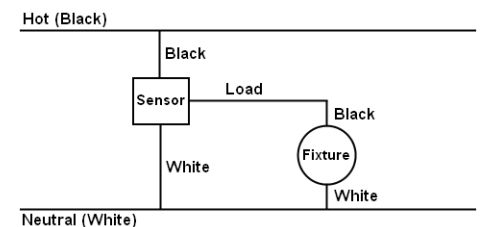
The Dialight fixture is also ideally suited for control by an external occupancy sensor (not provided by Dialight) in order to maximize energy savings based on its instant-on behavior and low power consumption. Instructions for connecting the fixture to an occupancy sensor are listed below.

1) Install occupancy sensor as per sensor instructions to provide desired coverage of area.

2) Connect luminaire wires as follows:

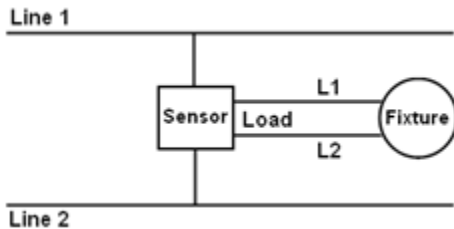
For 120-277VAC operation:

Black lead to load of the occupancy sensor, White lead to the line (neutral), Green lead to earth ground. Multiple luminaires may be connected to a sensor, as long as the rated load of the sensor is not exceeded.



For 415VAC operation:

Red and black leads to load of occupancy sensor, green lead to earth ground. Multiple fixtures may be connected to a sensor, as long as the rated load of the sensor is not exceeded.



Chemical Compatibility Guide

The chemical compatibility data referenced in this manual was supplied by the raw material manufacturers and is intended as a general guide. The data represents the basic material properties and does not necessarily represent the performance of the final product due to manufacturing process and design variations for each final product. Chemical compatibility is highly dependent on concentration, temperature, humidity, and other environmental conditions and therefore the customer assumes responsibility for evaluation of gaseous or direct contact chemical compatibility at their site prior to product installation.

www.dialight.com/pubs/MDTFCHEMFLX001.pdf

3) Restore power at circuit breaker or fuse.

4) Verify operation of system. If the light will not turn on, check the operation of the luminaire and sensor individually and check that the wiring is done correctly. If the light will not turn off or turns off and on quickly, see the sensor's installation instructions for further guidance.

Maintenance

To avoid personal injury, disconnect power to the light and allow the unit to cool down before performing maintenance.

WARNING: No user serviceable parts inside of fixture. Risk of electric shock. Removal of the lens will void the warranty.

Perform visual, mechanical, and electrical inspections on a regular basis. Dialight recommends checks to be made on a yearly basis. Frequency of use and environmental conditions, however should determine the frequency of checks. It is recommended to follow an Electrical Preventive Maintenance Program as described in NFPA 70B: Recommended Practice for Electrical Equipment.

The lens should be cleaned periodically, as needed, to ensure continued photometric performance.

Clean the lens with a damp, non-abrasive, and lint-free cloth. If not sufficient, use mild soap or a liquid cleaner. Do not use and abrasive, strong alkaline, or acid cleaners as damage may occur.

Inspect the cooling fins on the luminaire to ensure that they are free of any obstructions or contamination (i.e. excessive dust build-up). Clean with a non-abrasive cloth, if needed.

The light source of this luminaire is not replaceable; when the light source reaches its end of life the whole luminaire shall be replaced.

Secondary Retention

When using a safety cable for secondary retention, ensure minimum slack (no greater than 1 foot) in cable after installation. Connect safety cable to outer band of fixture or accessory retention points. Cable type, size, material, and attachment method to meet customer application and to be appropriate with all local and regional regulations.

Electrical Parameters (LED Module Only)

| Model No | Max Tc (F1) | Supply Current Rating (nom) | Working Voltage (nom) |
|------------------|-------------|-----------------------------|-----------------------|
| (H/F)*****E***** | 140°C | 0.047A | 51V |
| FD*****M***** | 140°C | 0.047A | 51V |
| (H/F)*****C***** | 140°C | 0.041A | 51V |
| FD*****H***** | 140°C | 0.041A | 51V |
| (H/F)*****B***** | 140°C | 0.043A | 51V |
| (H/F)*****A***** | 140°C | 0.048A | 51V |
| L*****C***** | 140°C | 0.075A | 51V |
| L*****B***** | 140°C | 0.056A | 51V |
| L*****9***** | 140°C | 0.036A | 51V |
| L*****6***** | 140°C | 0.037A | 51V |
| L*****4***** | 140°C | 0.050A | 51V |

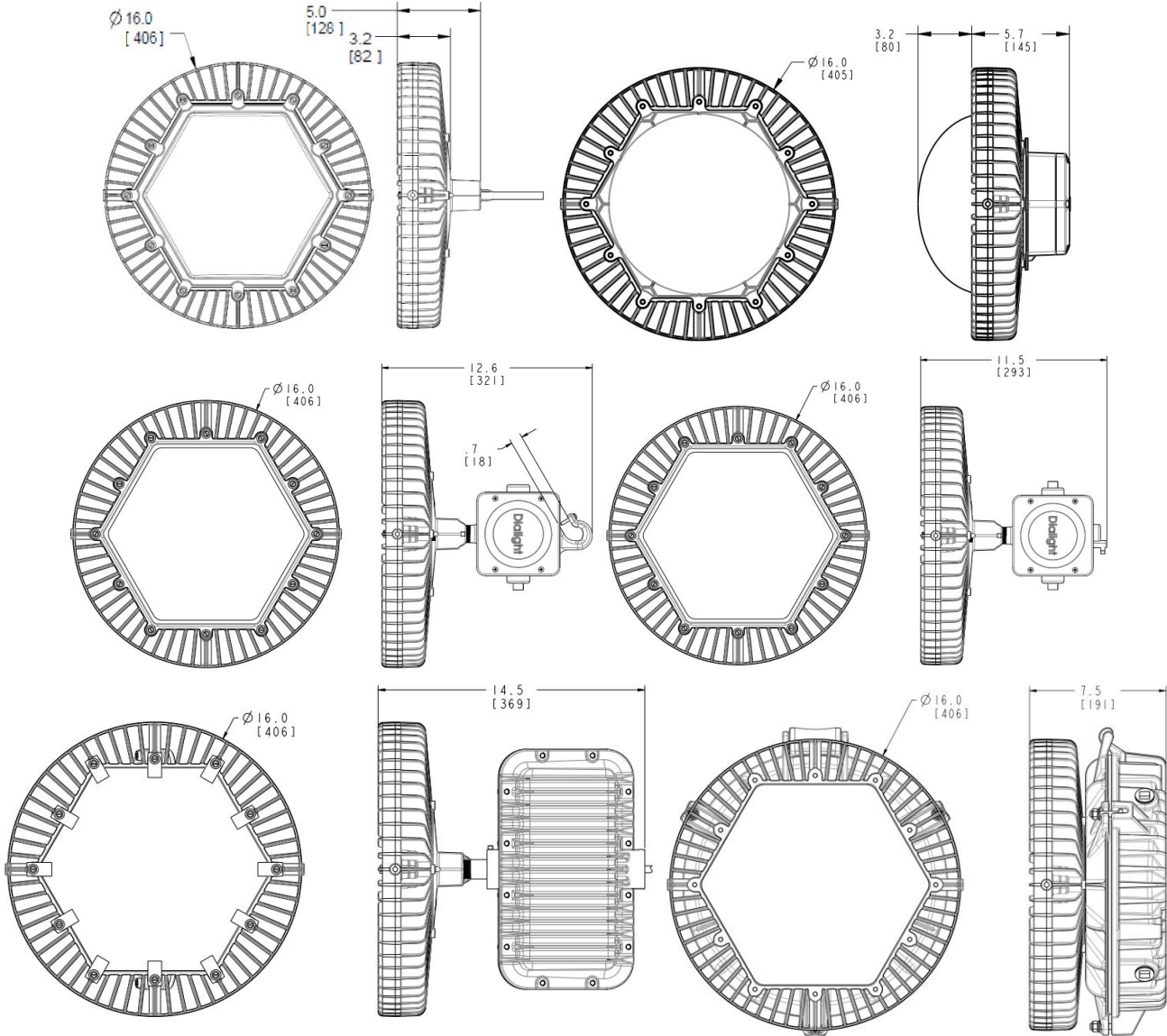
The light source of this luminaire is not replaceable; when the light source reaches its end of life the whole luminaire shall be replaced.

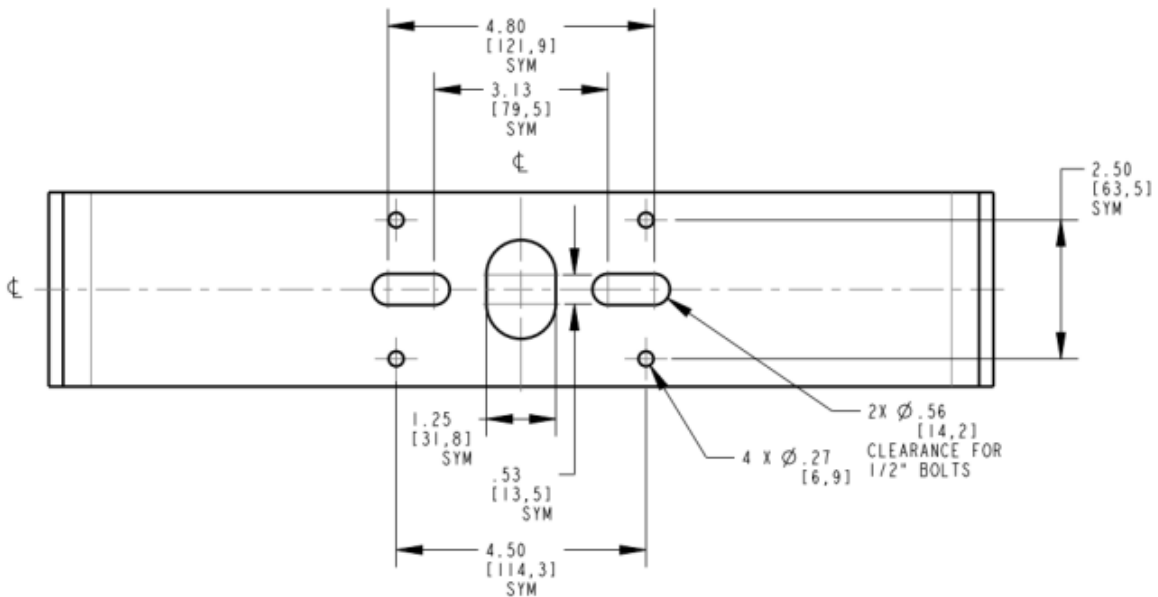
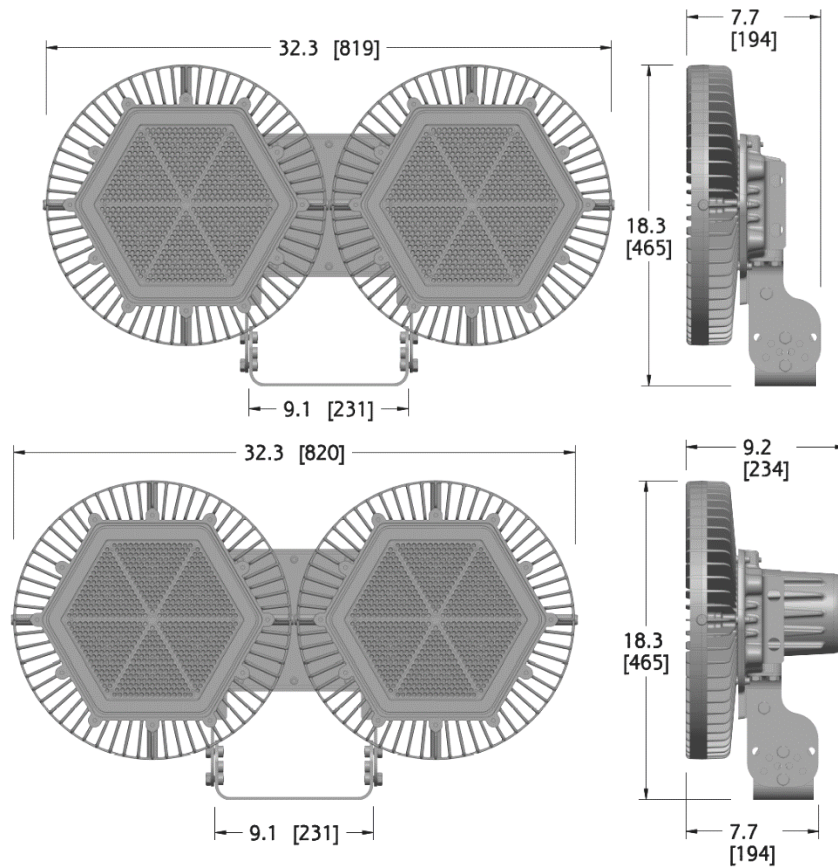
For models without a factory installed junction box: Terminal block not included. Installation may require advice from a qualified person.



Technical Diagrams

Dimensions in inches [mm]





Official Statement

All statements, technical information, and recommendations contained herein are based on information and tests that Dialight believes to be reliable. The accuracy or completeness thereof is not guaranteed. In accordance with Dialight "Terms and Conditions of Sale" and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his or her intended use and assumes all risk and liability whatsoever in connection therewith.

