

MOUNTING AND OPERATING INSTRUCTIONS

Inspect the contents of the box. It should contain:

- 1) PXL fixture with LED lights
- 2) 10 foot power cord (14/4)
- 3) 4 Mounting brackets
- 4) Instruction Sheet/Warranty

Mounting Instructions:

Notes:

- a) Minimum required distance between the fixture and any combustible material and/or other heat generating equipment shall be 3 inches (75mm) on all sides, top, bottom and ends of fixture.
- b) The maximum ambient temperature of the environment at the fixture shall be no more than 45-degrees centigrade (113-fahrenheit).
- c) Fixture is rated for damp locations.

Brackets: The four mounting brackets each have 2 holes for screw mounting onto the top of the fixture. Using the 8-32 screws installed on the fixture, the brackets can be mounted either side to side, or front to back, depending on your preference. (See Fig. 1 and 2) The brackets are designed with additional holes that fit over Unistrut or any other type of supports and can be used to hang the fixture with stainless steel aircraft-type cable. *Hint: If Unistrut or equal is used, place the bracket with the "U" facing up to use it as a raceway for the wires. There are also optional brackets for round pipe installation.*



Figure 1

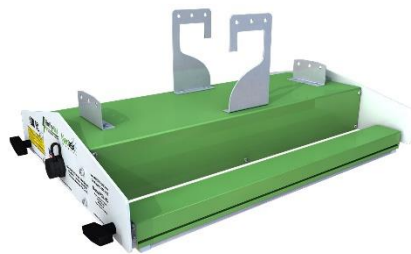


Figure 2

Typical installations will involve placing the bottom of the fixture from 1' to 7' from the growing area. At the height of 7', the fixtures should be spaced 8' apart. There is no need to adjust the height of the fixture, unless the plants are taller than 4-5 feet. In this case, the lights should be mounted higher and run longer. Growers should contact **Firefly-One** for recommendations and for custom brackets, if needed.

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

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WARNING – INSTALLATION REQUIREMENTS FOR CORDS AND WIRING

The cords and connectors supplied are a part of a proprietary wiring system as per UL8800. The cords are 14-gauge/4 conductor Type SEOOW, rated for 600 volts and are resistive to moisture, chemicals, oil and UV light. The cords have a temperature range from -40C to 90C. The plug and connectors are rated IP-67.

THE FOLLOWING ELECTRICAL INSTALLATION SHOULD BE CONDUCTED BY A QUALIFIED ELECTRICIAN.

- Cords and wiring should not be concealed or extended through a wall, floor, ceiling, or other parts of the building structure.
- Cords and wiring should not be located above a suspended ceiling or dropped ceiling.
- Cords and wiring should not be permanently affixed to the building structure.
- Cords and wiring should be routed so that they are not subject to strain and are protected from physical damage;
- Cords and wiring should be visible over their entire length; and
- Cords and wiring are used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions.

Wiring for the Electrical Circuit: A qualified electrician is needed to correctly install the wiring for the electrical circuit(s). The electrical box should have 2 switched circuits: One for the strobe light and the other for the LED lights. This allows for the PXL-55 to run the strobe separately from the LED lighting. The LED circuit can be dimmed with a dimmer for LED lighting.

Note: On a 20 Amp breaker, no more than 25 fixtures may be installed in series. The 10 foot 14/4 wire with connectors at each end are to be used between fixtures in series.

Directions for wiring fixtures: For hardwiring into a junction box (not provided), for the first fixture in the series, cut the plug off one end of the cable. Using a clamp-type connector (not provided), remove the outer covering approximately 4” (100mm). Insert the wire, clamp and connect with wire nuts (not provided) into the electrical box for the 4 wires and connect the wires as indicated below. Any sockets not in use on the fixtures, such as the last one on the circuit, should have the provided protective cap in place covering the socket. An optional pig-tail with connector can be ordered through Firefly-one, if you do not want to cut the first cord in the series.

AMPERAGE

.25 for strobes (30 Watts)

.2 for LEDs (23 Watts)

WIRES

Black = 120V(+) for Strobe

Red = 120V(+) for LED lights (dimnable circuit)

White = Neutral

Green = Ground

Recommended Operation:

The PXL-55 strobe can be adjusted to maximize growth during specific plant growth cycles. For most growers, we recommend starting with 18 hours of continuous lighting with both strobe and LED lighting. The fixtures can be run up to 24 hours. Due to increased light with no heat gain, adjustments should be made to the watering/nutritional feeding cycles. We recommend increasing nutrition (PPM) by 30%, without increasing watering. If watering cycles are reduced, the nutritional PPM should be slightly higher than 30%. Once the seeds break ground, or for cuttings, 16 hours of continuous lighting will stimulate the leaves to make sugars and protein for the roots. Once the plant roots, the strobe can be set to 12 hours for most plants.

CONTACT FIREFLY-ONE FOR CONSULTATION ON SPECIFIC PLANTS AND GROWTH CYCLES. WE ARE AVAILABLE TO ASSIST YOU WITH FINE TUNING YOUR SYSTEM FOR MAXIMUM GROWTH AND ENERGY EFFICIENCY.

WARRANTY

LIMITED LIGHTING SYSTEM WARRANTY

General Limited Warranty Summary - Firefly-One, LLC will warranty all lighting system components for five (5) full years, with the exception of the strobe assembly, which will have a warranty period of two (2) full years from date of product shipment. The five (5) years does not cover any labor and only covers system components. Firefly-One, LLC warrants to the purchaser of new Firefly-One, LLC product(s) that during the effective period of the warranty such product(s) shall be free of defect in workmanship and material. If a defect occurs under normal use, replacement parts will be shipped at no charge. Warranty replacement parts require the return of suspected defective materials being returned to Firefly-One, LLC. for examination to disclose, in our judgment, a manufacturing defect.

Labor Warranty - Warranty does not include labor or the cost of specialized equipment such as lifts, staging, scaffolding, or any other type of equipment need to access areas to service or repair lighting system.

System Component Warranty - All components of the lighting system will be covered for a total of five (5) years, with the exception of the strobe assembly is covered for two (2) years, from date of shipment as described in the general summary. This warranty is contingent upon the proper use of the product(s). Such warranty shall not apply if the product(s) failure is the result of accident, unusual physical or electrical stress, neglect, misuse, failure of electrical power, work performed by others, damaging foreign substances, causes other than manufacturing defect. Purchaser agrees to provide full and free access for any needed warranty work. Firefly-One, LLC must be notified immediately if there are any non-working systems

Obligations Under the Terms of the Warranty - Firefly-One, LLC's sole responsibility shall be to repair or replace at its option any product(s) that fail during this period, provided purchaser has promptly reported such failure to Firefly-One, LLC Firefly-One, LLC shall not be liable for consequential damage resulting from defects in materials and/or workmanship on the premises. Warranty only covers parts and materials to repair the lighting system components.



WARNINGS

MODERATE Risk Group
Product tested against IEC62471

WARNING – POSSIBLE RISK OF INJURY TO EYES AND SKIN

- Hazardous optical radiation may be emitted from the light source. Do not stare at operating lamp. May be harmful to the eyes.
- UV may be emitted from the light source. Eye or skin irritation may result from exposure. Use appropriate shielding.
- IR may be emitted from the light source. Do not stare at operating lamp.

These photobiological safety markings are based on testing of the light output characteristics of a single horticultural luminaire. Increased exposure risk to facility personnel may be present depending upon the number of horticultural luminaires and their placement and/or positioning within the plant growth facility.

It is the responsibility of the plant growth facility to address these risks at the facility level and to ensure that people entering the plant growth areas while the lights are on, are aware of these risks and that appropriate safeguards are in place.

Cleaning:

- 1) Unplug the power cord.
- 2) Use warm soapy water with soft cloth to clean fixture.
- 3) Thoroughly dry.
- 4) Plug in power cord

Protected under patents #9,295,201,B2 & #9,756,794,B2. Other patents pending.