



# ROI-E420 SERIES

## LED USER MANUAL

Installation and Operating Instructions

**PLEASE READ  
THESE INSTRUCTIONS  
BEFORE USING  
THE PRODUCT**

**TECHNICAL SPECIFICATIONS:**



**INTRODUCTIONS:**

Thank you for purchasing the ROI-E420 series system. The ROI-E420 series Horticulture LED System. An inspired collaboration between two of the most respected lighting companies in horticulture industry. TSL Horti Tech and Grower's Choice have joined forces with their years of innovative experience to create this high performance and cost-effective lighting solution for commercial horticulture.

SPECIFICATIONS	
Light Source	LED
Spectrum	GC-3K Full Phase
PPF	1090 $\mu\text{mol/s}$
Max Input Power	420W
Efficacy	2.6 $\mu\text{mol/s}$
Fixture Dimension   Weight	35.3" L x 34.6" W x 3.2" H / 19.4lbs 89.6cm L x 88cm W x 8.1cm H / 8.8kg
Mounting Height	$\geq 6"$ (15.2cm) Above Canopy
Thermal Management	Passive
Dimming	0-10V
Light Distribution	120°
Lifetime	L90: >54,000 hrs
Power Factor	>90%
Certifications	UL 8800, UL 1598, IP 65, DLC
Warranty	5 Years Standard Warranty

**MAX AMPERAGE BY VOLTAGE SERVICE**

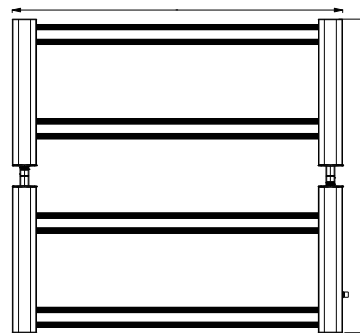
VOLTAGE	120V	208V	240V	277V
AMPERAGE	4.0A	2.5A	2.0A	1.8A



3.2"  
(8.1CM)



35.3" (89.6CM)



34.6" (88CM)

\* PPF calculations complied using our in-house integrating sphere measurements and typical spectroradiometric data for each LED to determine the fixture performance. Actual photometric results may vary within the LED's manufacturer's bin tolerance.

\* Wattage values are typical expected values. TSL Horti Tech maintains a tolerance of +/- 10% range on flux and power consumption. Target light level can vary from projected levels depending on ambient temperature, room reflections values, and other conditions.



## SAFETY WARNINGS:

The ROI series LED system is passively cooled with absolutely no moving components. Do not try to open or disassemble the fixture, it contains no service parts inside. Doing so may cause harm to the fixture and void warranty.

- Always adhere to the local rules and regulations when installing or using the fixture.
- Wearing protective gloves and glasses is recommended during installation.
- Always disconnect from the mains before performing any maintenance to the fixture.
- The fixture will get hot during operation. Do not touch while the light is on. Keep this product away from children.
- Always allow at least 10 minutes for the fixture to cool down before handling.
- Do not touch the LED diodes.
- Keep the power cord away from hot surface.
- Do not plug this system into a supply voltage other than what is instructed on the fixture.
- Do not use the fixture when the power cord is damaged.
- Do not use the fixture when the unit has been dropped, or its enclosure or bars are damaged.



### WARNING

Risk of electrical shock. To reduce the possibility of serious injury, always take the proper precautions and unplug the fixture before moving or cleaning.

### WARNING

Light bars and power supply are splash-proof but not waterproof. In the event that the light bar becomes submersed, first disengage the circuit breaker, then unplug the fixture before proceeding to remove from water.



### CAUTION

To reduce the risk of overheating or fire, never place operating fixtures face down on a flush surface. Always allow for adequate ventilation of fixtures and power supplies.

### CAUTION

LED and heat sink surfaces may be hot. Allow sufficient cooling time before handling.

### CAUTION

To prevent eye damage, avoid looking directly at the unshielded LEDs.

### CAUTION – RISK OF PERSONAL INJURY

Disconnect power before servicing or installing luminaire. Lighted fixture may be hot. To reduce risk of injury, turn off or disconnect power and allow to cool before handling. Fixture must be grounded in accordance with appropriate codes. Failure to do so may result in serious injury or death. Be sure all power is off prior to installing fixture.



## **CONTENTS:**

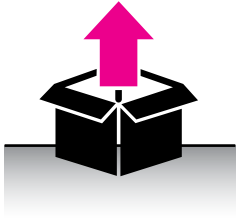
- ROI-E420 LED System
- 9' Connecting Cable
- 1ft NEMA 6-15P 240V M25 Plug
- Information Page
- 120/240 Adaptor
- User Manual
- Rope Ratchet

## **Not Included:**

- Lighting Controller
- RJ Data Cable
- Glasses

# INSTALLATION:

- Switch off mains power
- We always recommend using certified or qualified installation professional to ensure optimal performance and safety.



- Unbox fixture and place on flat, stable surface.

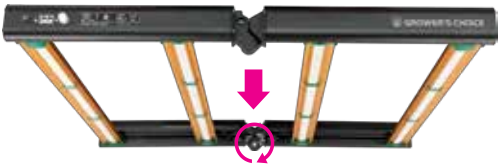


- Warning: Do not handle the fixture using the LED bars as it can result damage to the light and performance.

Only lift from the primary fixture structure as shown below.



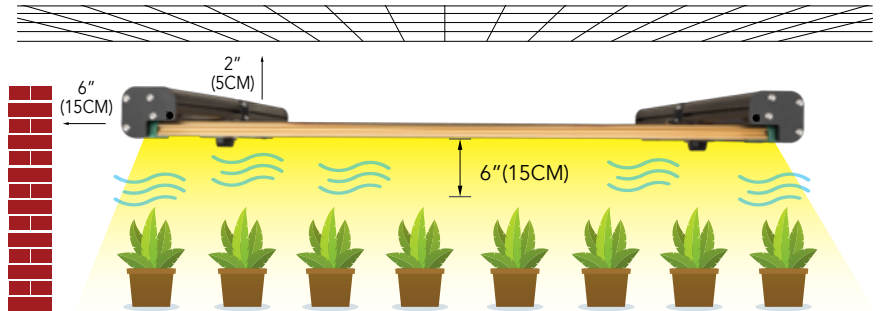
- Unfold the fixture with LEDs facing down.



Turn the nut to secure the fixture position



- The ROI Series can be mounted to the supporting structure or frame by suspending with carabiner cables (not provided) or other suspension means using the four mounting rings on the fixture. Maximum fixture weight: 20 lbs
- Mount the light bars at least 6" from the top of your canopy for optimal light efficiency and uniformity. Always allow for adequate ventilation of fixture. The rope ratchet kit provided with luminaire.



## INSTALLATION:

- Inspect the contents for any obvious physical damage. If damage has occurred, contact the shipper of the hardware. If replacement part are required.

- Some minimum clearances around the grow environment are required for proper operation of the cooling system and to prevent over heating:

Ceiling clearance: 2"

Fixture to plants: 6"

Fixture to fixture clearance: 2"

Fixture to other objects: 6"

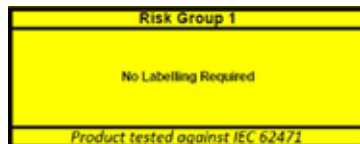
Fixture to wall clearance: 6"

- The maximum ambient temperature of the grow environment operation is 0 to 40°C.

Ensure that the maximum ambient temperature is not exceeded. A mechanical ventilation or cooling system is required to maintain temperatures within the growing space below 104°F (40°C) when the horticultural luminaire is in operation.

The Storage temperature range is -40°C to 70°C.

This unit is designed for damp locations.



- 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.



WARNING

**DISCONNECT POWER BEFORE SERVICING.** Hazardous voltages may be present when covers are removed. Qualified personnel must use extreme caution when servicing this equipment.

- Wiring must be in compliance with horticultural, local, and national standards and requirements. Before applying power to the light fixture, verify that your product is configured properly for your particular application.

The Greenhouse Light Fixture is shipped with a cord (whip) that is connected internally to the fuxture. This cord is equipped with M25-Nema 6-15P

For proper connection of a Fixture shipped with a plug - ensure that the proper mating receptable is available. Simply plug in fixture to this receptacle.

- When wiring the light fixture, ensure the following:

- Power is disable when connecting cords or plugs.

- Power cords are not concealed or extended through bulkheads, flooring, ceiling, or other parts of the building structure.

- Power cords are not located above the ceiling (including dropped ceilings)

- Power cords are not permanently attached to the building structure.

- Power cords are protected from physical damage.

- Power cords are not subjected to strain and are bearing weight of the fixture

- Power cords should be visible over the entire cable length.

- Power cords are used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions.

## WARRANTY:

TSL Horti Tech warrants the mechanical and electronic components of their product to be free of defects in material and workmanship if used under normal operating conditions for a period of five (5) years from the original date of purchase. If the product shows any defects within this period and that defect is not due to user error or improper use, TSL Horti Tech shall, at its discretion, either replace or repair the product using suitable new or reconditioned products or parts. TSL Horti Tech warranty liability extends only to the replacement cost of the product. In case TSL Horti Tech decides to replace the entire product, the limited warranty shall apply to the replacement product for the remaining initial warranty period.

TSL Horti Tech shall not be held responsible for any damage caused by the operation of the unit, be it incidental or consequential or any type including, without limitation, damage or injury caused to other products or machinery or buildings. Nor will responsibility be accepted for loss of time or profit, loss of finished product, or for any inconvenience caused in any way whatsoever.







**Tel:** (909) 972-8419

**E-mail:** [info@growersc.com](mailto:info@growersc.com)

**Website:** [www.growersc.com](http://www.growersc.com)

**Address:** 1500 S Milliken Ave, Suite B, Ontario, CA, 91761



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