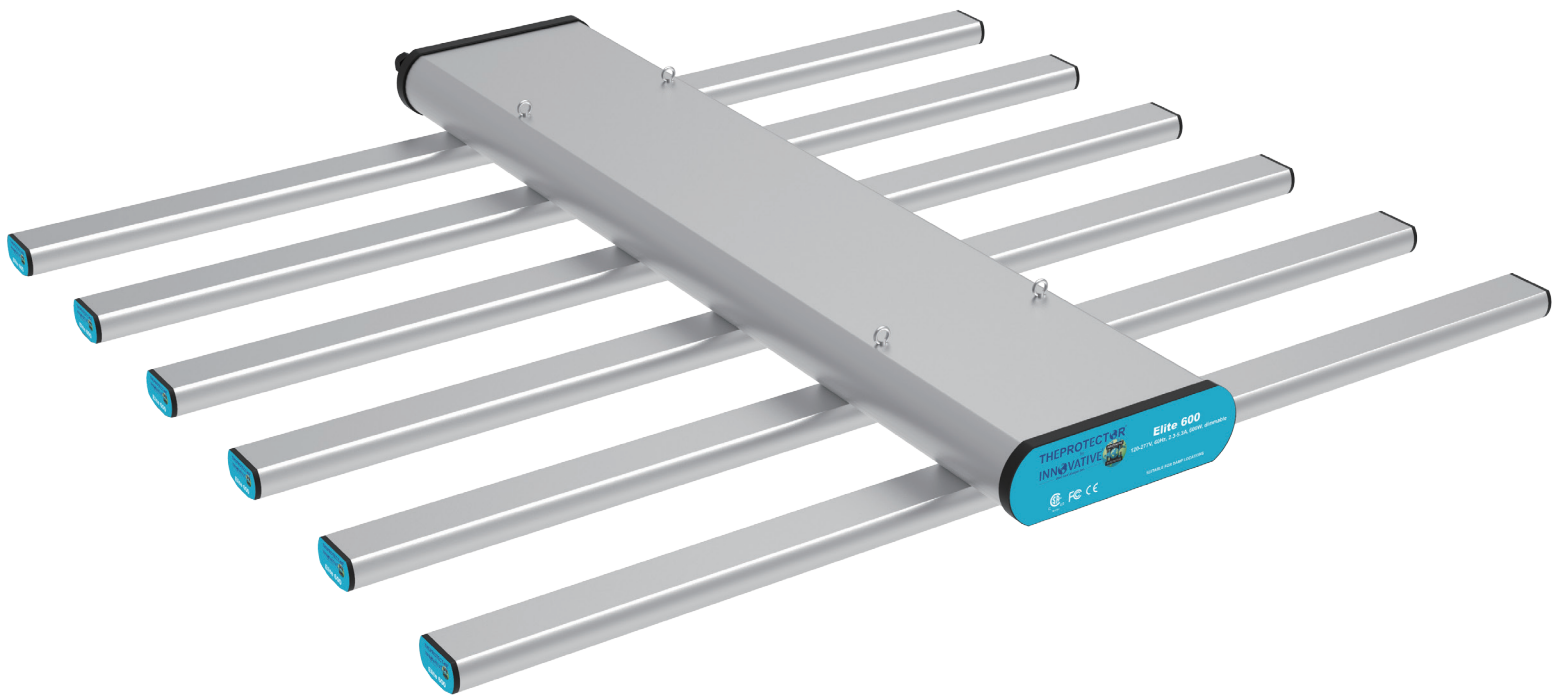


# THE PROTECTOR®

by  
**INNOVATIVE**  
—tool and design inc.—



## Elite 600 LED Growing Light



## User Manual



[www.shoptheprotector.com](http://www.shoptheprotector.com)

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## Elite 645W LED Growing Light



### **Full Spectrum**

- 380nm-780nm.
- Improve active ingredient contents

### **1650 $\mu\text{mols}^{-1}$**

- Over 2.7 $\mu\text{mol}/\text{J}$  at 600w
- Saving more energy while produce more

### **Wet location / IP65**

- Make planting easier.
- Easily sterilized.

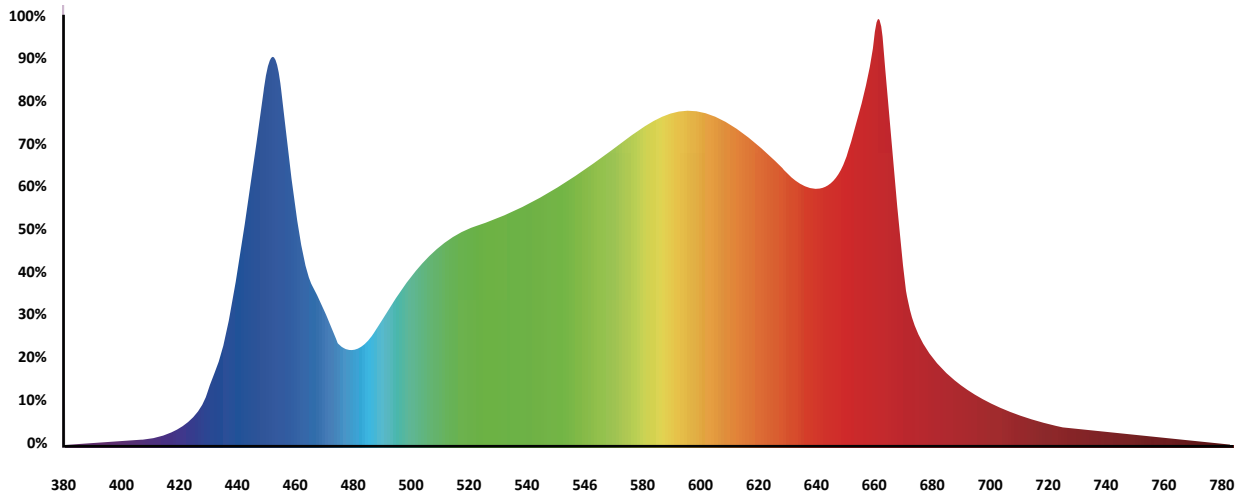
### **>97% light transmission**

- With silicone conformal coating.

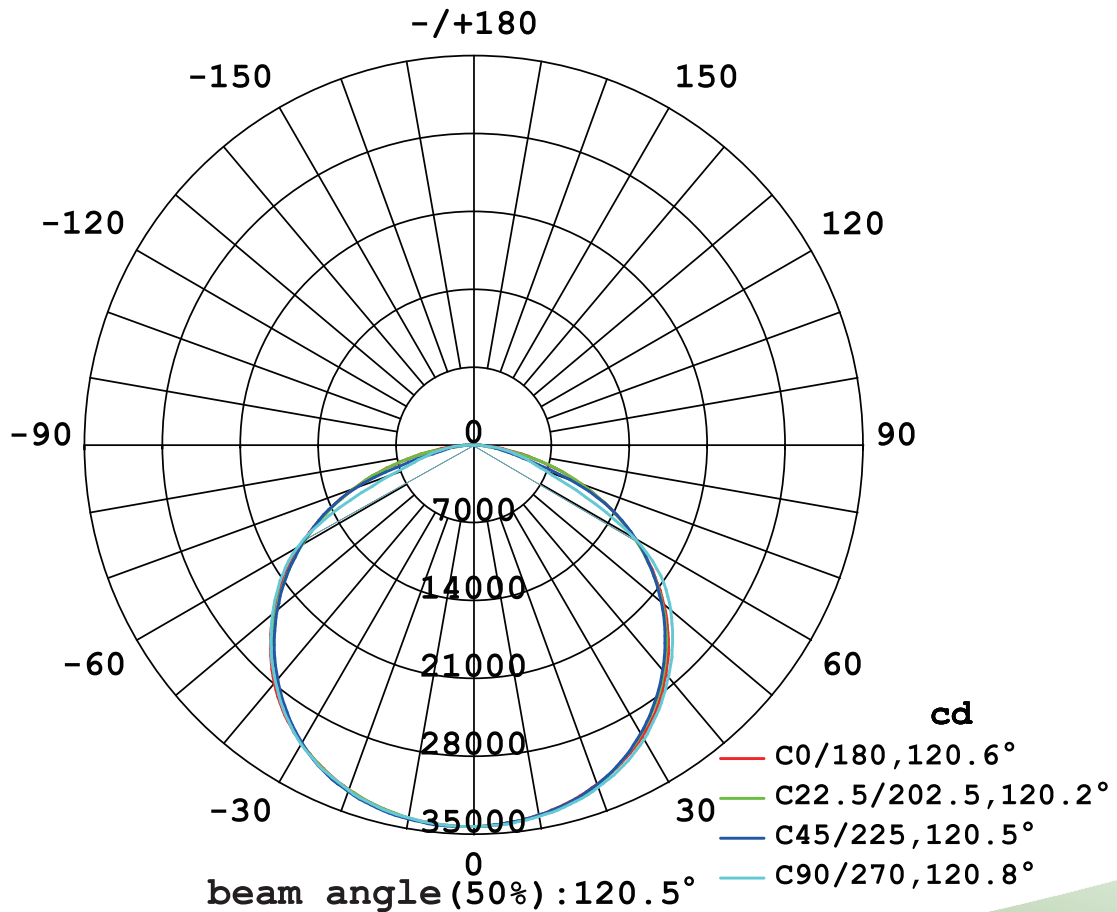
### **Suitable for GMP & GACP facility**

- Sealed shut.
- No fans.

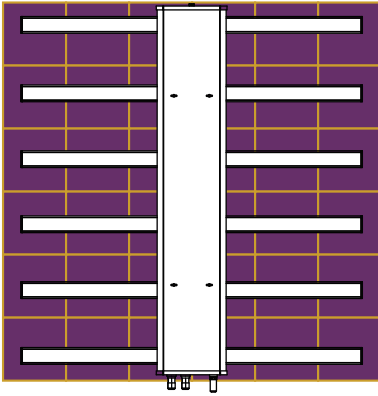
## SPECTRUM



## LUX DISTRIBUTION



# PPFD MAP



Map Size: 1m x 1m

≥1000	800-1000	700-800	600-700	450-600	300-450	250-300
-------	----------	---------	---------	---------	---------	---------

1399	1443	1346	1346	1443	1399
1439	1554	1661	1661	1554	1439
1381	1559	1623	1623	1559	1381
1381	1559	1623	1623	1559	1381
1439	1554	1661	1661	1554	1439
1399	1443	1346	1346	1443	1399

## PPFD MAP at 0.5ft

Clearance	0.5	ft
Qty	1	U
Average PPFD	1489	μmol/m <sup>2</sup> /s
Max PPFD	1661	μmol/m <sup>2</sup> /s
Min PPFD	1346	μmol/m <sup>2</sup> /s
Min/Average	90.4	%
Watts	600	W

590	786	880	880	786	590
815	1041	1117	1117	1041	815
868	1113	1206	1206	1113	868
868	1113	1206	1206	1113	868
815	1041	1117	1117	1041	815
590	786	880	880	786	590

## PPFD MAP at 1ft

Clearance	1	ft
Qty	1	U
Average PPFD	935	μmol/m <sup>2</sup> /s
Max PPFD	1206	μmol/m <sup>2</sup> /s
Min PPFD	590	μmol/m <sup>2</sup> /s
Min/Average	63.1	%
Watts	600	W

425	530	600	600	530	425
590	750	880	880	750	590
685	885	950	950	885	685
685	885	950	950	885	685
590	750	880	880	750	590
425	530	600	600	530	425

### PPFD MAP at 1.5ft

Clearance	1.5	ft
Qty	1	U
Average PPFD	699	$\mu\text{mol}/\text{m}^2/\text{s}$
Max PPFD	950	$\mu\text{mol}/\text{m}^2/\text{s}$
Min PPFD	425	$\mu\text{mol}/\text{m}^2/\text{s}$
Min/Average	60.8	%
Watts	600	W

486	508	550	550	508	486
518	641	699	699	641	518
539	659	749	749	659	539
539	659	749	749	659	539
518	641	699	699	641	518
486	508	550	550	508	486

### PPFD MAP at 2.0ft

Clearance	2.0	ft
Qty	1	U
Average PPFD	594	$\mu\text{mol}/\text{m}^2/\text{s}$
Max PPFD	749	$\mu\text{mol}/\text{m}^2/\text{s}$
Min PPFD	486	$\mu\text{mol}/\text{m}^2/\text{s}$
Min/Average	81.8	%
Watts	600	W



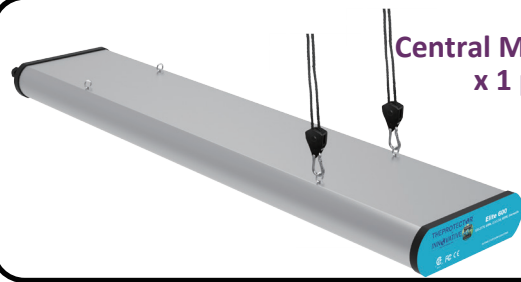
## Specifications

Type	Elite 600
Amp Draw	2.7A
Wattage	600W
Power factor	>0.9
PPF	1,650 $\mu\text{mol/s}$
Efficacy	2.7 $\mu\text{mol/J}$
BTU	2100 BTU/h
Driver Brand	Moso
Light source	Osram 660nm + Samsung 301b
Dimming	Daisy Chain Digital signal(RS485): 0-100%; Analog signal (0-10Vdc): 35%-100%
Material	6063 Aluminum
Thermal Management	Passive Cooling
Mounting Height	$\geq 6''$ (15.2cm) Above Plant Canopy
Warranty	5 years
Certifications	CE /RoHS standards
IP rating	IP 65
Ambient operating temperature	14 ° F ~ 104°F (-10°C ~ 40 °C)
Lifespan	L90: >54,000 hrs
Fixture Dimension   Net Weight	L990 x W990 x H110mm   xxx kg
Packing Dimension   Gross Weight	
Coverage area	Flower: 5' x 5' Veg: 7' x 7'

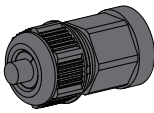
# In the Box



LED Bars  
x6 pce



Central Mast  
x 1 pce



Waterproof Connector  
x2 pce



Network Cable  
x1 pce



Power Cable  
x1 pce

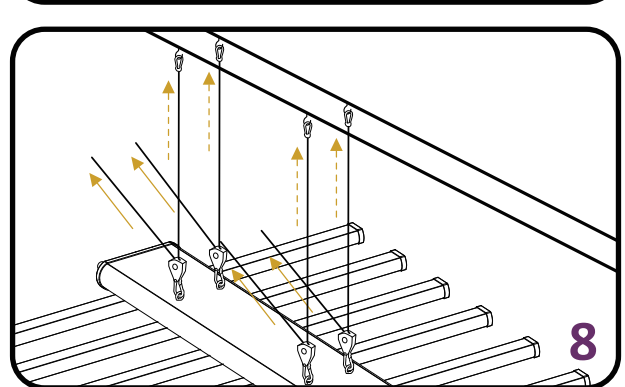
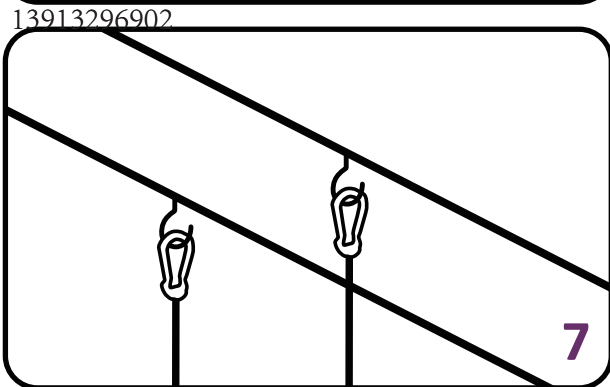
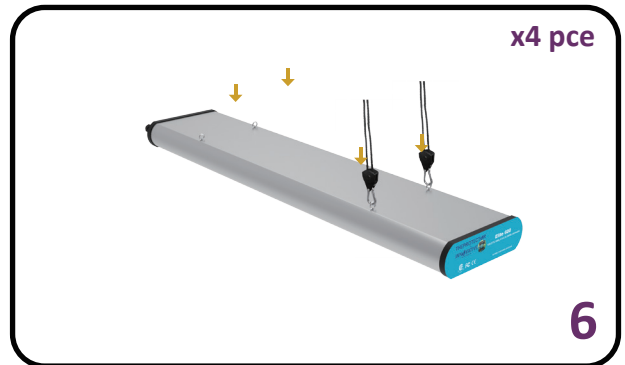
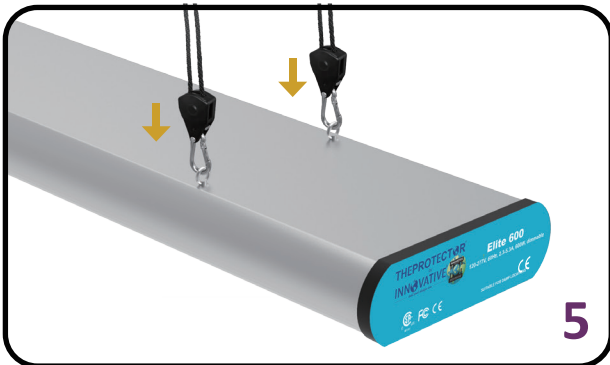
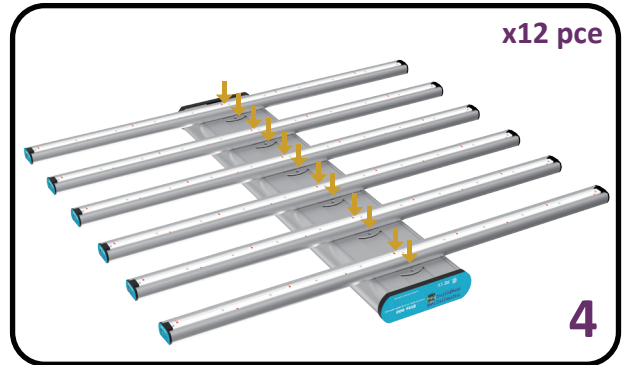
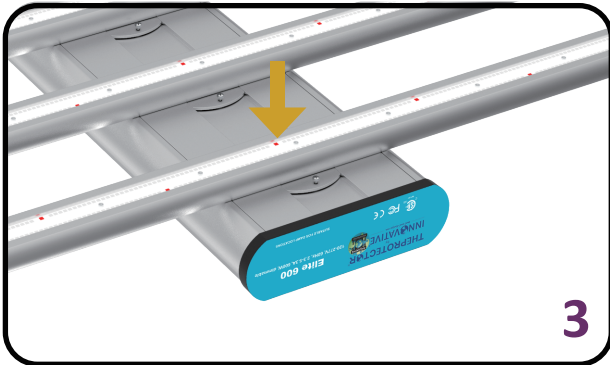
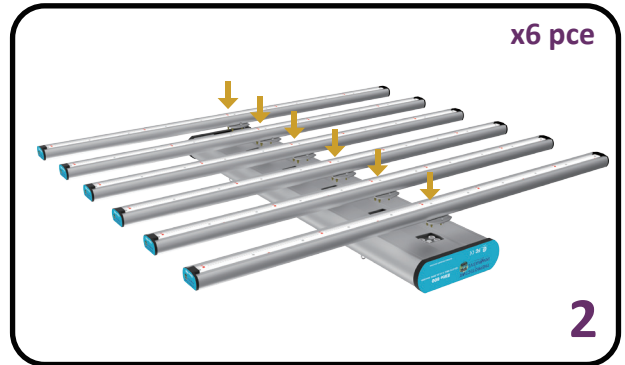


Rope Slings  
x4 pce



Dummy Plug  
x1 pce

# Installation Instructions



13913296902

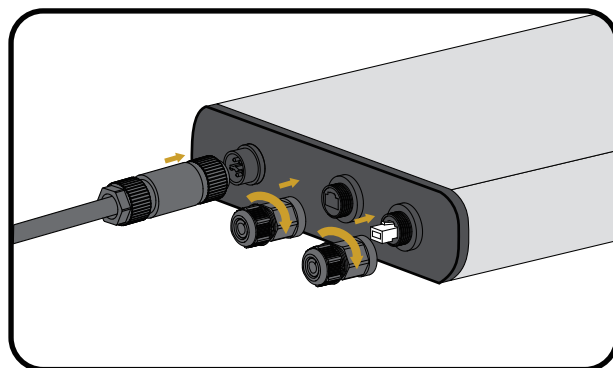
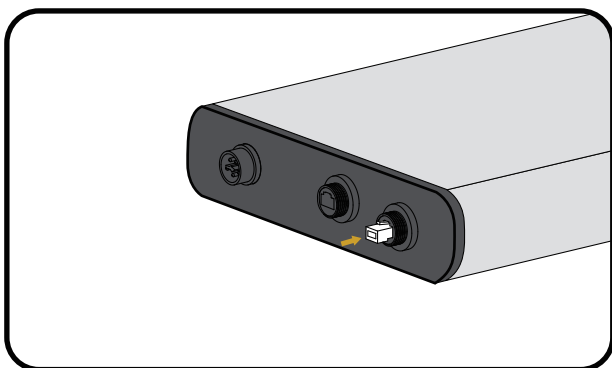
*When handling your Nova Fixture. The LED array should NOT come in contact with sharp objects. DO NOT touch diodes or apply direct force to the diodes as this can/will cause permanent damage.*



## Installation Precautions

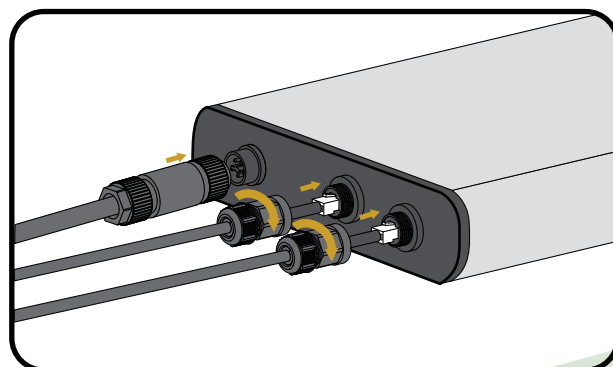
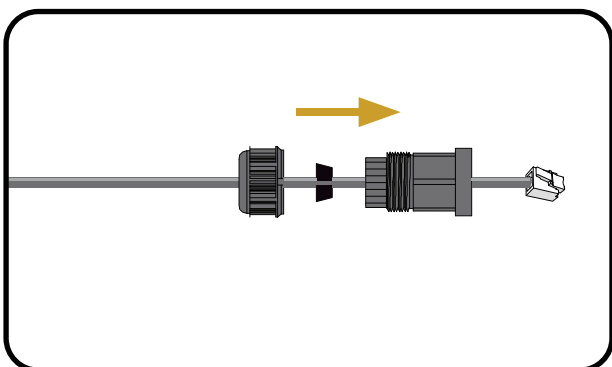
- *“THIS PRODUCT MUST BE INSTALLED BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED, IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE”.*
- *“KEEP THESE INSTALLATION INSTRUCTIONS”.*
- *For lighting equipment with cords or wiring harnesses, instructions shall include information to guide the installation such that cords:*
  - 1) *Are not concealed or extended through a wall, floor, ceiling, or other parts of the building structure,*
  - 2) *Are not located above a suspended ceiling or dropped ceiling,*
  - 3) *Are not permanently affixed to the building structure,*
  - 4) *Are routed so that they are not subject to strain and are protected from physical damage,*
  - 5) *Are visible over their entire length, and*
  - 6) *Are used within their rated ampacity as determined for the maximum temperature of the installed environment specified in the instructions.*

### Non-controlled



- *Non-controlled fixtures simply operate at 100% when inserting the dummy plug into the IN terminal.*

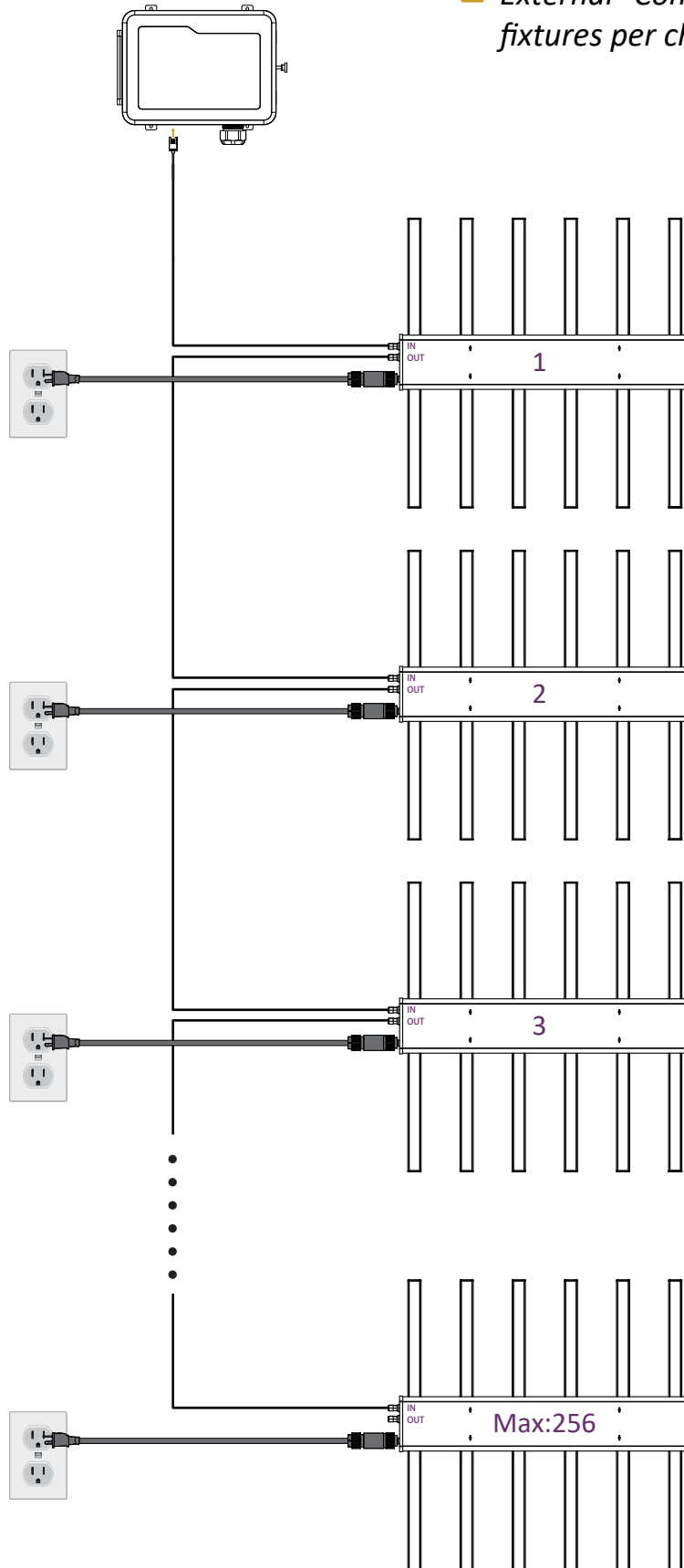
### Dimmable



**SUITABLE FOR DAMP LOCATIONS**

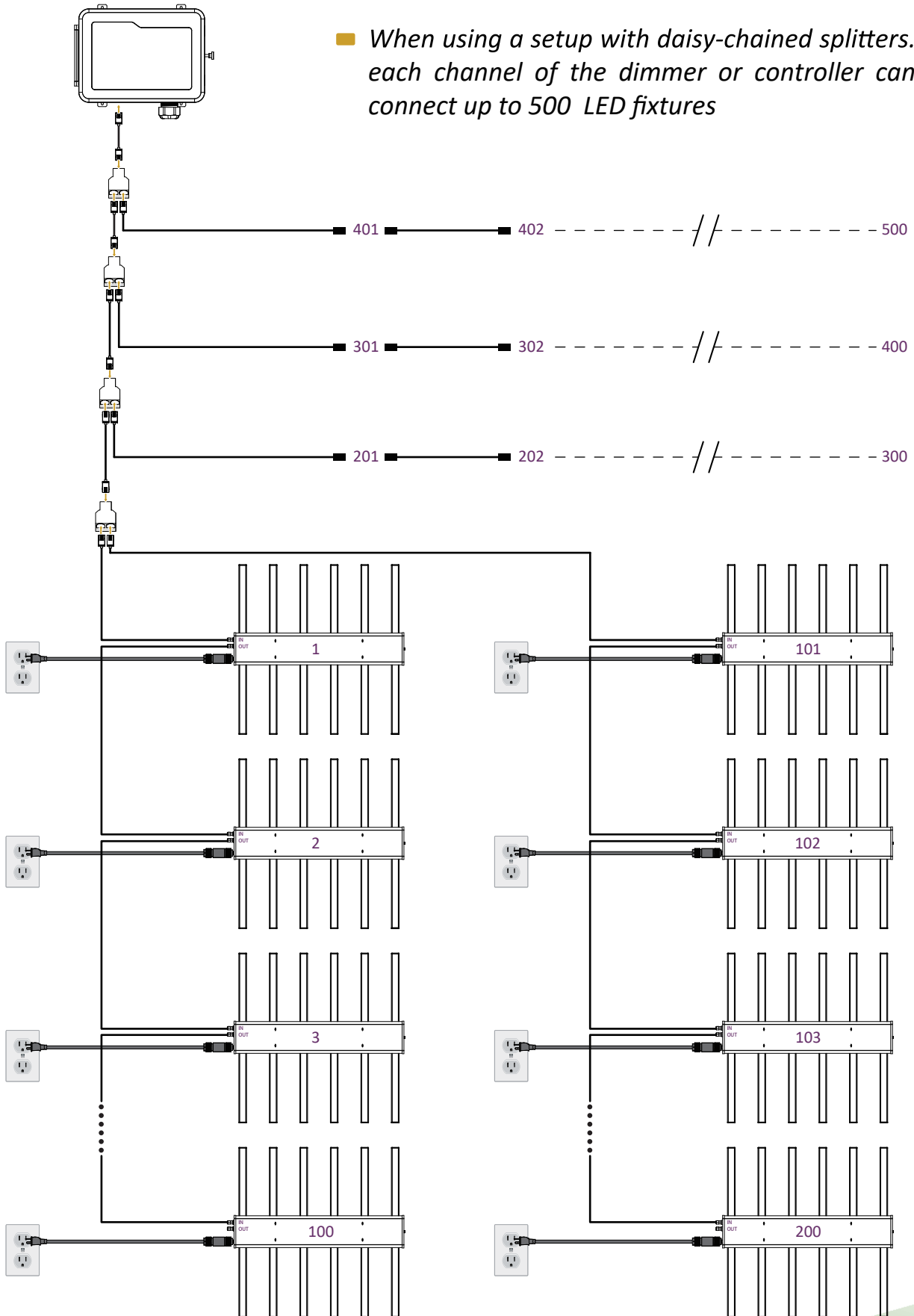
# Digital signal

■ External Controllability with 256 fixtures per channel.

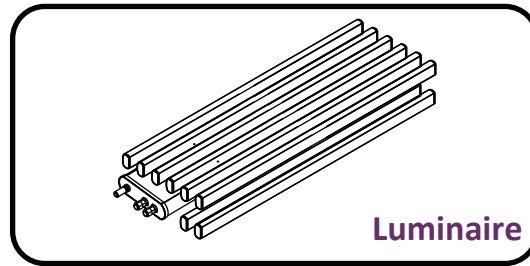


# Analog signal

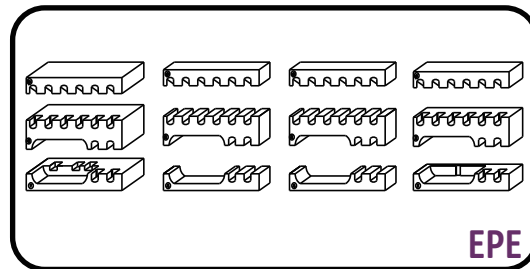
- When using a setup with daisy-chained splitters, each channel of the dimmer or controller can connect up to 500 LED fixtures



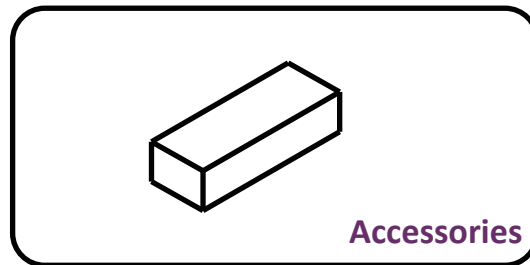
# Package Diagram



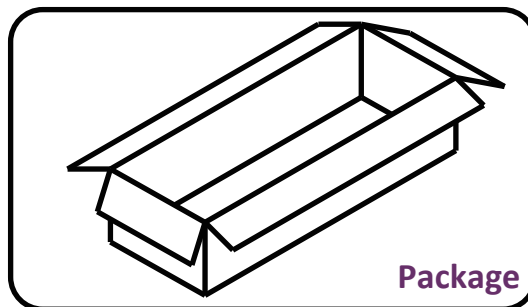
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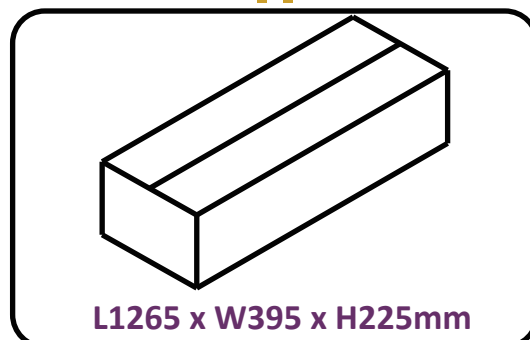
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## THEPROTECTOR LIMITED PRODUCT WARRANTY

Please take the time to read through our Standard Terms and Conditions of the THEPROTECTOR Limited Product Warranty.

### How Long Does The Coverage Last?

The product warranty becomes effective from the date of purchase by the purchaser. Coverage terminates if you sell or otherwise transfer the product. The repair of your product under warranty will not extend the period of the warranty. Each part has its own warranty. Please check the warranty list before you place an order.

### How Do You Get Service?

Products are to be returned to THEPROTECTOR Tech Support Center under your express account. Address: 10725 Capital St. Oak Park. MI +1 248-542-1831

### What is Covered?

Normal wear and tear. We will repair or replace your product if your product is found, within the warranty period, to be defective due to defective materials or workmanship existing at the time of purchase. If any part is no longer available or out of manufacture, THEPROTECTOR will replace it with a functionally-equivalent replacement part.

### What is Not Covered?

THEPROTECTOR shall NOT be liable for costs of repair or replacement of a product incurred as a result of:

1. Accidental damage, faults caused by negligent use or care, neglect, careless operation or handling of the product which is not in accordance with the THEPROTECTOR Instruction Manuals.
2. Use of the parts not assembled or installed in accordance with the instructions of THEPROTECTOR.
3. Use of parts or accessories other than those produced or recommended by THEPROTECTOR.
4. External sources such as transit damage or weather.
5. Repairs or alterations carried out by parties other than THEPROTECTOR or its authorized agents.
6. Serial numbers defaced or missing.

THEPROTECTOR warrants the mechanical and electronic components of all THEPROTECTOR series to be free of defects in material and workmanship if used under normal operating conditions for a period 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 THEPROTECTOR shall, at its discretion, either replace or repair the product using suitable new or refurbished parts. In case THEPROTECTOR decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period.

*THEPROTECTOR DISCLAIMS ANY AND ALL LIABILITY, INCLUDING ANY EXPRESS OR IMPLIED WARRANTIES, WHETHER ORAL OR WRITTEN, FOR SUCH THIRD PARTY HARDWARE. THE CUSTOMER ACKNOWLEDGES THAT THEPROTECTOR HAS MADE ITS BEST EFFORTS TO MATCH ITS PRODUCTS TO WORK WITH THIRD PARTY HARDWARE OR THE ABILITY TO CONNECT TO AND CONTROL THIRD PARTY HARDWARE FOR THE CUSTOMER'S INTENDED PURPOSE. THEPROTECTOR ADDITIONALLY AND SPECIFICALLY DISCLAIMS ANY AND ALL LIABILITY FOR CHANGES, ADDITIONS OR UPDATES IN ANY WAY TO A THIRD PARTY MANUFACTURES PRODUCTS.*

