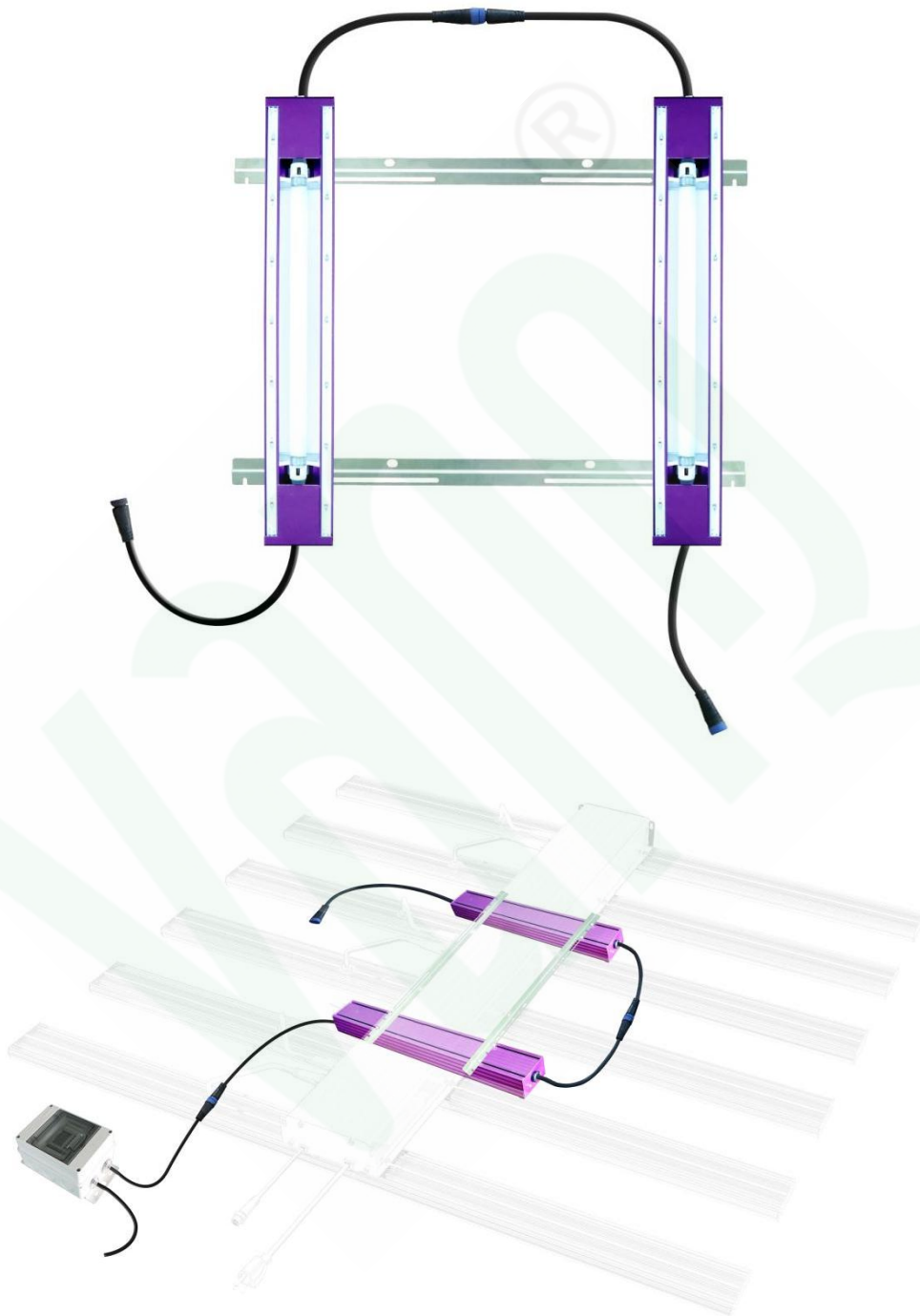


vanq® Shenzhen VANQ Technology Co., Ltd.

Supplemental Lighting- VQ-GLCP Series THCMax Bloom Light Specification



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CATALOG

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VQ-GLCP Series

THCMAX Bloom light

1 Lamp Introduction

1.1 Brief Introduction

Thank you for purchasing VQ-GLCP series lamps. VQ-GLCP series lamps are specially designed for horticultural auxiliary lighting, in conjunction with VANQ other series grow lighting, aiming to increase THC content of industrial hemp flowers for indoor planting.

This manual not only introduces the purpose and parameters of lamps, but also introduces the installation methods of lamps. Please read this manual carefully before installing the lamps and time switch. If you have any questions, please feel free to contact us.

1.2 Lamp functions and characteristics.

- 1、Improving photosynthetic efficiency,shortening the flowering cycle;
- 2、Improving crop quality,increasing THC content,estimated yield up by 20-25%;
- 3、Reduce fungi,molds and plant pests and maintain a healthy growing environment;
- 4、Useful for the formation of plant, flowering, fruit coloring and vitamin C;
- 5、Full range of models, UV only and UV+Far-red different models for customer choices;
- 6、Optimized optical design, together with main light source use, the even illumination distribution, make sure high consistency of plant flower growth;
- 7、Far-red and UV circuits are designed separately, in combination with THCMAX bloom lamp timing switch (two channels and 16 timers) to meet the lighting needs of crops from growth to flowering.

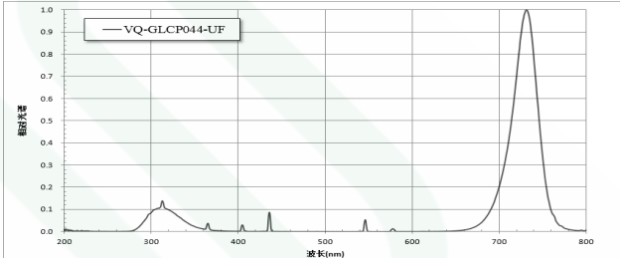
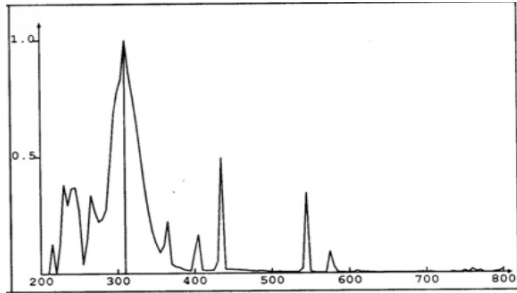
2 THCMAX Bloom light information and Specification

2.1 Basic Information

| Item name | THCMAX Bloom light |
|---------------------|----------------------------------|
| Manufacturer | ShenZhen VANQ Technology Co.,Ltd |
| Waterproof rate | Non-waterproof |
| Size | 445Lx 472Wx42H(mm) |
| Working Temperature | -20°C ~ 40°C -4°F ~ 104°F |
| Beam angel | 120° |
| Dimmable function | No |
| Warranty | 1 Year |

In order to simplify the content, in some chapters, THCMAX bloom light are abbreviated as lamps.

2.2 Parameter

| Model | | VQ-GLCP-044UF-L | VQ-GLCP-044UF-S |
|------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------|------------------|
| Electric parameter | Rated input voltage | 110VAC 50/60HZ | 220VAC 50/60HZ |
| | Total Power | 44w±5% | |
| Light Source Parameter | Far-red light | Light Source | LED |
| | | Specification | 3535SMD |
| | | LED QTY | 28PCS |
| | | Power | 28*1=28W |
| | UV light | Light Source | Fluorescent lamp |
| | | Specification | T5 |
| | | lamp QTY | 2PCS |
| | | Power | 2*8=16W |
| Light Spectrum | |  | |
| Net Weight | | 1.6kg | |
| Features | | FR and UV light | |
| Manual attention | | !Can not be used alone, to be connected with the time switch of THCMax Bloom light, installed onto the main lamps for | |
| Model | | VQ-GLCP-016UN-L | VQ-GLCP-016UN-S |
| Electric parameter | Rated input voltage | 110VAC 50/60HZ | 220VAC 50/60HZ |
| | Total Power | 16w±5% | |
| Light Source Parameter | UV light | Light Source | Fluorescent lamp |
| | | Specification | T5 |
| | | lamp QTY | 2PCS |
| | | Power | 2*8=16W |
| Light Spectrum | |  | |
| Net Weight | | 1.6kg | |
| Features | | Only ultraviolet UV light | |
| Manual attention | | !Can not be used alone, to be connected with the time switch, installed onto the main lamps for application. | |

2.3 Order Coding Rules

| Item Series | Model | Input Voltage |
|-------------|----------------------------------------------------------------------------------------------|----------------------------------|
| VQ-GLCP | -044UF: Power 44W included UV and FR light -016UN: Power 16W included UV,without FR light | -L: 110-120VAC -S: 220-240VAC |

For example: VQ-GLCP-044UF-S refers to the VQ-GLCP series THCMax bloom light, total power 44W, including UV and Far-red, input voltage 220-240VAC.

3 THCMax bloom light time switch introduction

!THCMax bloom light needs to be connected with the time switch for using, a separate purchase of lamps or time switch will be unable to work normally.

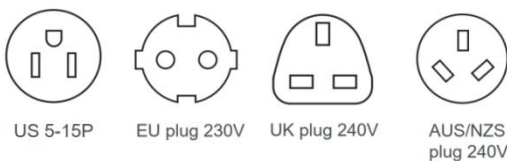
3.1 Basic Parameters of Time Switch

| Name | THCMax bloom light time switch |
|---------------------|-----------------------------------------------------------------------|
| Model | VQ-GLCP-DTS8A |
| Input voltage | 85-265VAC 50/60HZ |
| Timer function | two channels timer separately, each channel has 16 independent timers |
| Size | 193L*118W*98H (mm) |
| Net weight | 850g |
| Switch capacity | Single channel 8A |
| Time control range | 1 Minute-168 Hours |
| Working temperature | -10°C ~ 40°C 14°F ~ 104°F |

In order to simplify the content, some chapters of THCMax time switch abbreviation for time switch.

3.2 Time Switch Order Code

| Controlled lamp series | Model | Plug type |
|------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VQ-GLCP | -DTS8A: D-Dual, T-Timer, S-Switch, That is, two-channel time switch, 8A-single 8A output. | -US: USA type 120VAC 5-15P -EU: Europe type 220VAC -UK: United kingdom type 230VAC -AUS: Australia type 240VAC -CHA: China Type 220VAC -XXX: (Japan, Italy...),etc country type, The number of digits in XXX shall be subject to the client needs. |



For example: VQ-GLCP-DTS8A-CHA refers to: THCMax bloom light time switch used to control VQ-GLCP

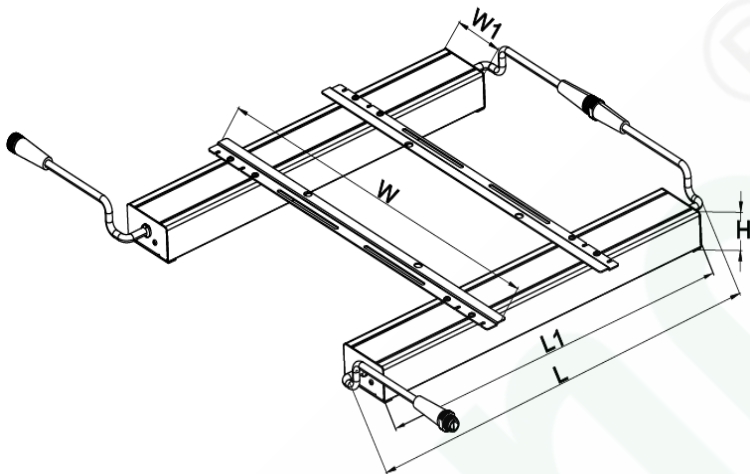
series lamps, two channels switches, single 8A output, CHINA plug.

4 Size and Package

!THCMax bloom light and THCMax bloom light time switch are separately packaged.

4.1 Lamp

1、Lamp size



L =445mm

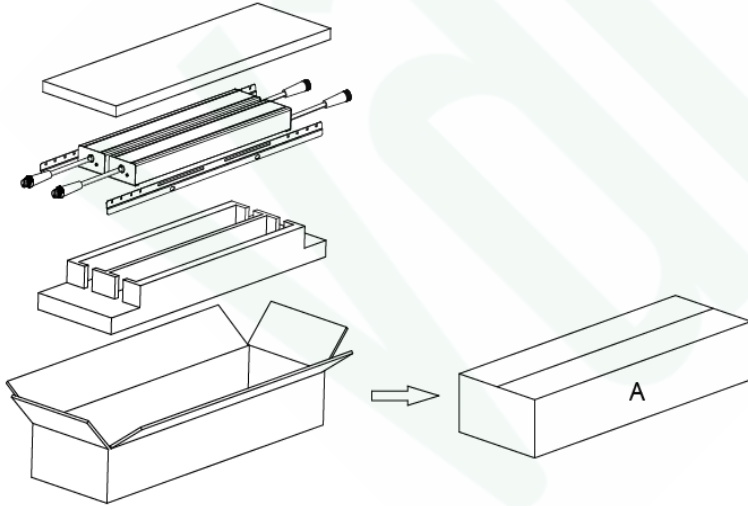
W=472mm

H =42mm

W1=66mm

L1=440mm

2、Package ways



Inner packing of lamp A:1pcs/box

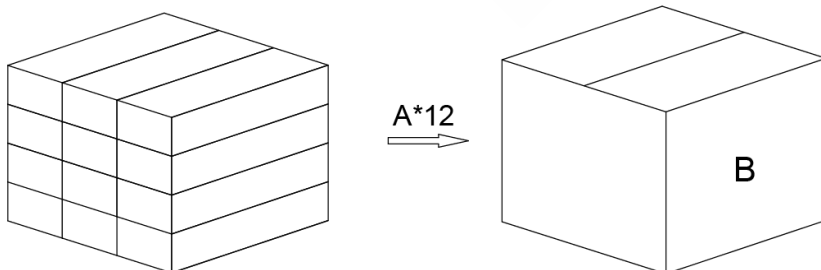
Gross weight:2.2kg

Net weight:1.6kg

Size A:615L x 200W x 115H(mm)

Package material :Plastic

bag+Foam+Cartons



Outer Packing of lamp

B:12pcs/box

Gross weight:28kg

Size B:630L x 615W x 480H(mm)

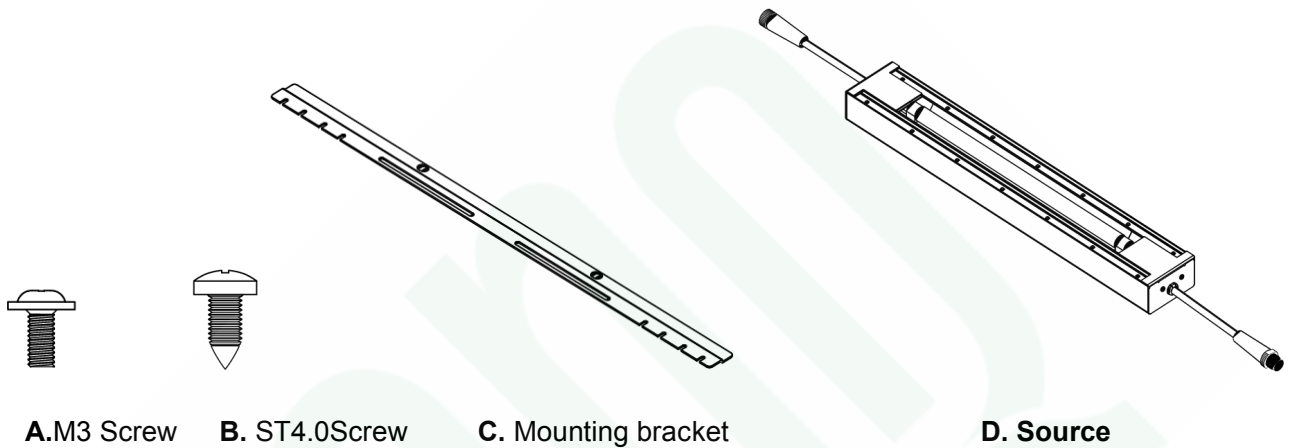
Package material:Plastic

bag+Foam+Cartons

Note: Inner Packing A can be shipped directly as standard packing.

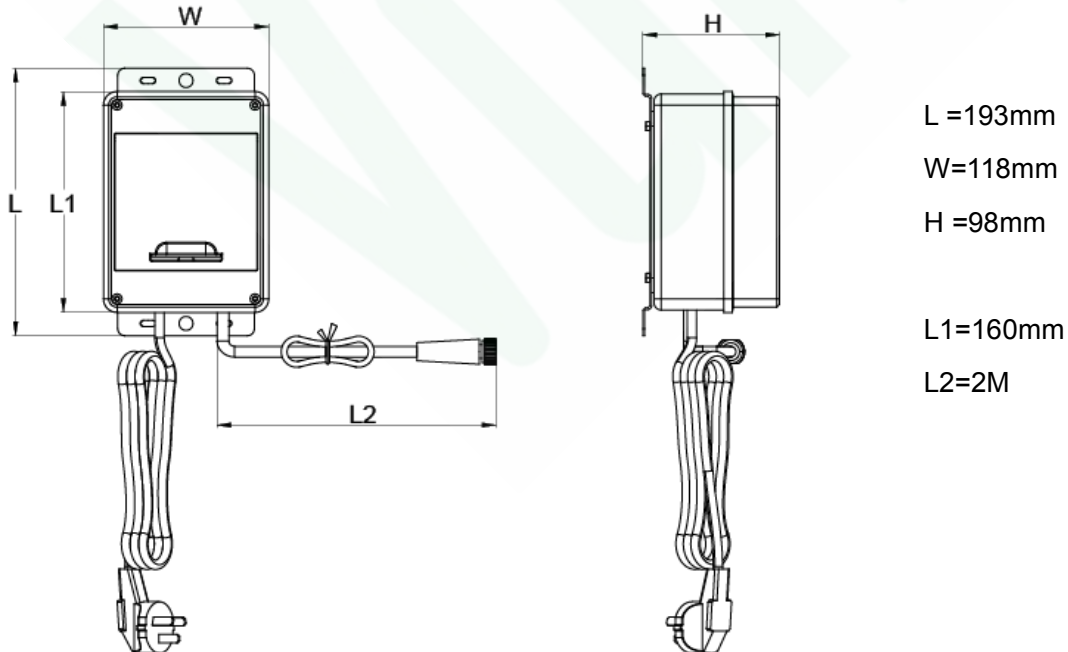
3. Inner Package (A) packing list

| NO | Item Name | Specification | QTY |
|----|------------------|----------------------------------------------------------------------------------------------------------------|-----|
| A | M3 Screws | PWM-M3*6, round head cross screwed with medium thread | 8 |
| B | ST4.0Screws | PA-ST4*8, Self tapping screws with round head and cross point tail | 4 |
| C | Mounting bracket | Size: 472mm*26mm*3.2mm, Stainless steel material | 2 |
| D | Source | Aluminum alloy 6063 radiator, single Fluorescent lamp (UV)light or LED Far-red(FR) light +Fluorescent UV light | 2 |

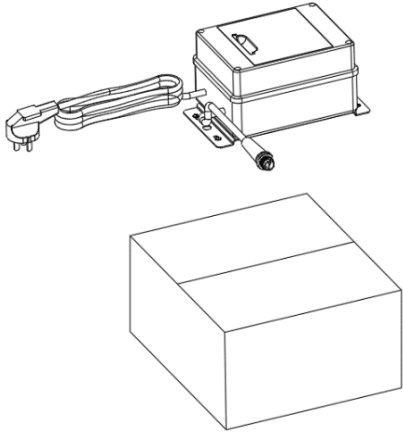


4.2 THCMax Bloom light time switch

1. Time switch



2、Time switch package



Time controlled switch
 package:1pcs/box
 Gross weight: 1.1kg
 Net weight: 0.85kg
 Size:235L x 185W x 130H(mm)
 Package material:Carton

3、Packing List

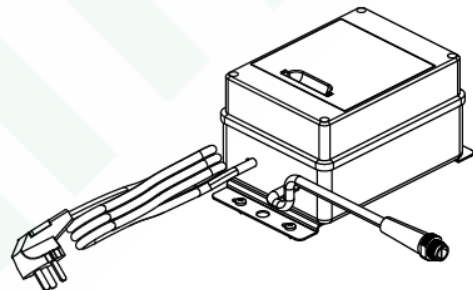
| NO | Name | specification | Quantities |
|----|------------------------|--------------------------------------------------------------------|------------|
| B | ST4.0 screw | PA-ST4*8, Self tapping screws with round head and cross point tail | 4 |
| F | Protective Cover | Plastic material, not waterproof function | 1 |
| E | Time controlled switch | two channels, 16groups time switch control | 1 |



B.ST4.0 Screw



F.Safety Cap



E.Time switch

Please check the products and accessories carefully according to the contents of the list. If you find the actual product does not match the list, or product damaged, please contact us immediately and provide photos or videos!

5 Lamp connection principle

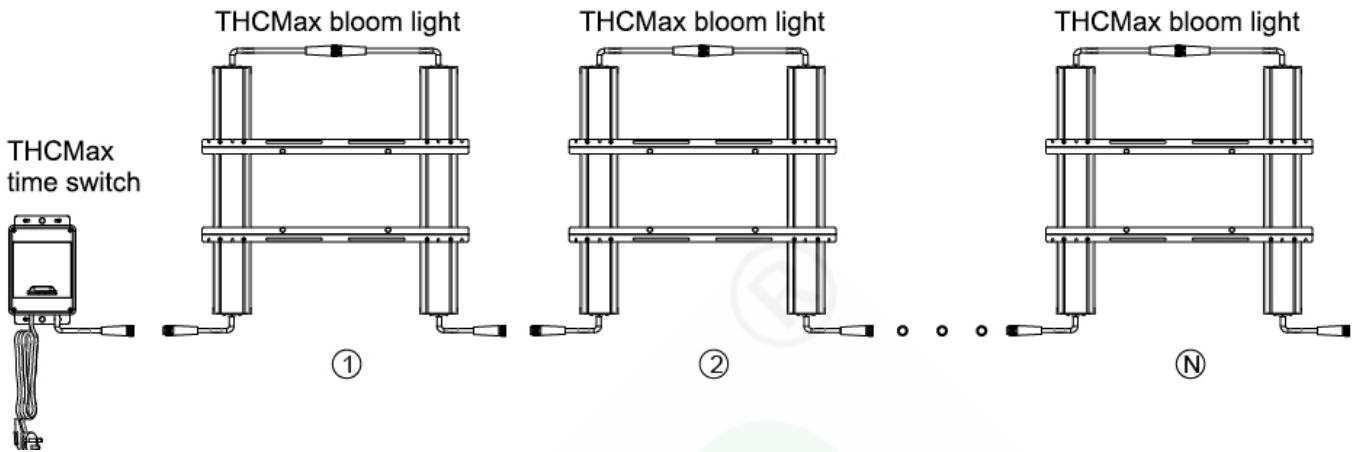
According to the connection principle, customers determine the way of connection and installation of lamps, choose the number of THCMax Bloom light time switch.

5.1 Connected Principle Diagram

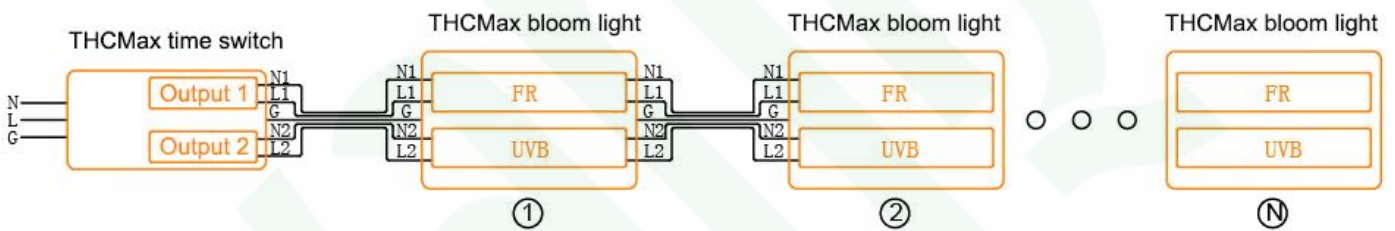
1. THCMax bloom light and time switch are connected as shown in the following diagram. Each time switch is

VQ-GLCP Series THCMax Bloom Light

connected with a number of lamps $N \leq 20$, 1 set time switch can be connected with different types of lamps(UV/FR/UV+FR).



2. The internal connection principle of THCMax Bloom light and its time switch is shown in the below photo. The time switch has two time-controlled outputs to control the Far-red light (FR) and the UV light (UV) of the lamps respectively. The bloom light and the time switch are connected by a 5-core cord. The same to different bloom lights.



6 Precautions

! Please read the following items carefully before you install the product.

6.1 Installation precautions

1. Only certified professionals are able to install the lights;
2. Make sure the power is switched off before installation;
3. Connect cables according to local safety regulations and electrical codes;
4. Time switch and bloom light can't touch or close to heating objects;
5. The number of bloom lights connect to a time switch can't exceed 20 units.

6.2 Requirements of working environment

! Our company does not provide warranty service for damage to lights and time switch caused by improper working environment.

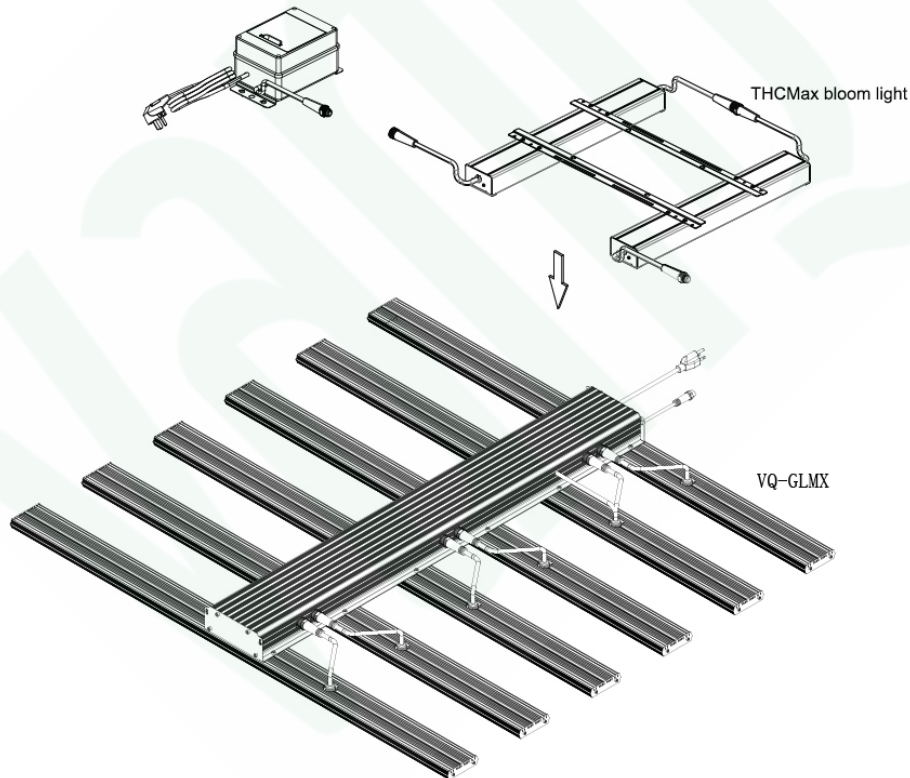
1. The power supply voltage needs to match the input voltage of the lights, and the lights are 110V or 220V single-voltage input products;

2. The working temperature cannot exceed the specified range, the working temperature of lights is $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$, and the working temperature of time switches is $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$;
3. Do not use lights and time switches in environments with serious dust pollution;
4. Do not use lights and time switches near flammable and explosive objects;
5. Do not use lights and time switches outdoors;
6. Do not use lights and time switches in environment with water, lights and time switches are not waterproof.

7 Installation

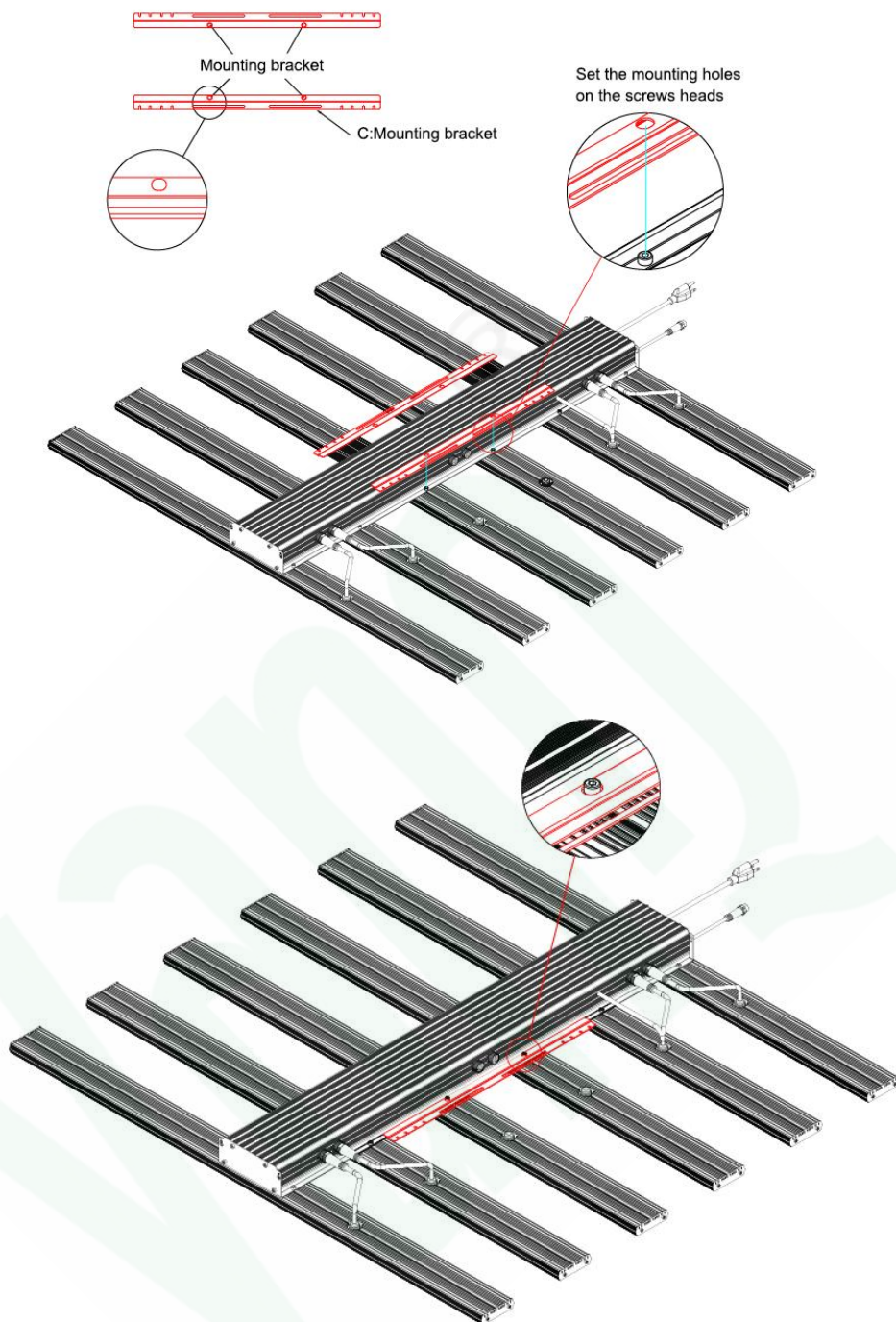
! Bloom lights must be installed to our series grow lights, it can't work individually. Bloom lights can work together with VQ-GLMX series, MG-Octopus640 and MG-Octopus800.

7.1 Installation guides to VQ-GLMX series light



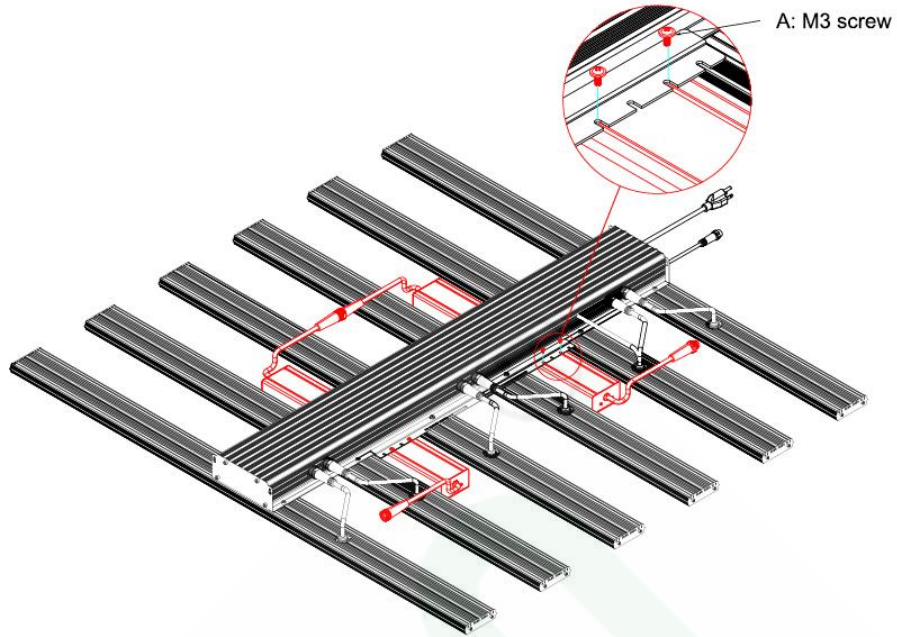
1. Installation of mounting bracket(c)

Set the mounting holes on the mounting bracket(c) to the screws of heat sink on VQ-GLMX series lights.



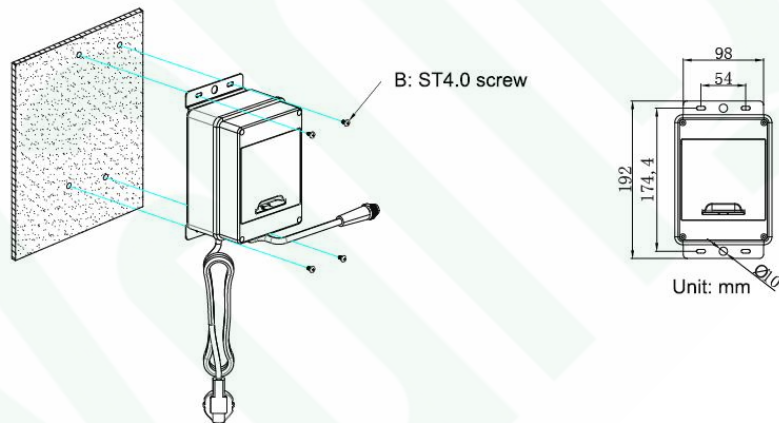
2. Fix the bloom lights

Fix the M3(c) screws on the slots of mounting bracket, and lock it to the nuts of groove on the back of THCMax bloom light, and then the THCMax bloom light and mounting bracket are fixed together.



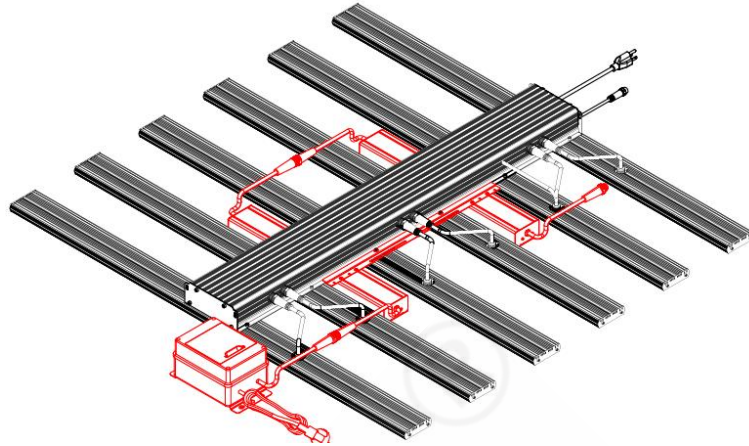
3. Installation to time switch of THCMMax bloom light

Fix the time switch next to the bloom light, make sure the distance can't exceed 2 meters.



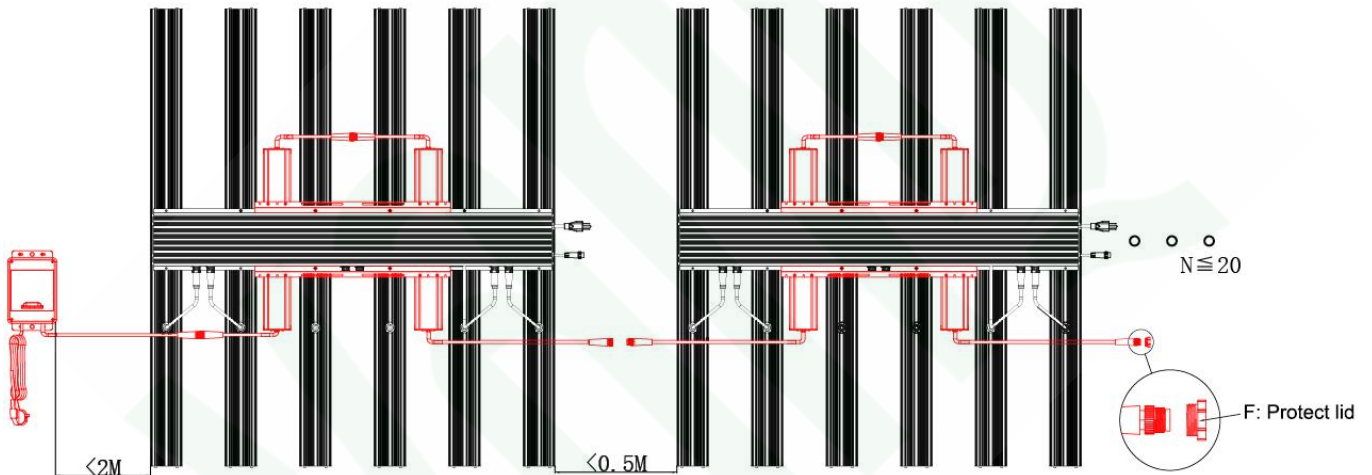
4. Cords connection

Connect the waterproof connectors of time switch and bloom light, and connect the waterproof connectors of bloom light and VQ-GLMX series lights, finally tighten the threaded cap. The waterproof cords should be connected above the VQ-GLMX series lights, avoiding to block the light, especially the cords will accelerate aging after be explored to UV light.

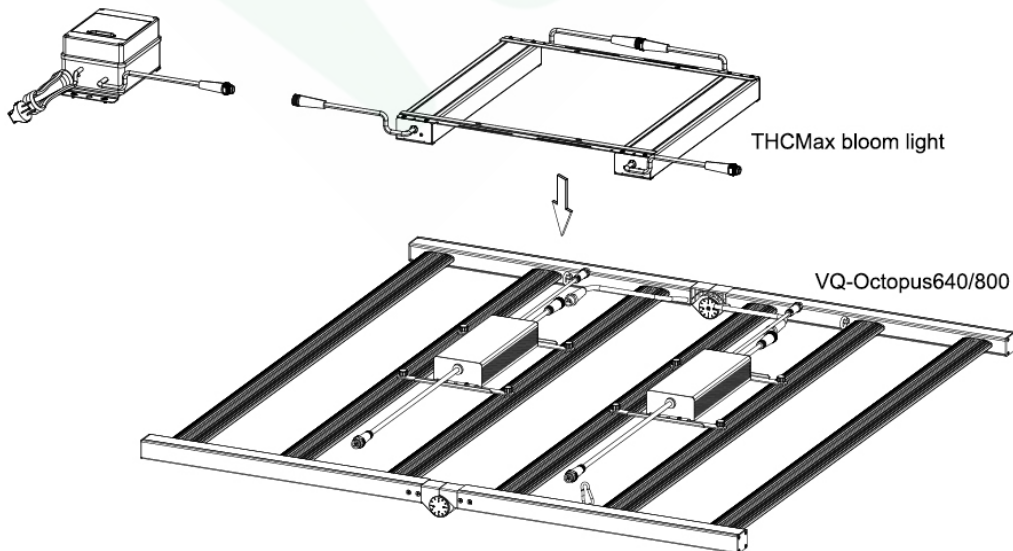


5. Connection to multi VQ-GLMX series lights

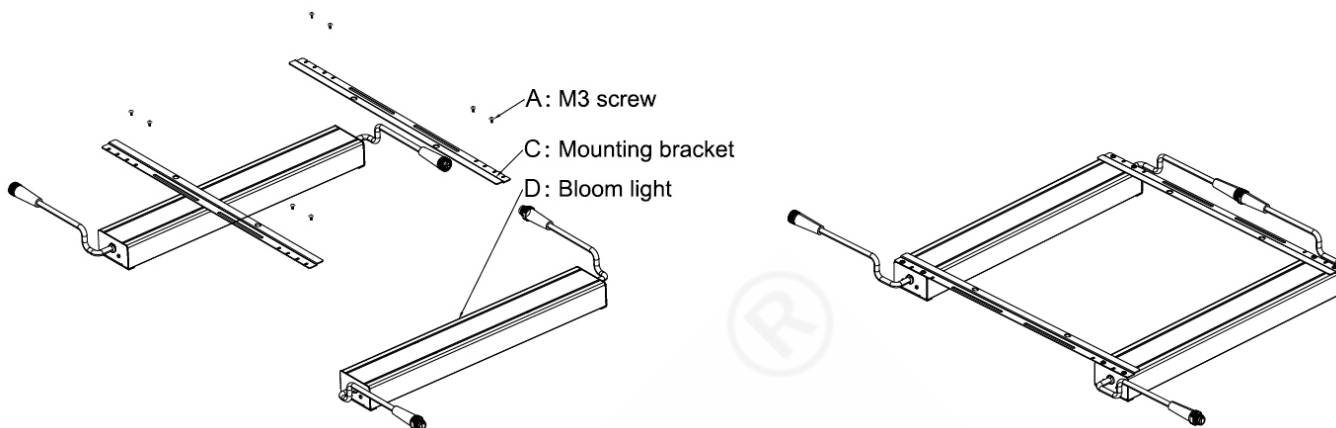
Each time switch can connect to max 20 units VQ-GLMX series lights. The distance of Time switch and main VQ-GLMX series light can't exceed 2 meters. The distance of VQ-GLMX series light to next one can't exceed 0.5 meters.



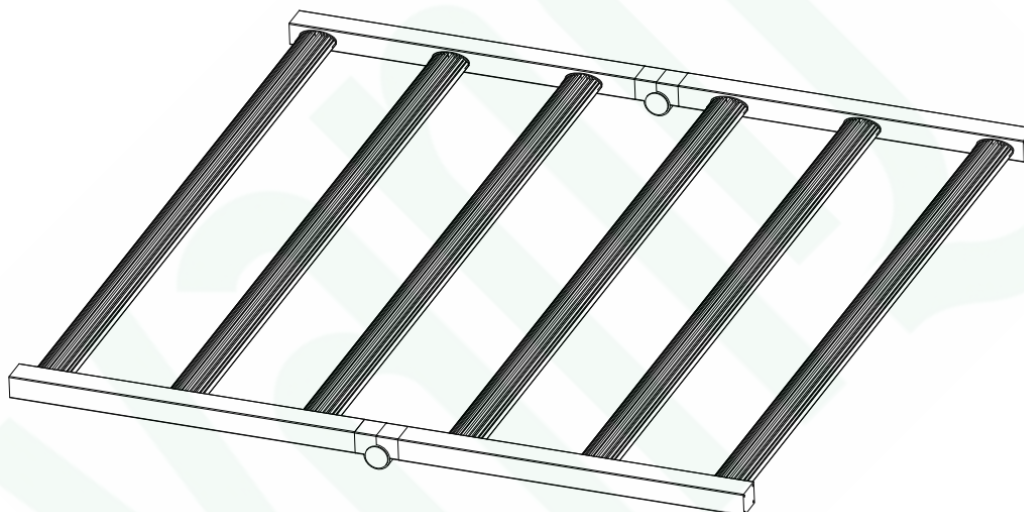
7.2 Installation guides to MG-Octopus640 and MG-Octopus80



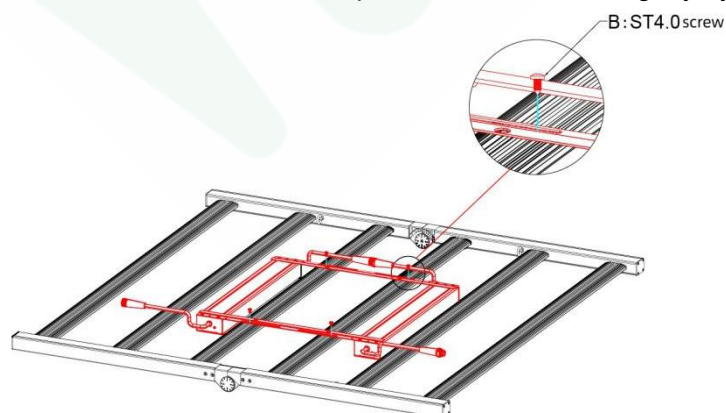
1. Install the THCMAX bloom light.



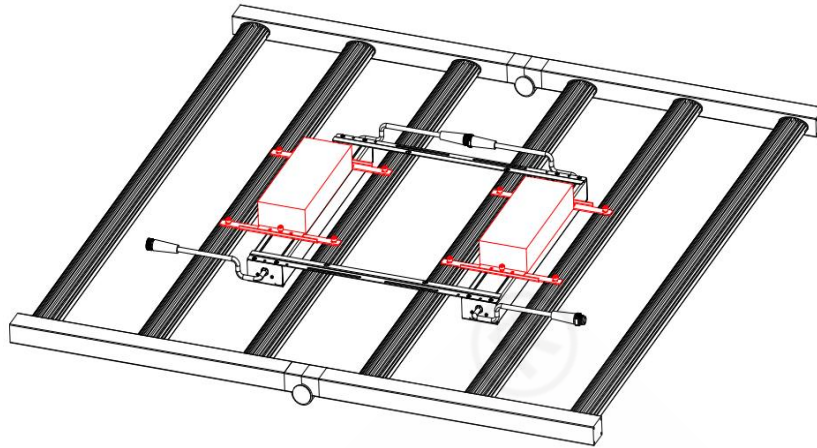
2. Disassemble the power supply from MG-Octopus640/800.



3. Put the Bloom light on the middle of the MG-Octopus640/800 and fix it tightly by screws.



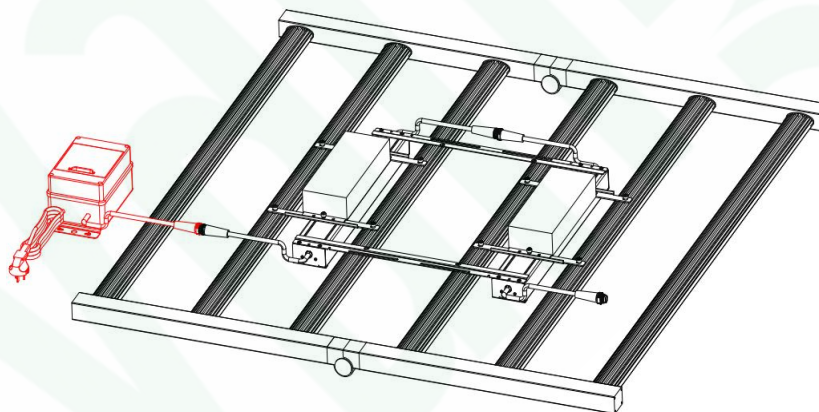
4. Re-assemble the power supply to MG-Octopus640/800, and fix it tightly by screws.



5. Installation time switch of THCMAX bloom light. Same to installation of time switch to VQ-GLMX series. Please refer to **3rd sector in Item 7.1.**

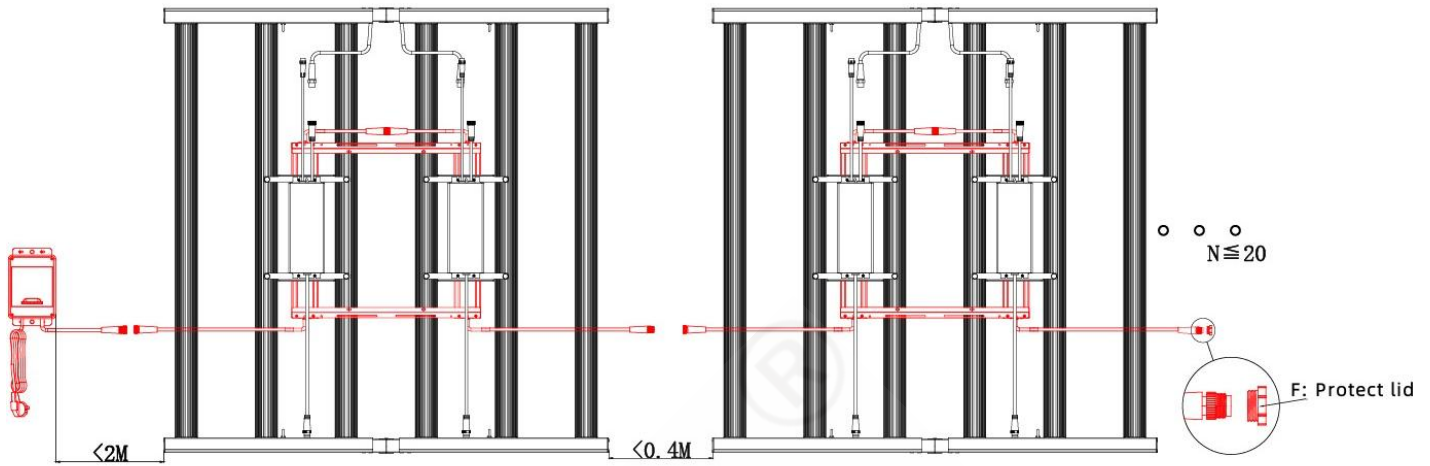
6. Cords connection

Connect the waterproof connectors of time switch and bloom light, and connect the waterproof connectors of bloom light and MG-Octopus640/800 lights, finally tighten the threaded cap. The waterproof cords should be connected above the MG-Octopus640/800 lights, avoiding to block the lights, especially the cords will accelerate aging after be explored to UV light.



7. Connection to multi MG-Octopus640/800 lights

Each time switch can connect to max 20 units MG-Octopus640/800 .The distance of Time switch and main MG-Octopus640/800 can't exceed 2 meters. The distance of MG-Octopus640/800 to next one can't exceed 0.4 meters.



8 Operation guides to time switch of THCMax bloom light



8.1 User manual


1. Chinese & English display and button names comparison

| | | | | | | | | | | | | |
|---------|--------|----|------|-----|-----|------|--------|-------|-------------|-------|----|----|
| Chinese | 星期 | | | | | | | 开 | 自动 | 关 | 上午 | 下午 |
| | 一 | 二 | 三 | 四 | 五 | 六 | 日 | | | | | |
| English | Mo | Tu | We | Th | Fri | Sa | Su | ON | Auto | OFF | AM | PM |
| Chinese | 取消/恢复 | | 校时 | 校分 | 校秒 | 校星期 | 定时(设定) | 时钟 | 手动/自动 | 复位 | | |
| English | Cancel | | Hour | Min | Sec | Week | Prog | Clock | ON/Auto/OFF | Reset | | |

2. Lock and unlock of time switch

Only time switch is under unlock status, it is available to operate.

1) Unlock: There is a “” icon displayed on the left bottom of the screen. Short press the “Cancel” key four times, “” icon disappears, the time switch is unlocked.

2) Lock: short press the “Cancel” key four times or no operation in 30 seconds, the time switch will recover to lock status, there is a “” icon displayed on the left bottom of the screen.

8.2 Time adjustment

Please make sure the displayed time on time switch is exact same to current time, please adjust it if the clock is incorrect.

Short press Cancel Key four times to unlock. Press “Hour”, “Min” and “Sec” keys to adjust time switch to current time and week.

8.3 Instructions

1、Operating Instructions

| Procedure | Key | Function | Note |
|-----------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------|
| ① | Press“Cancel”Key | Press the "Cancel" Key four times to unlock | |
| ② | Press“Prog”Key | Enter the Timer 1“ON” setting | Note 1 |
| ③ | Press“Hour”、“Min”Key | Set the specific ON time [hour, minute] | |
| ④ | Press“Week”Key | Set repeat cycle from 15 different “repeat modes” | Note 2 |
| ⑤ | Press“ON/Auto/OFF”Key | Set the Working Channels ON (CH1 Or CH2 Or Both) | Note 3 |
| ⑥ | Press“Prog”Key | Enter the Timer 1“OFF” setting | |
| ⑦ | Press“Hour”、“Min”Key | Set the specific OFF time [hour, minute] | |
| ⑧ | Press“Week”Key | Set repeat cycle from 15 different “repeat modes” (Should be same as Set of “ON”) | |
| ⑨ | Press“ON/Auto/OFF”Key | Set the Working Channels OFF (CH1 Or CH2 Or Both) | Note 3 |
| ⑩ | Repeat Operation ①-⑧ | Set Timer 2/Timers 3...Timers 16 ON/OFF Time (If No Need,Disable the Timer by setting ON- /OFF - -) | Note 4 |
| ⑪ | Press“Clock”Key | Finish Timers Setting, Back to Start-up Screen | |
| ⑫ | Press“ON/Auto/OFF”Key | Press multiple times to switch working modes (Auto) Timer Enabled/(ON)Timers Disable With Lamps ON or Timers Disabled With Lamps OFF | Note 5 |

Note: **Note 1** During the operation of the Timer Setting, the timers not work.

Note 2 Press“Week”Key multiple times, you can change different repeat modes.

Note 3 Press“ON/Auto/OFF”Key, Selet the Working Channels (CH1 Or CH2 Or Both).

Note 4

- ◆ Press “Cancel” Key To Disable the Timer by setting ON- /OFF - -(Not 00:00),Press“Cancel”Key again to enable the Timer.
- ◆ Inspection: Multiple press “Prog” Keys to confirm all setting are correct.
- ◆ Modification: If any timer is wrong, by pressing “prog” Key to locate the wrong timer,press “Cancel” key to clear the setting, reset the timer following the instruction.
- ◆ If all correct,Press“Clock”Key,back to Start-up Screen.

Note 5 Timers Enabled: Unlock the time switch,press “ON/Auto/OFF”Key multiple times to change modes, If under “Auto” mode, the timers will work normally as setting, if under “ON”mode,both UV and FR lamps will be on with all timers disabled, if under “OFF” mode,both UV and FR lamps will be off with all Timers disabled.

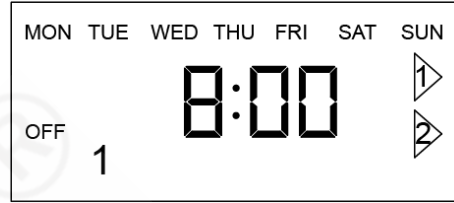
2、 Examples

Example 1: THCMax Bloom Light Far red and UV should be ON during 19:00-08:00 everyday.

- 1) Follow procedure ①~⑤, make sure Timer 1 setting as below figure 1a show.
- 2) Follow procedure ⑥~⑨, make sure Timer 1 setting as below figure 1b show.



1a



1b

- 3) Follow procedure ⑩, disable Timers2, Timers3...Timers 16.
- 4) Multiple press "Prog" Keys to confirm all setting are correct. If not correct, please repeat 1)-3).
- 5) Follow procedure ⑪, Finish Timers Setting, Back to Start-up Scree.
- 6) Follow procedure ⑫, Make sue the switch under "AUTO" mode.

Example 2: THCMax Bloom Light Far red should be ON during 19:00-08:00 everyday, and UV should be ON during 09:30-16:30 everyday.

- 1) Follow procedure ①~⑨, make sure Timer 1 setting as below figure 2a,2b show; Timer 2 setting as below figure 3a,3b show.
- 2) Follow procedure ⑩, disable Timers 3, Timers 4...Timers 16.



2a



2b



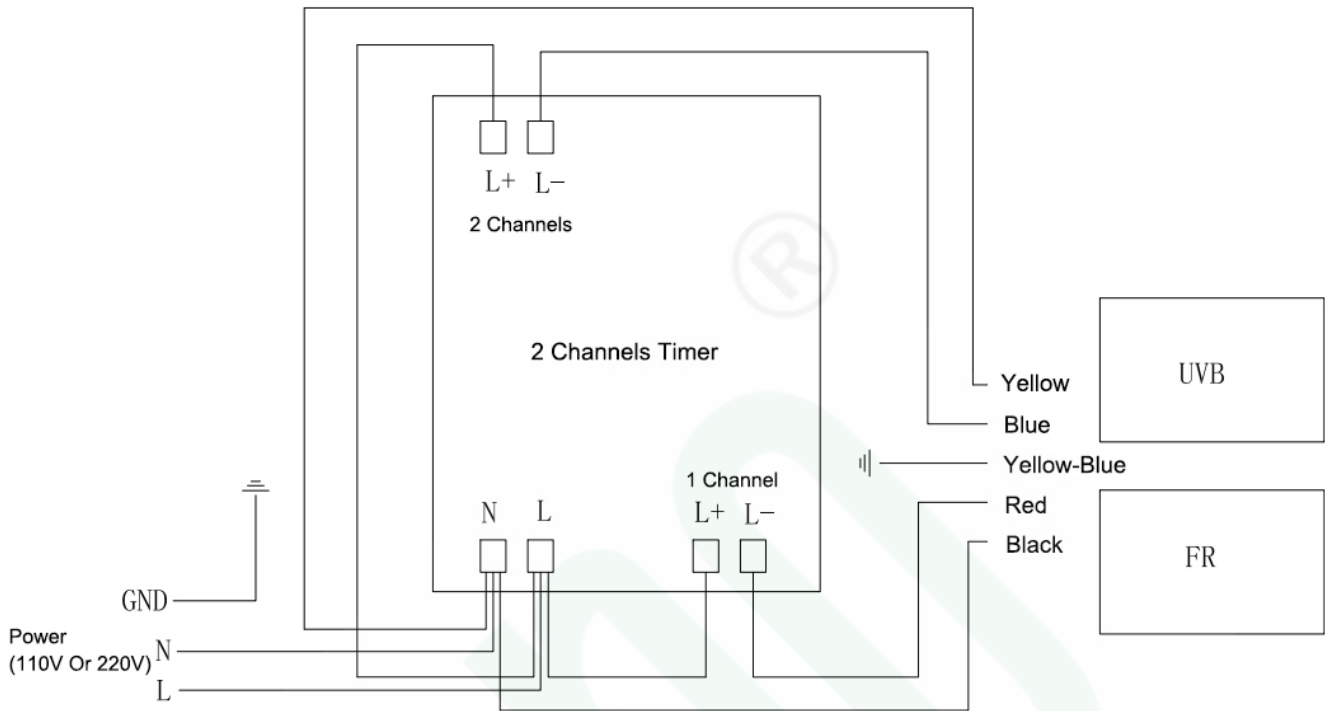
3a



3b

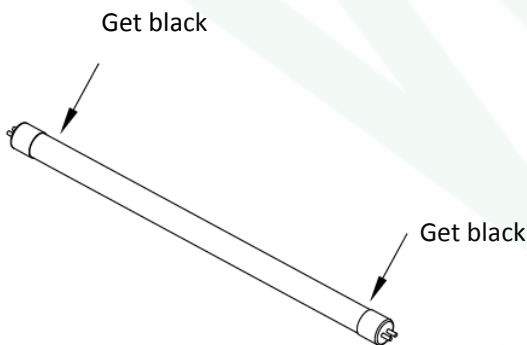
- 3) Follow procedure ⑪, Finish Timers Setting, Back to Start-up Scree
- 4) Follow procedure ⑫, Make sue the switch under "AUTO" mode.

8.4 Time Switch Internal Circuit



9 THCMax Bloom Light Special Instructions for UV Light Sources

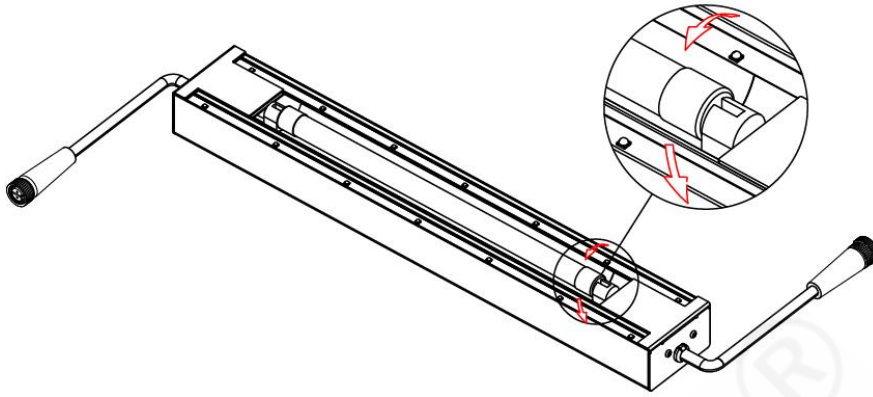
1、 After the lamp is used for a short period of time, the positions indicated by the arrows at both ends of the ultraviolet light source T5 fluorescent lamp will become slightly black. As the use time increases, the black will become thicker, which is a normal phenomenon. The light radiation of the lamp tube will drop slightly, but the lamp can still be used normally.



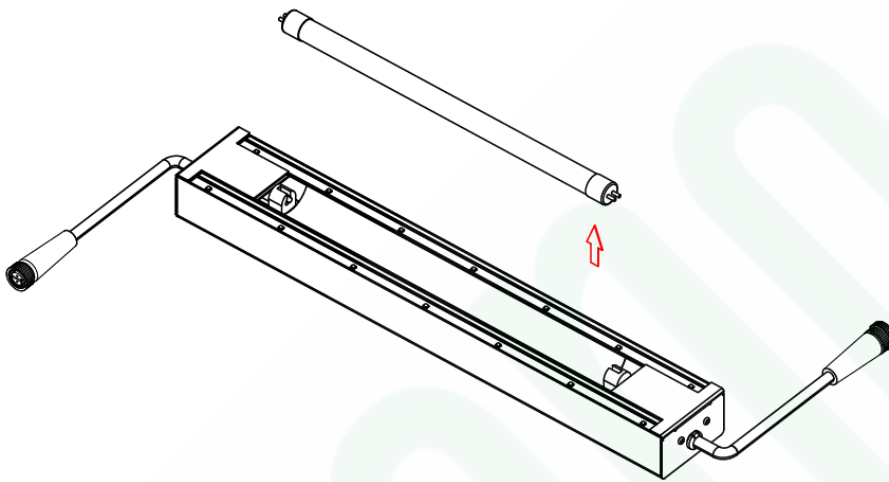
2、 Theoretical service life of T5 fluorescent lamp is 3000 hours, the more times of switching during use, the shorter the service life of the lamp tube. Therefore, the actual service life of the lamp is related to the time interval of the user's timing switch, and the actual service life will be less than the theoretical service life.

3、 Since the actual service life of T5 fluorescent tubes is too short compared with other components of lamps, customers can spare more T5 fluorescent tubes for replacement according to the situation.

The replacement method is shown in the figure below.



Step 1: Grasp both ends of the lamp tube with fingers and rotate vigorously, so that the lamp foot of the lamp tube rotates to the notch of the lamp holder.



Step 2: Grasp the lamp tube with both hands and fingers and pull out the lamp tube upwards.

10 THC Max Bloom Light -UVB band light radiation distribution test

Unit: $\mu\text{W}/\text{cm}^2$

Height=45cm

| | | | | |
|----|----|-----|----|----|
| 17 | 34 | 34 | 35 | 16 |
| 23 | 76 | 109 | 83 | 28 |
| 36 | 95 | 132 | 92 | 30 |
| 24 | 78 | 104 | 80 | 27 |
| 16 | 37 | 42 | 36 | 19 |

120cm

120cm

Height=60cm

| | | | | |
|----|----|----|----|----|
| 12 | 21 | 35 | 22 | 13 |
| 26 | 50 | 67 | 52 | 27 |
| 34 | 67 | 80 | 67 | 34 |
| 25 | 45 | 65 | 52 | 28 |
| 12 | 18 | 36 | 20 | 10 |

120cm

120cm

11 USE, Storage and Disposal

11.1 Precautions for use

- 1、 This lamp contains UV light, and the human body cannot be exposed to the irradiation range for a long time;
- 2、 When the lamp is working, do not touch the lamp directly; the temperature of the lamp will be high after working for a period of time, and touching the lamp directly may cause burns;
- 3、 Regularly check the wires of lamps and time switch, and do not use them if they are damaged;
- 4、 When the lamps or time switch are damaged, do not disassemble and repair by yourself. There is high voltage inside ; VANQ company will no longer provide warranty services after repairs;
- 5、 Do not modify lamps or time switch by yourself. There is a high voltage inside, VANQ company will no longer provide warranty services after modification;
- 6、 Do not use wet towels or any chemical reagents to clean lamps and time switch, and gently wipe with a dry duster.

11.2 Storage, Disposal

- 1、 Store in a dry and clean environment, the ambient temperature is -20~75°C;
- 2、 Products can not be disposed as unsorted municipal waste, must be collected separately for disposal, recycling and environmental friendly.

12 Warranty Services

- 1、 The warranty period is one year. During the warranty period, VANQ will provide free warranty service for any product quality problem. Warranty services include replacement of new products, replacement of product parts, and repair of defective products. The method to be adopted is at the discretion of VANQ. If repair is required, please send the product and invoice back to VANQ. Even VANQ provide warranty service for the product, the remaining warranty period is still one year from the date of purchase of the original product
- 2、 Warranty services are not provided in the following cases
 - 1) Product damage caused by more than 20 lamps connected to one time switch.
 - 2) Product damage caused by violation of "6.2 Requirements of working environment".
 - 3) Product damage caused by violating 4, 5, 6 three points Of "11.1 Precautions for use" .