Orphek
Aquarium LED Lighting

HOW
TO
CHANGE
THE WIFI MODULE

1

Remove power from the light.
You can either unplug the power cord or disconnect the quick connector going to the light.
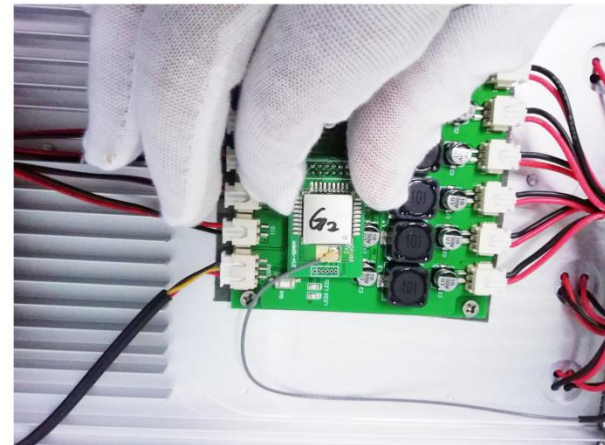
2

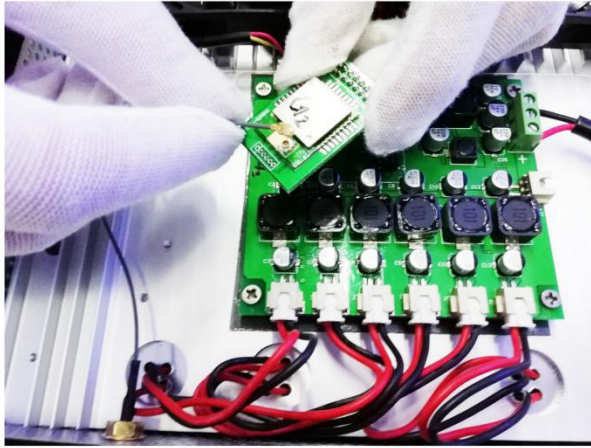Remove the eight nuts on the black acrylic fan panel and carefully remove the acrylic panel.

3

Dislocate the wifi module
(this is the device the antenna wire plugs into) and carefully pull up on the antenna wire clip.
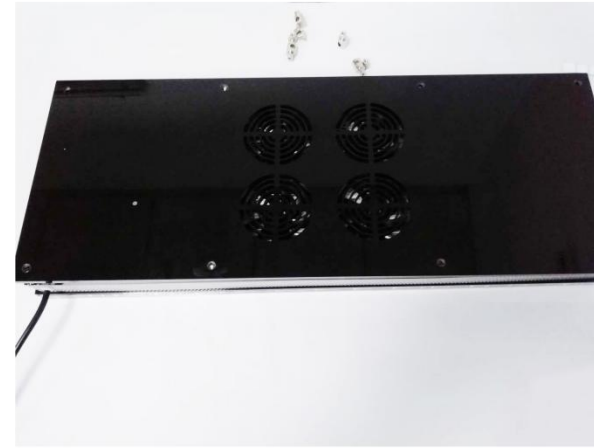This is similar to a snap button.

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4

Pull antenna wire straight up on the wifi module.

7

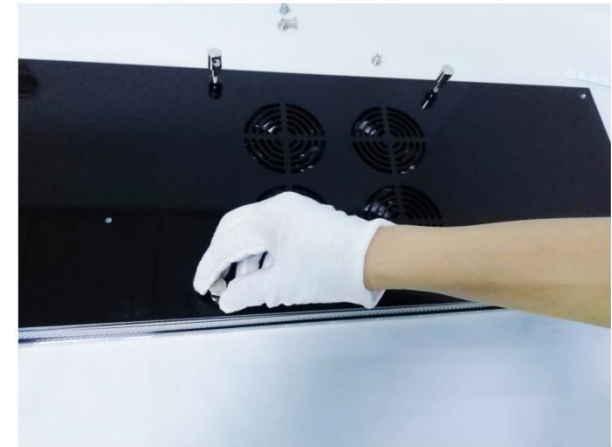Place the acrylic fan panel into the eight screws.
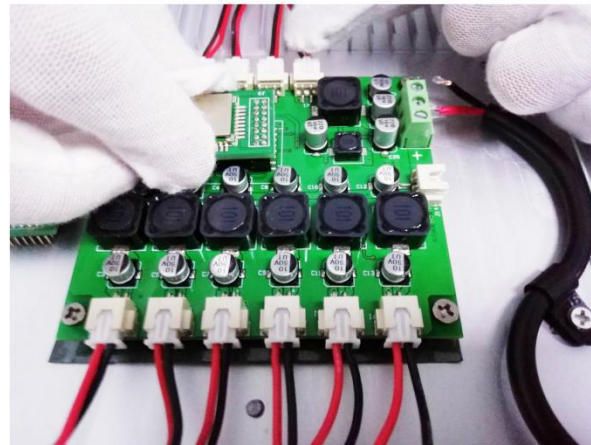
5

Snap the antenna clip on the new wifi module.

8

Thread the nuts onto the screws and hand tighten only, do not use force.

6

Insert the wifi module into the receptacle making sure all pins are straight and aligned with the receptacle.

9

You can now power the light up and connect to your gateway.

![Orphek Aquarium LED Lighting logo]

HOW
TO
CHANGE
THE PC CARD

1

Remove power from the light.
You can either unplug the power cord
or disconnect the quick connector
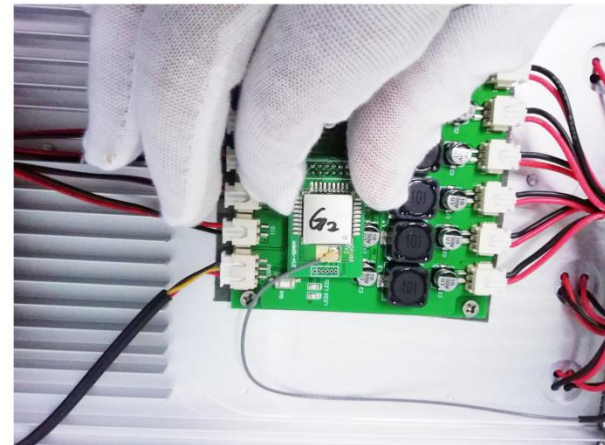going to the light.

2

Remove the eight nuts on the black
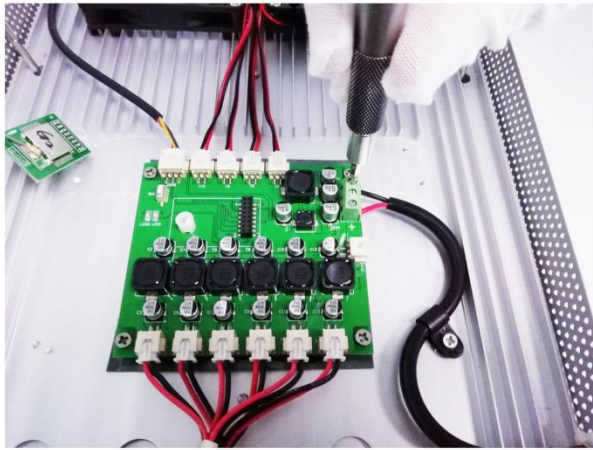acrylic fan panel and carefully remove
the acrylic panel.

3

Remove the wifi module from the
circuit board by pulling straight up.
The wifi module is the device the
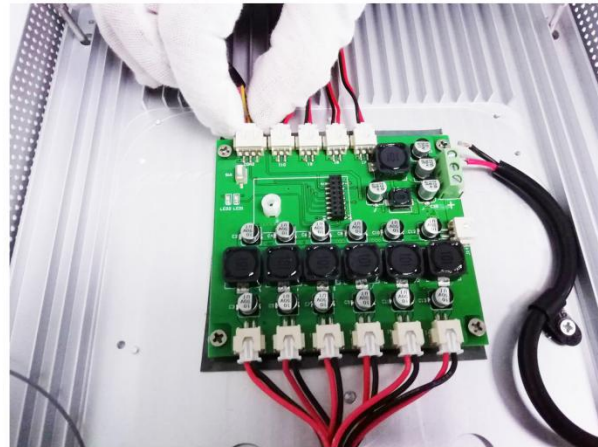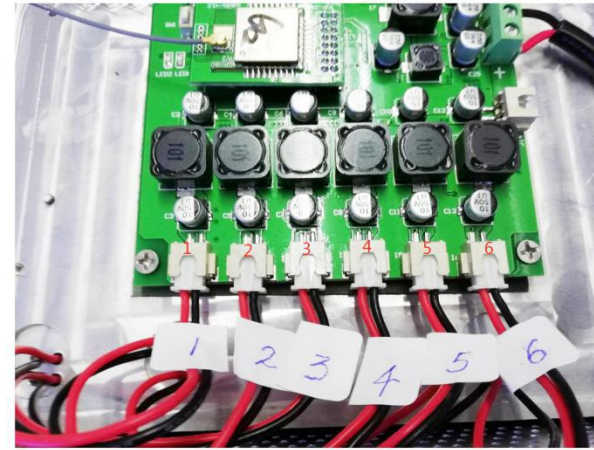antenna wire connects to.

4

Remove the power wires from the PC card.

7

Remove the six connectors going to the LEDs and mark each one so you know where it will plug into on the new card later.
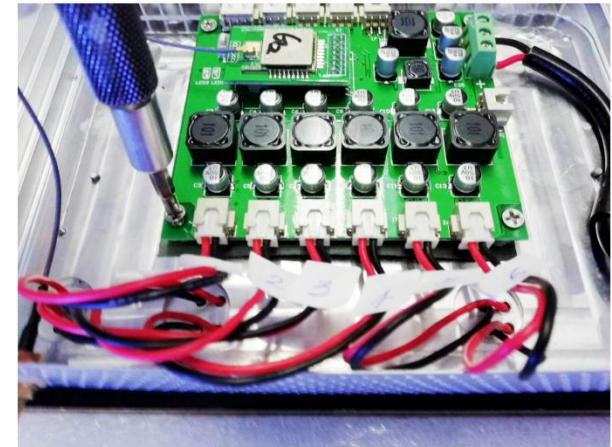

5

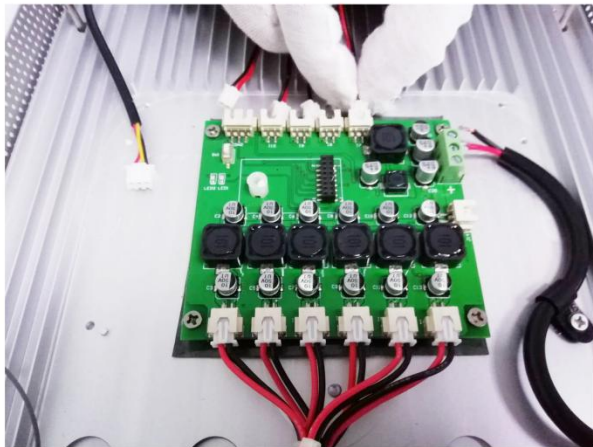Remove the temperature sensor connector from the PC card.

8

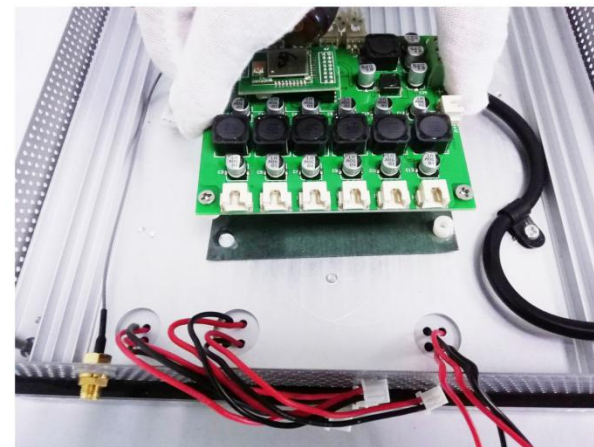Remove the four screws holding the PC card to the frame.

6

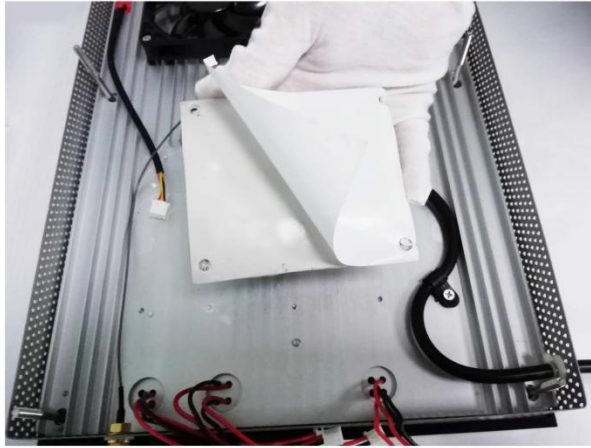Remove all four fan connectors from the PC card.

9

Remove the PC card.

10

Lay the new insulating silicone pad so it lines up with the four threads holding the screws.

11

Place the new PC card on the frame so it lines up with the four holes.

12

Carefully screw the new PC card to the frame.
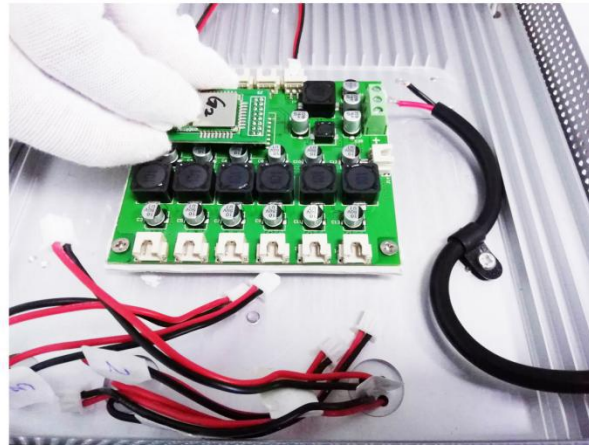
13

Insert the wifi module into the wifi receptacle on the new card.

14

Connect the temperature sensor.

15

Connect all four fan connectors to the PC card.
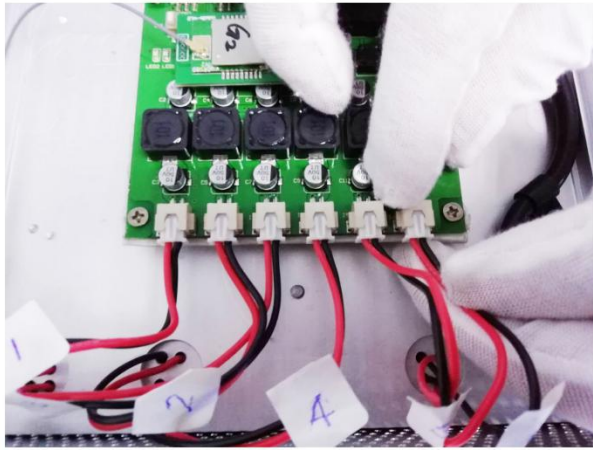
16

Put the six LED connectors into their correct receptacles.
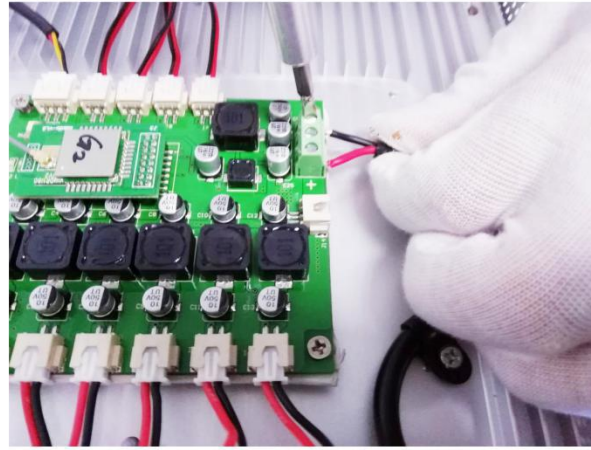
17

Install the power wires onto the terminal strip carefully observing polarity. Red wire to + and black wire to -.

18

Install the acrylic panel onto the eight screws and hand tighten only.

19

You can now apply power to the light and connect to your gateway.

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HOW
TO
CHANGE
THE PCB of LEDs

1

Remove power from the light.
You can either unplug the power cord or disconnect the quick connector going to the light.

2

Remove the eight nuts on the black acrylic fan panel and carefully remove the acrylic panel.

3

Remove the six connectors going to the LEDs and mark each one so you know which of wire from new PCB of LEDs will connect to socket of control board later.
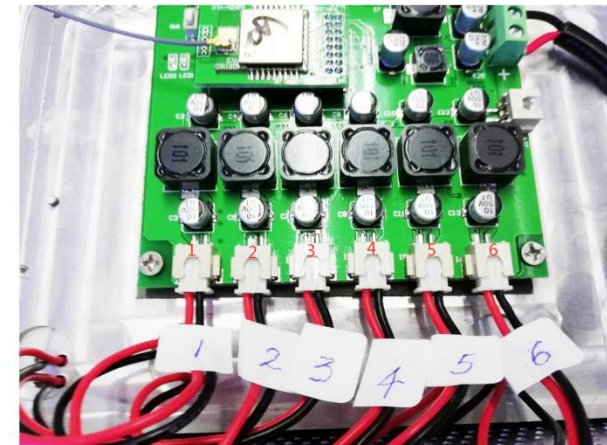
4

Disconnect the power supply cord to PCB of LEDs.

5-2

5

Let the unit face up, disassemble the acrylic.

6

Take away the silicone circle, remember to put it back to original location when assemble unit later.

5-1

7

Disassemble the lens.

8

Unscrew the old PCB
of LEDs.

9

Change new PCB, mark the
wire of PCB with same No.
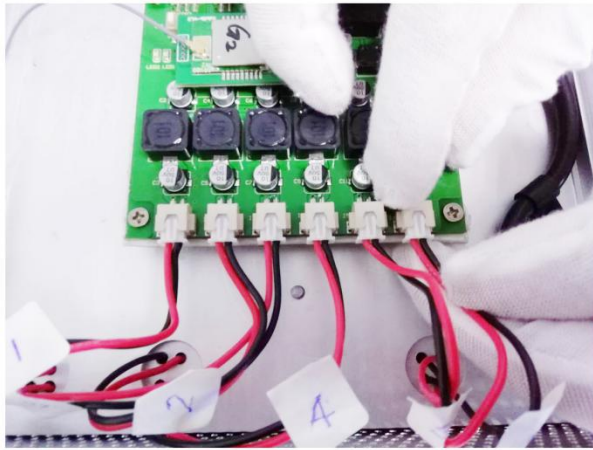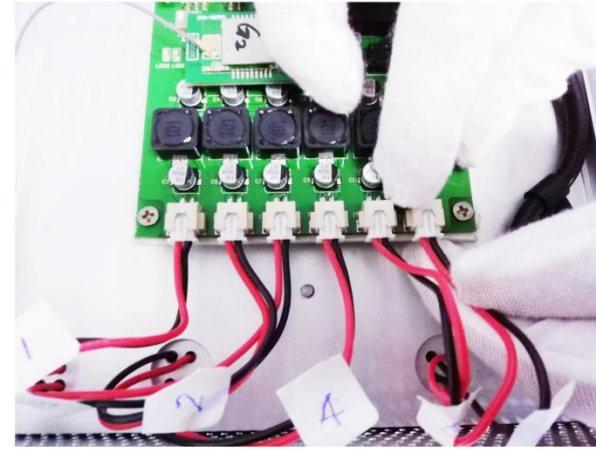like old PCB.
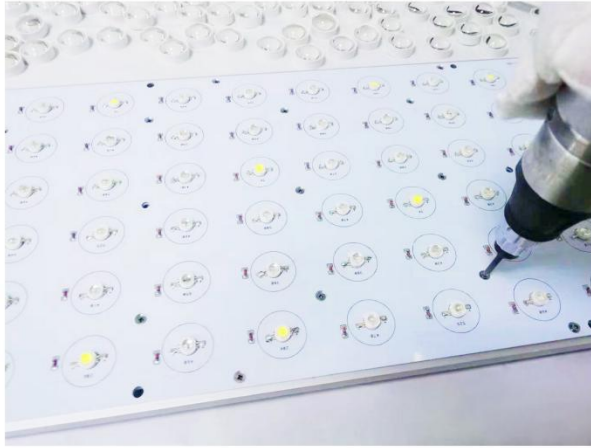
10

Assemble the PCB, lens,
silicone circle, acrylic.

11

Put the six LED
connectors into their
correct receptacles.

12

Install the acrylic
panel onto the eight
screws and hand
tighten only.

13

You can now apply power to the
light and connect to your gateway.

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Troubleshooting
Channel Malfunction

When a colour channel is not working we need to check whether there is a problem with the PC card or the wiring to the PCB.

If the entire channel is not illuminating for example: Channel 3 then please carry out the following test:
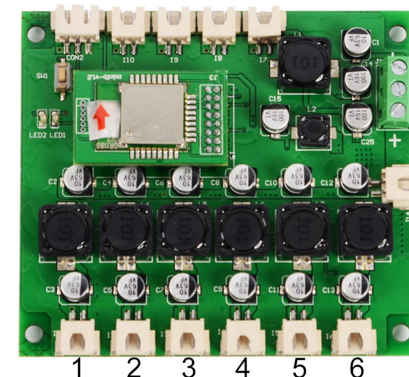
1

exchange channel 3 (wiring location number 5)
with channel 4 (wiring location number 6)
to test the connection.
See image right for visual explanation:

If channel 3 now illuminates, then the problem
lies with the PC card and this should be replaced.

If channel 3 still does not illuminate, then the
second step is to check the wiring on the PCB.

1   2   3   4   5   6

Channel 1-No.1&3   Channel 3-No.5
Channel 2-No.2&4   Channel 4-No.6

2

Channel 1 ———
Channel 2 ———
Channel 3 ———
Channel 4 ———

On the PCB, there are 6 soldered
wires named:
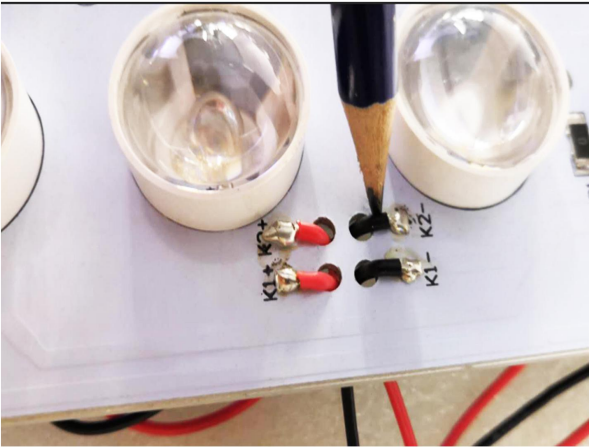K1, K2, K3, K4, K5 and K6.

K3+/- & K5+/-   belongs to channel 1
K4+/- & K6+/-   belongs to channel 2
K2+/-   belongs to channel 3
K1+/-   belongs to channel 4
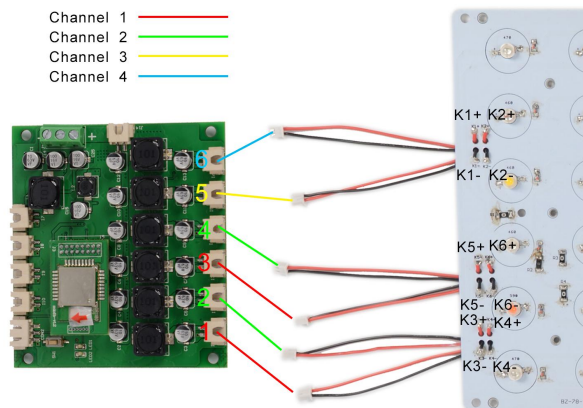
3

Check the wire of K2+/2- to see if it is connected and soldered fully.

Note: if channel 3 and channel 4 both are malfunctioning then please also check to see if there is any bridge between the soldering point of K1 and K2, same testing if other 2 channels are not working

4

Check the leds in channel 3 one by one:

A.Go to Quick and Dim all channels to 10%
B.Use a wire (PVC insulated wire) to jumper across the leds one by one
(Wearing plastic gloves in testing is better if operator is not trained.
In test make sure hand is dry and wearing shoes)
C.when using the jumper across the led and the other leds in channel 3 all light up, then it is the led that is causing the problem.
D.Change the damaged led and channel 3 will work again.

See right picture example of how to use a wire to jumper across the led.

These steps can be repeated if you have any further problem with other channel.