

## USB 5V Module 1

### Introduction

The USB LED Strip module uses a voltage booster to convert 5V from a USB supply into 12V, suitable for driving up to 20 12V LEDs in a pre-manufactured strip. The kit is designed also to be controllable from a number of microcontrollers such as Arduino, PICAXE and Genie, it has a single enable connection allow microcontroller operation of the module

- 5V to 12V booster technology
- Uses a USB power connection
- Has provision for an on/off switch if required
- Has a single channel which can be microcontroller controlled
- The module can control up to 20 LEDs
- 18mm x 33mm



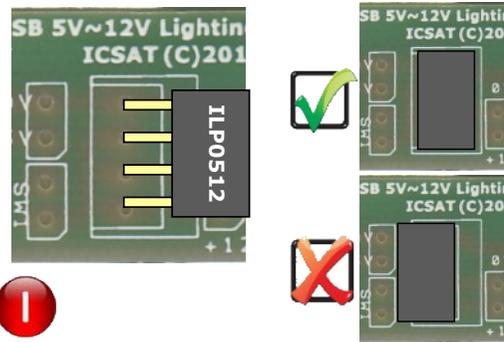
### IMPORTANT

If you don't intend to make your module controlled by a microcontroller then follow steps 1 to 7.

Otherwise follow steps 1 to 9, on the **reverse side** for a controlled version.

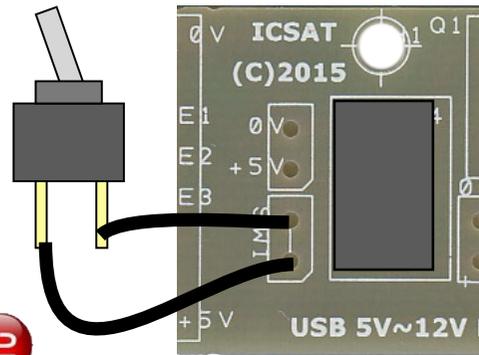
## Assembling your USB 5V Module 1

Solder the 5V booster pack into place, ensure it fits **in the footprint spacing**, note the **off centred pins**.



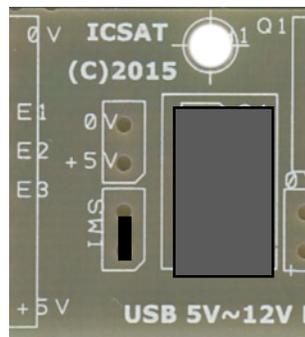
1

Add a switch to the position marked **SW1**, if **not** use a small wire link to make the connection **permanently on**.



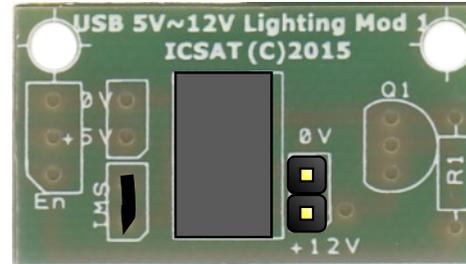
2

View with **NO** switch version, using a wire link



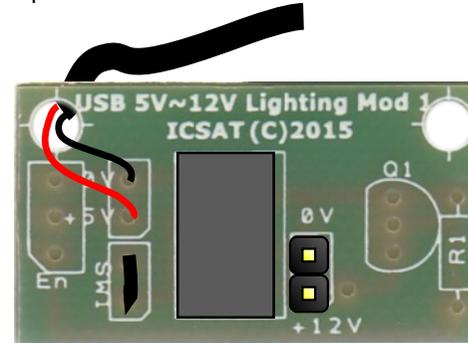
3

Solder in place the 2-pin headers which are used to connect the LED strips to.



4

Solder the USB power lead to the USB LED Strip module



5

You now can connect your LED strip to the completed module, using the plugin connectors



6

The plugin connector is soldered on to the LED strip: **RED** to the +V connection and **BLACK** to the 0V connection



7

Now with your LED strip connected you can plug it into a USB socket to power-up your LED strip.

**Remember** to use your switch if you have fitted one!



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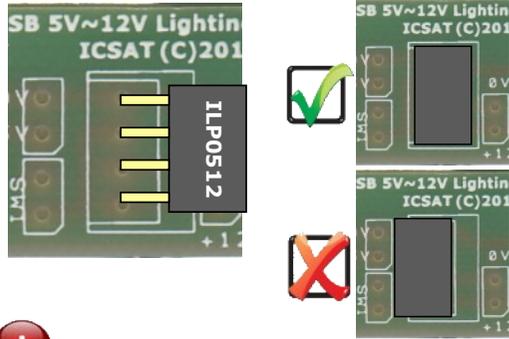
[www.icsat.co.uk](http://www.icsat.co.uk)

SKU EK0110

USB 5V Module 1 Manual

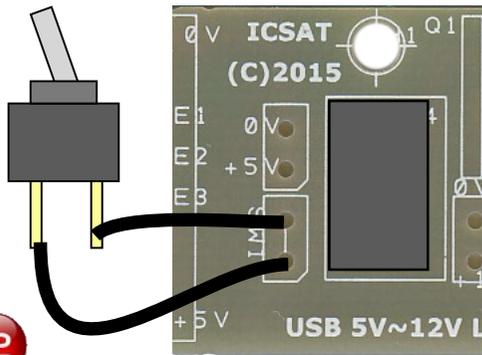
Ver. 1.00

Solder the 5V booster pack into place, ensure it fits **in the footprint spacing**, note the **off centred pins**.



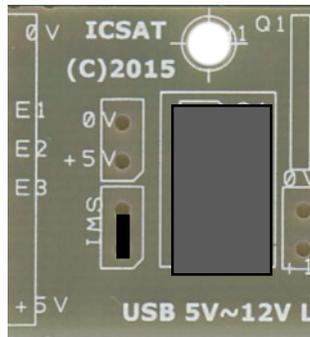
1

Add a switch to the position marked **SW1**, if **not** use a small wire link to make the connection **permanently on**.



2

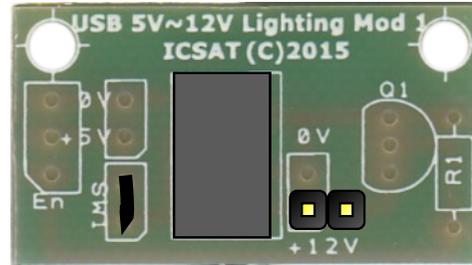
View with **NO** switch version, using a wire link



3

## Assembling your USB 5V Module 1 Controlled version

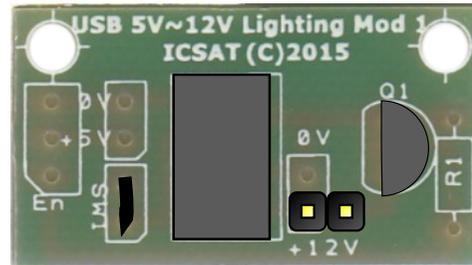
Solder in place the 2-pin headers which are used to connect the LED strips to.



4

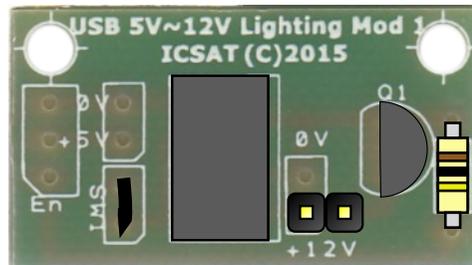
**Note** the position of the 2-pin header

Now solder in place the ZVN4206A MOS-FET transistor, note the orientation



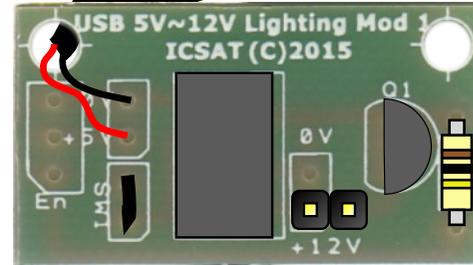
5

Now you can solder in place R1, 10K resistor in the place marked.



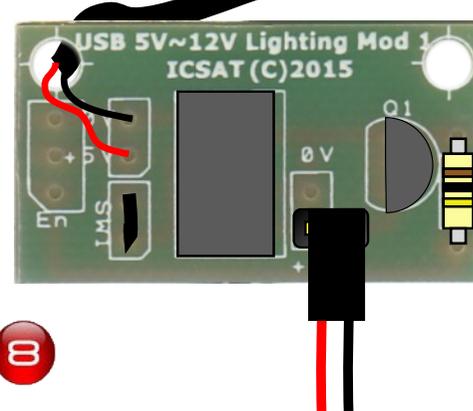
6

Solder the USB power lead to the USB LED Strip module



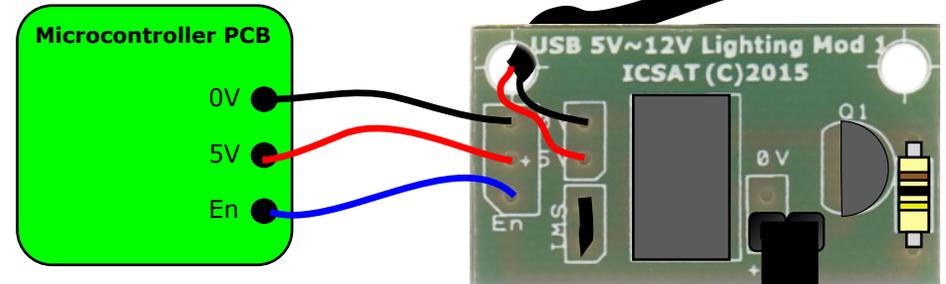
7

You now can connect your LED strip to the completed module, using the plugin connectors



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The PCB has 3 connections that allow you to add or connect a microcontroller.



The enable connection is an output pin, high turns ON the LED strip, low turns it OFF. The pin can use PWM to control the brightness of the LEDs. The 5V connection is **ONLY** needed if you are powering **BOTH** boards from the same USB connection



Remember to check all connections before powering up the USB 5V Module 1, this is especially true if you are using a microcontroller board as well

**Remember** to use your switch if you have fitted one!



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## Support

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