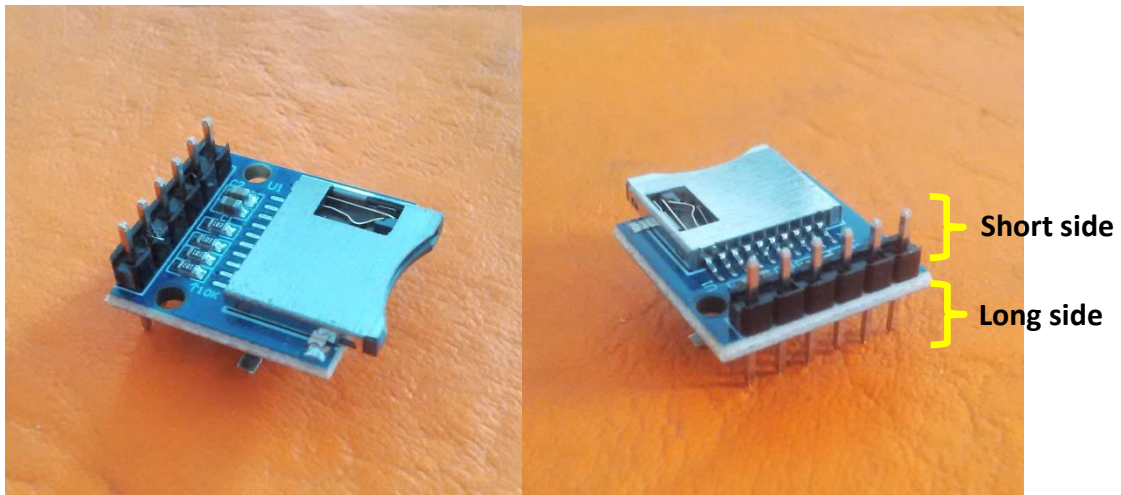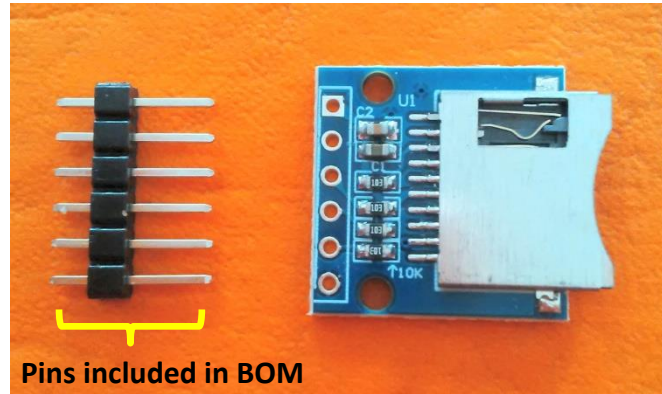# Lite3DP S1: assembly details and instructions
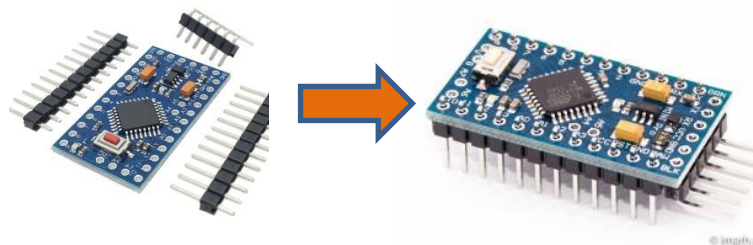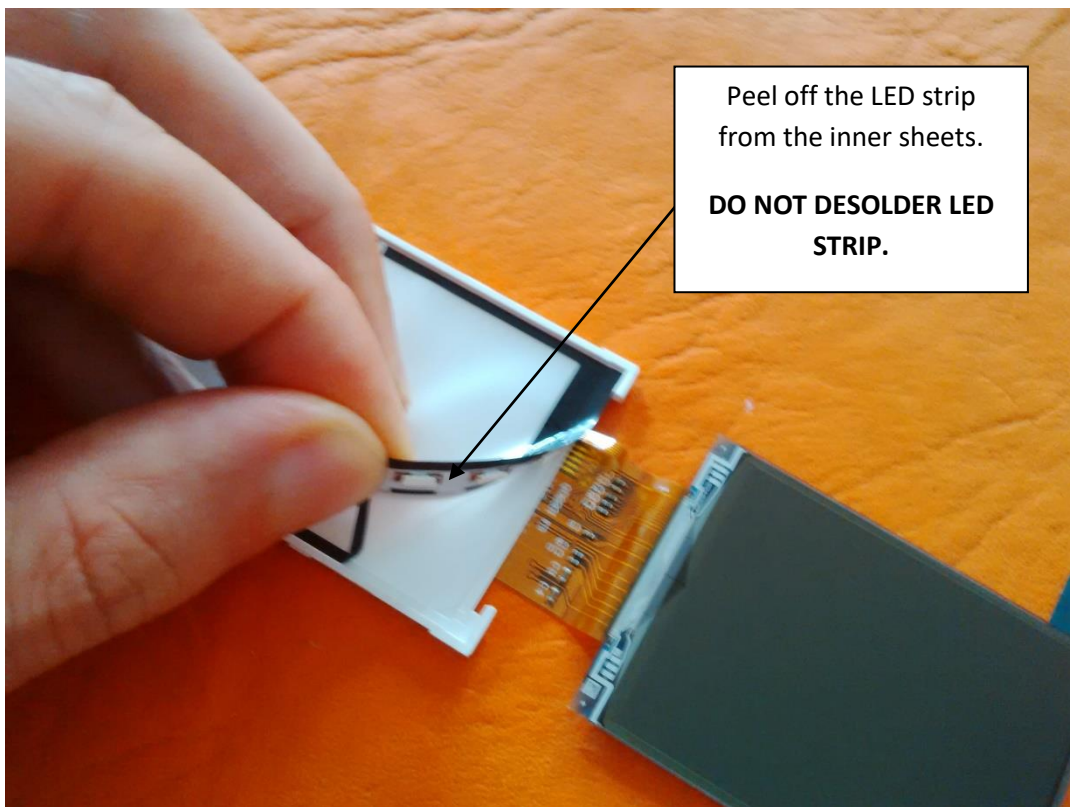
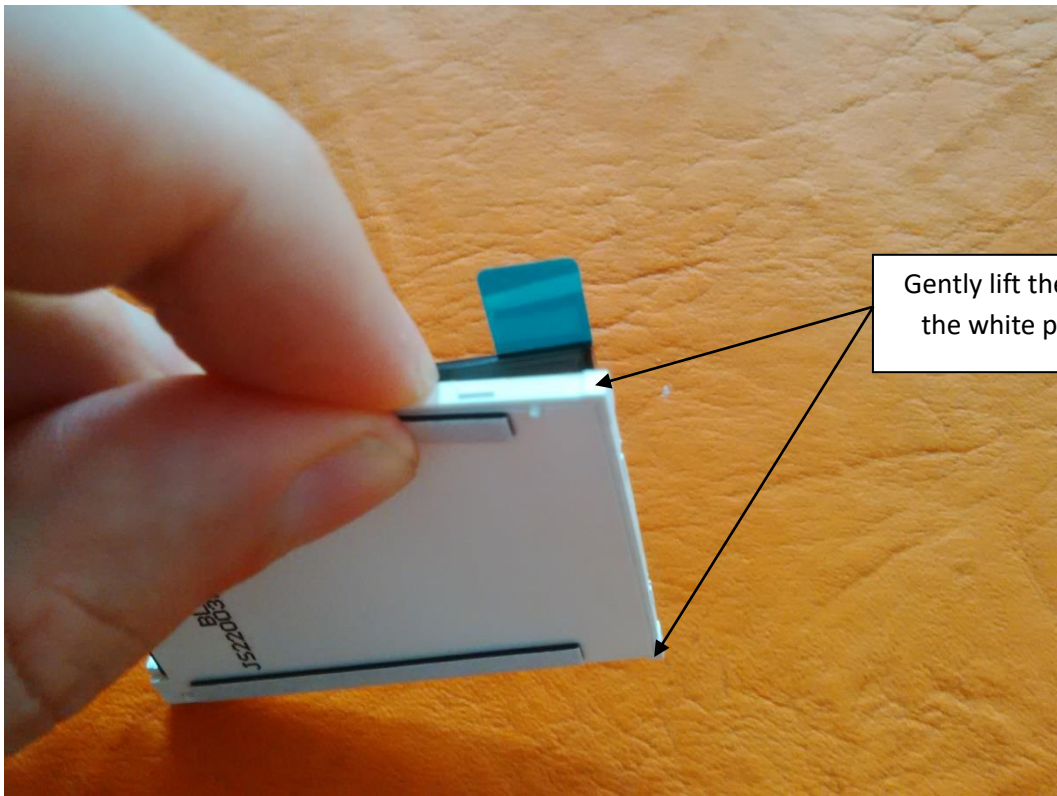**Solder 6 pins to micro SD module:**
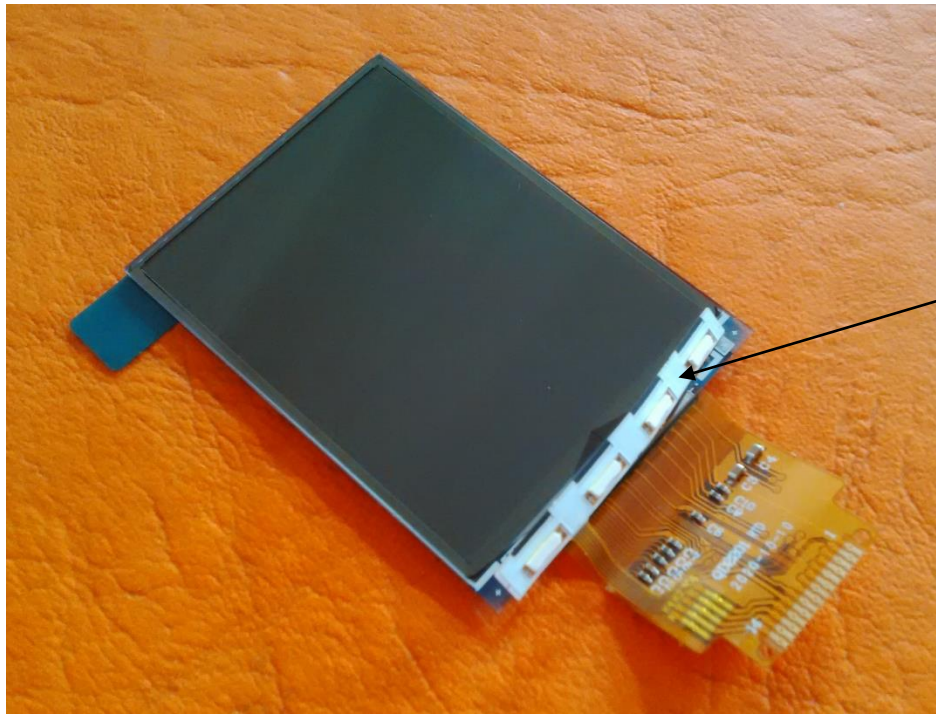
**Pins included in BOM**

**Short side**

**Long side**

**Solder all 30 pins to Arduino Pro Mini 5V 16 MHz**

## Removing the LCD backlight case

Gently lift the corners of the white plastic case

Peel off the LED strip from the inner sheets.

**DO NOT DESOLDER LED STRIP.**
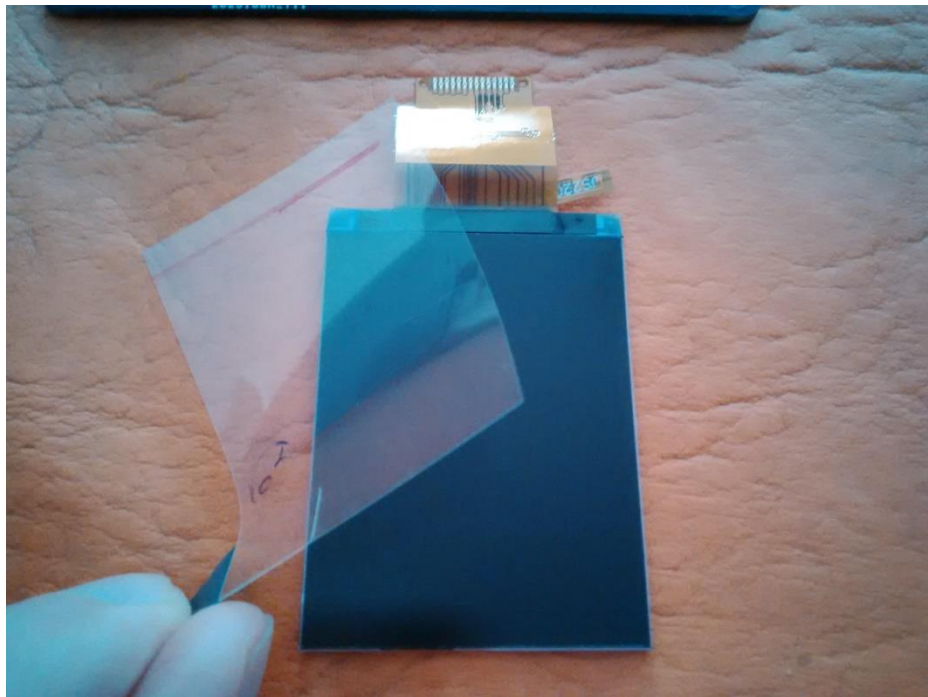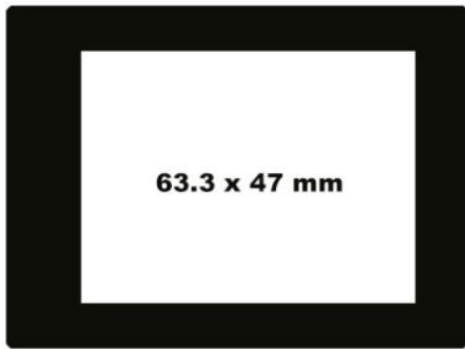
LED strip is included in design



Remove the protective film. Please wear gloves to **avoid leaving fingerprint marks** on the LCD.

After removing the protective film, the LCD is ready to be soldered on PCB.
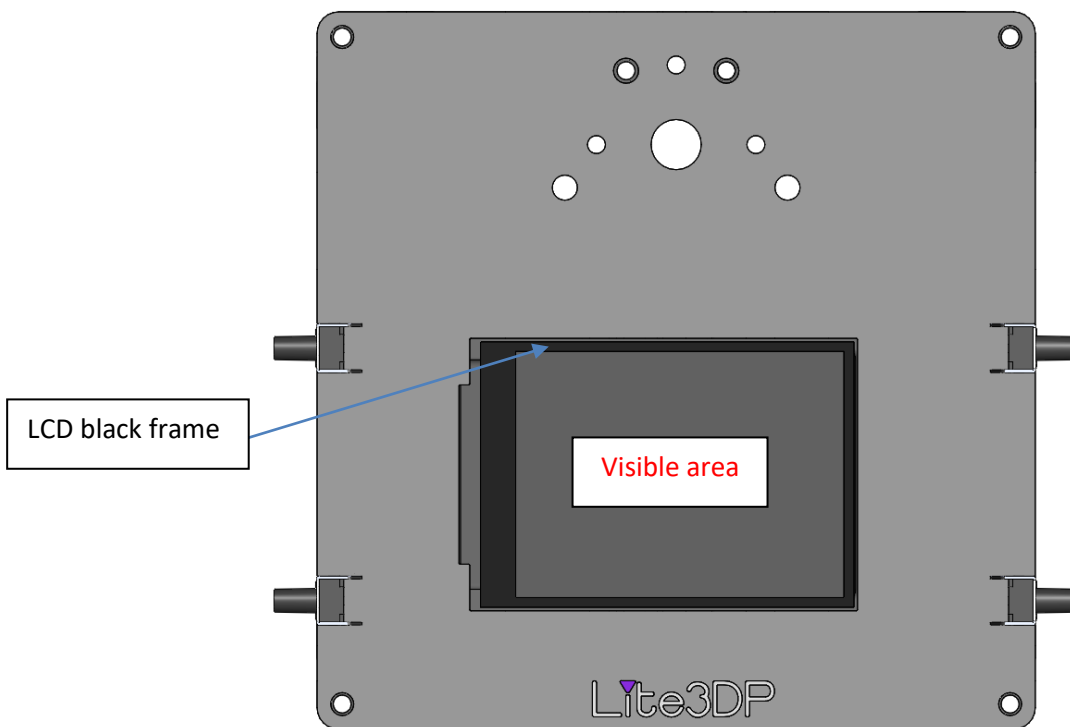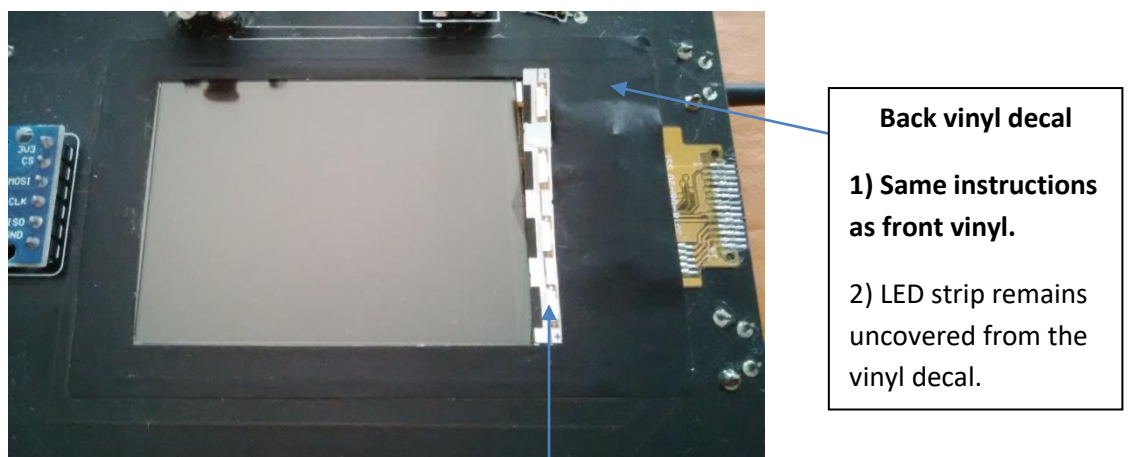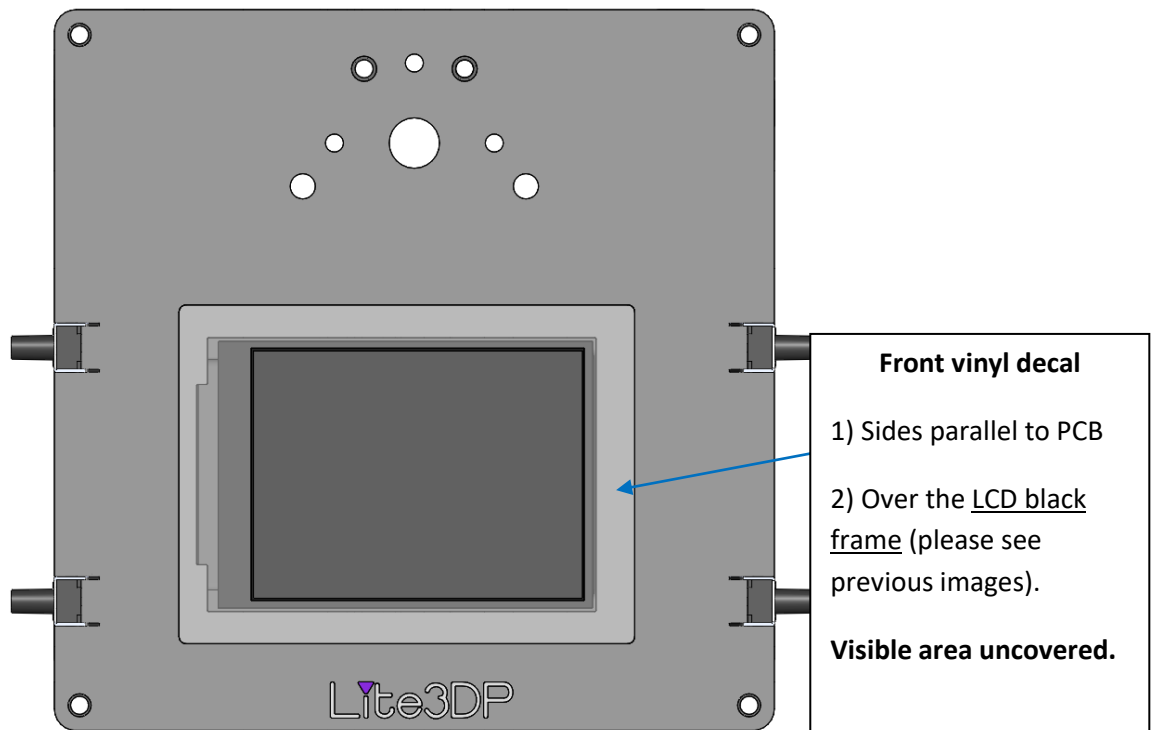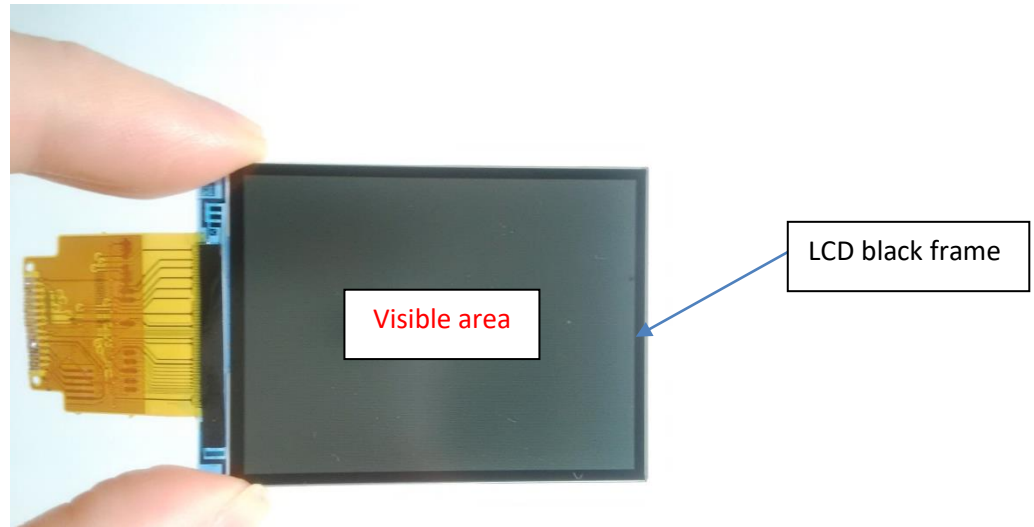
**Vinyl Decal Adhesion**

63.3 x 47 mm

73 x 47 mm

**Front vinyl decal**

**Back vinyl decal**

LCD black frame

Visible area

Lite3DP

LCD black frame

Visible area



**Front vinyl decal**

1) Sides parallel to PCB

2) Over the LCD black frame (please see previous images).

**Visible area uncovered.**

Lite3DP



**Back vinyl decal**

**1) Same instructions as front vinyl.**

2) LED strip remains uncovered from the vinyl decal.
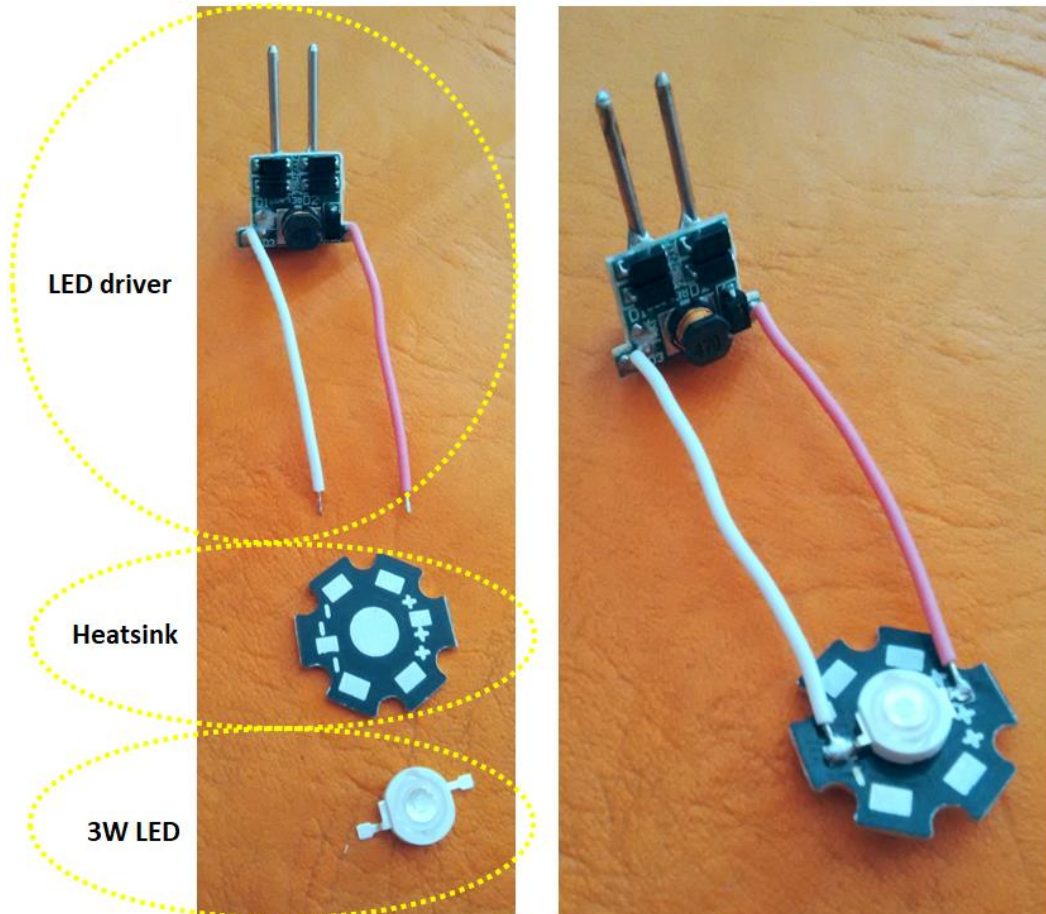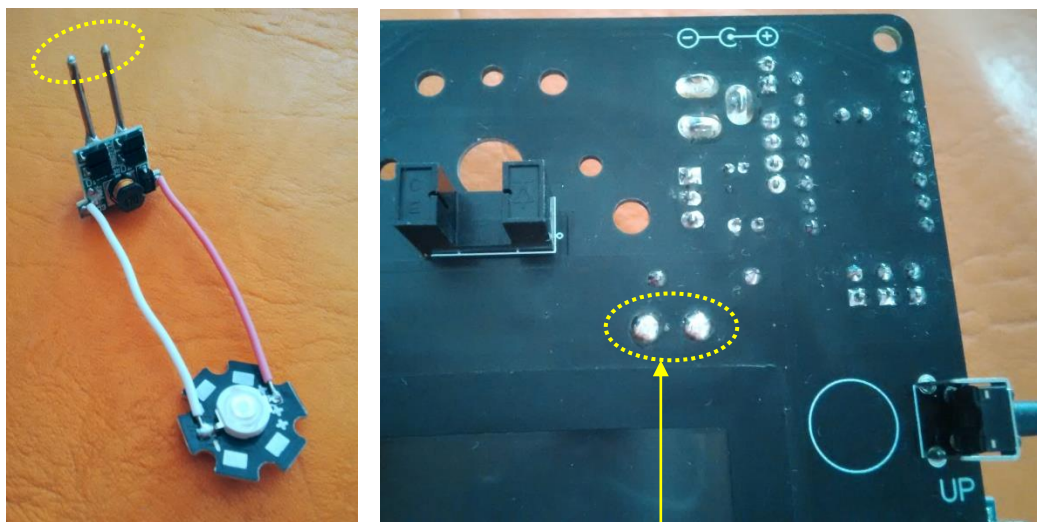
5          **LED strip**

# LED Driver soldering

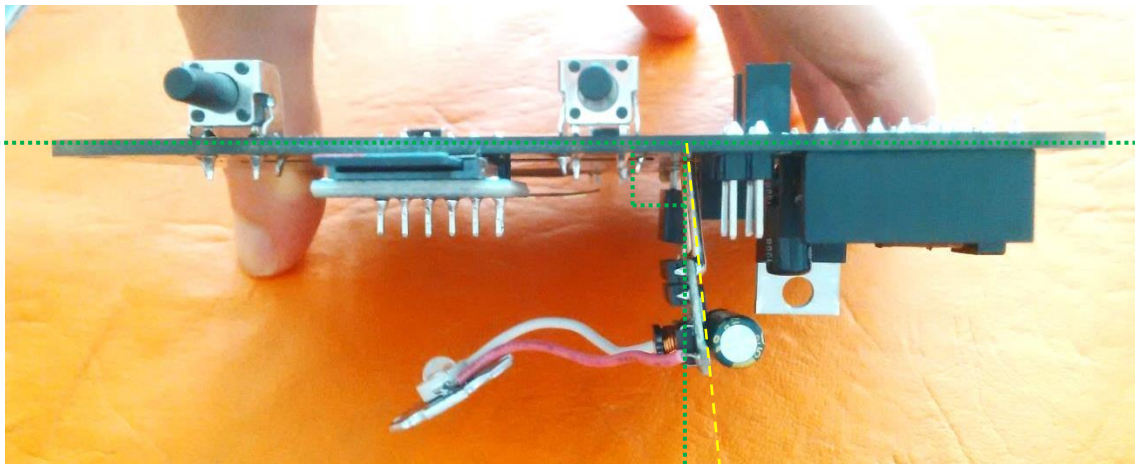**Solder LED to heatsink, then LED to LED driver wires.**

<u>**Important:**</u> verify LED polarity before soldering. Solder according to the following images.
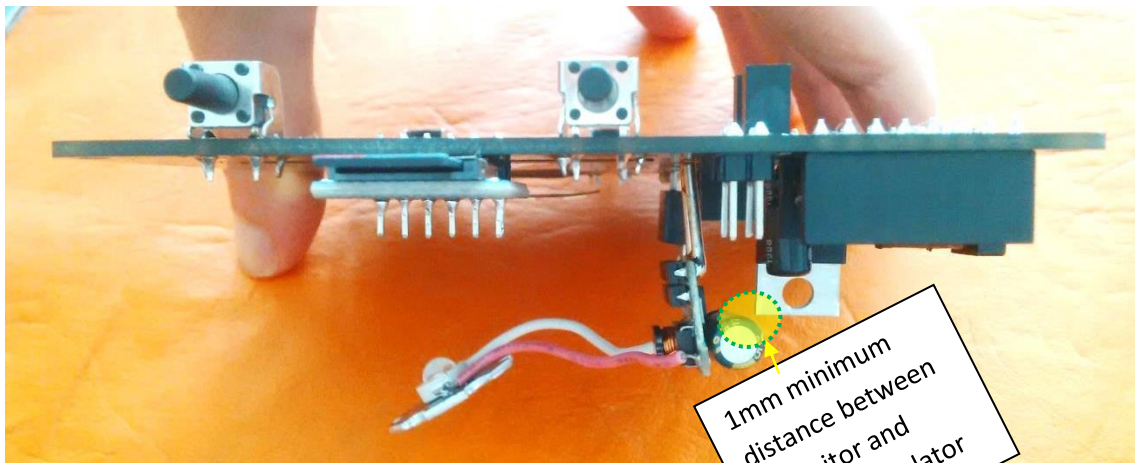


**Final configuration**



**The 2 driver legs and their solder must not exceed 1.5 mm in height above the PCB.**
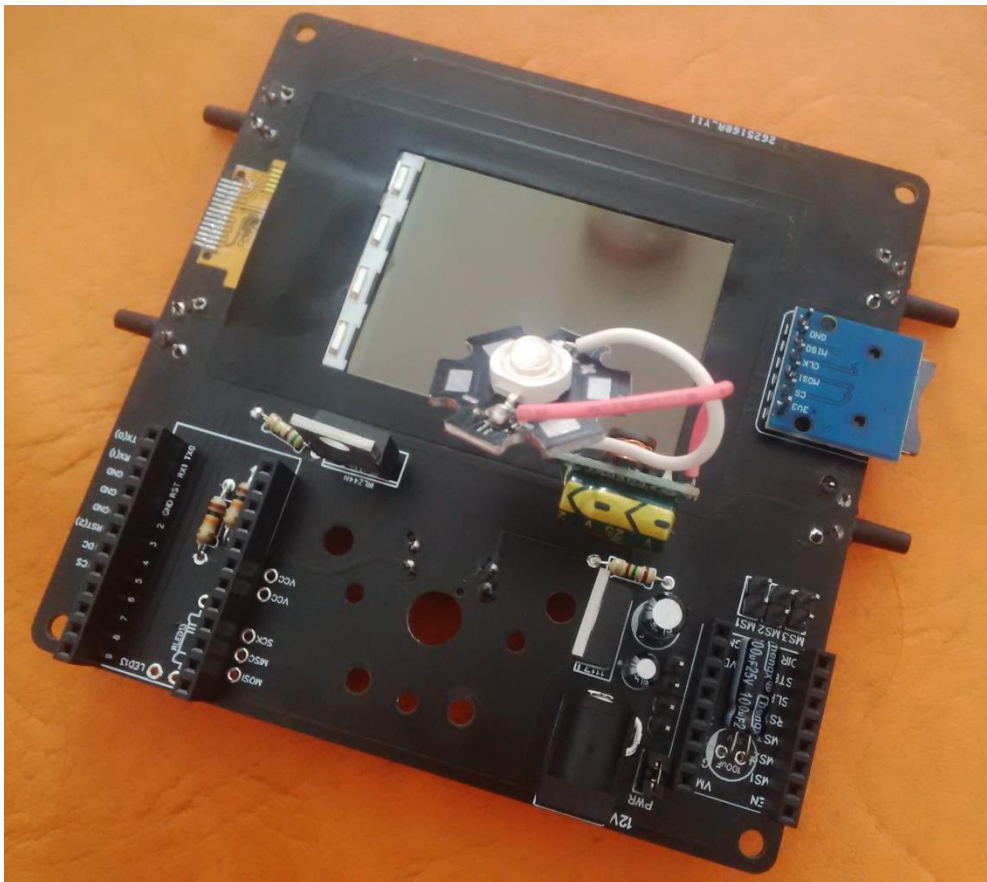
5° angle soldering



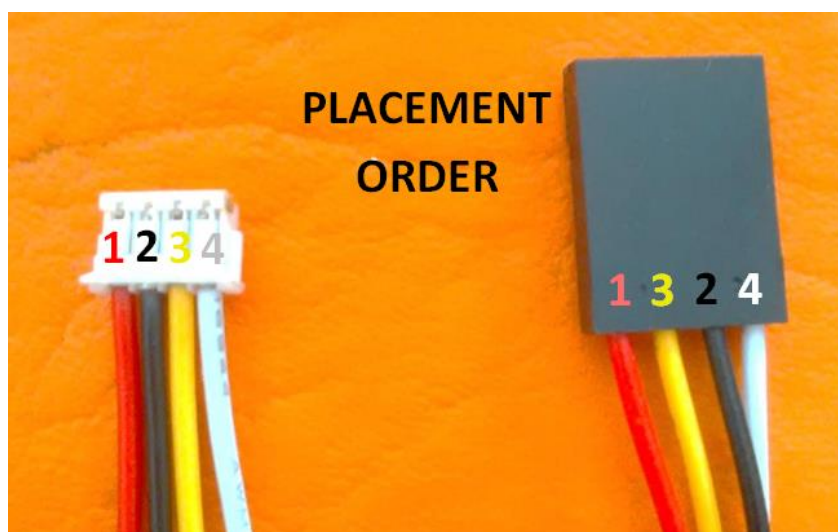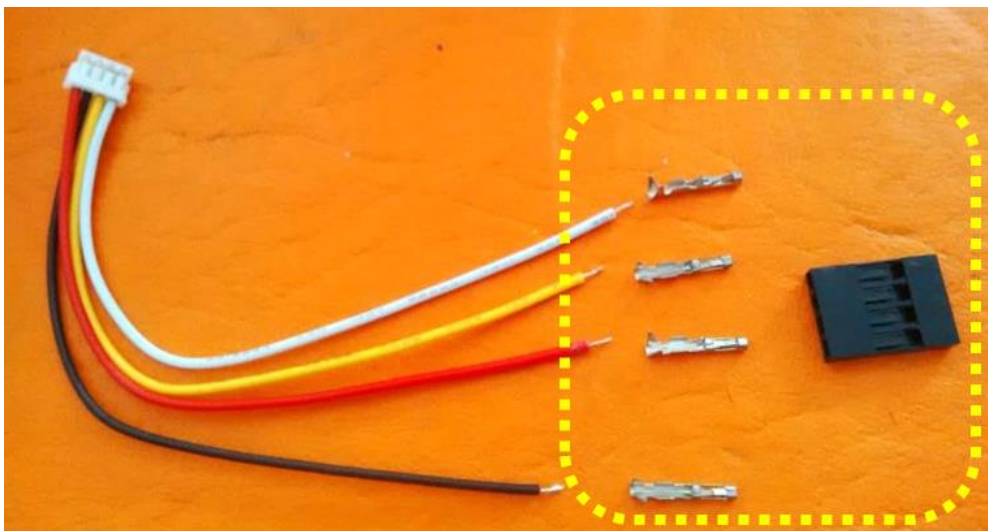1mm minimum distance between capacitor and voltage regulator

## PCB assembly

## Stepper motor cable



*A terminal must be added to the stepper motor included cable:*





PLACEMENT ORDER

## **DRV8825: set limit current + place heatsink**

- Adjust reference Vref to 0,14 – 0,15 V.
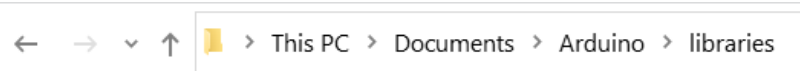
Current Limiting
Potentiometer
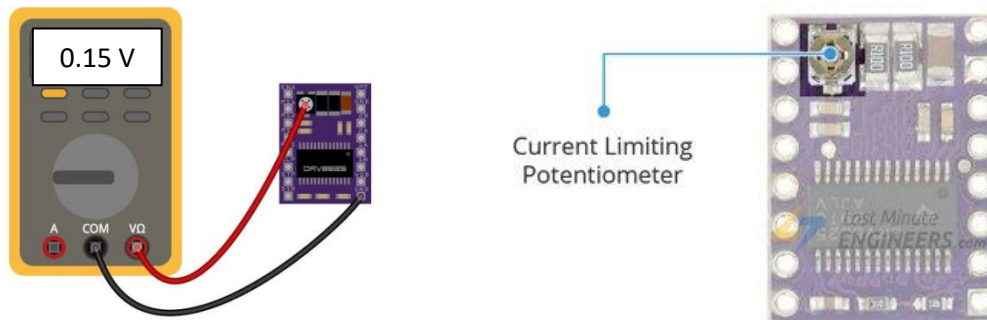
- Place heatsink.
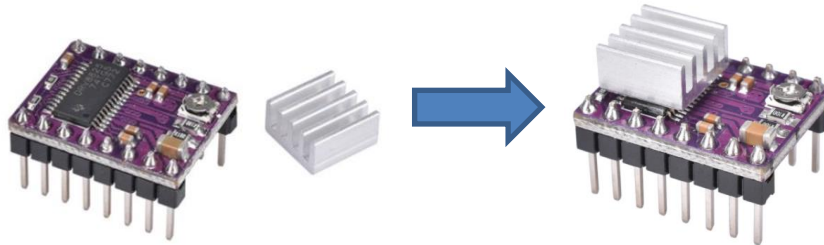
## Libraries installation and firmware upload to Arduino

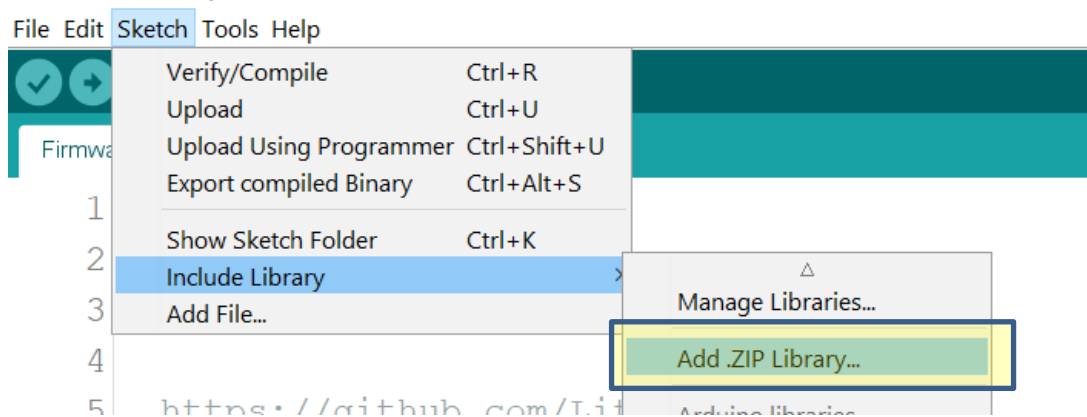**1)** Verify that the computer to be used does not already have a library with one of the following names:



**"SdFat"**

**"Adafruit_GFX_AS"**

**"Adafruit_ILI9341_AS"**

In case you have a library of the same name, **please delete it**, since another version of the libraries will cause a malfunction.
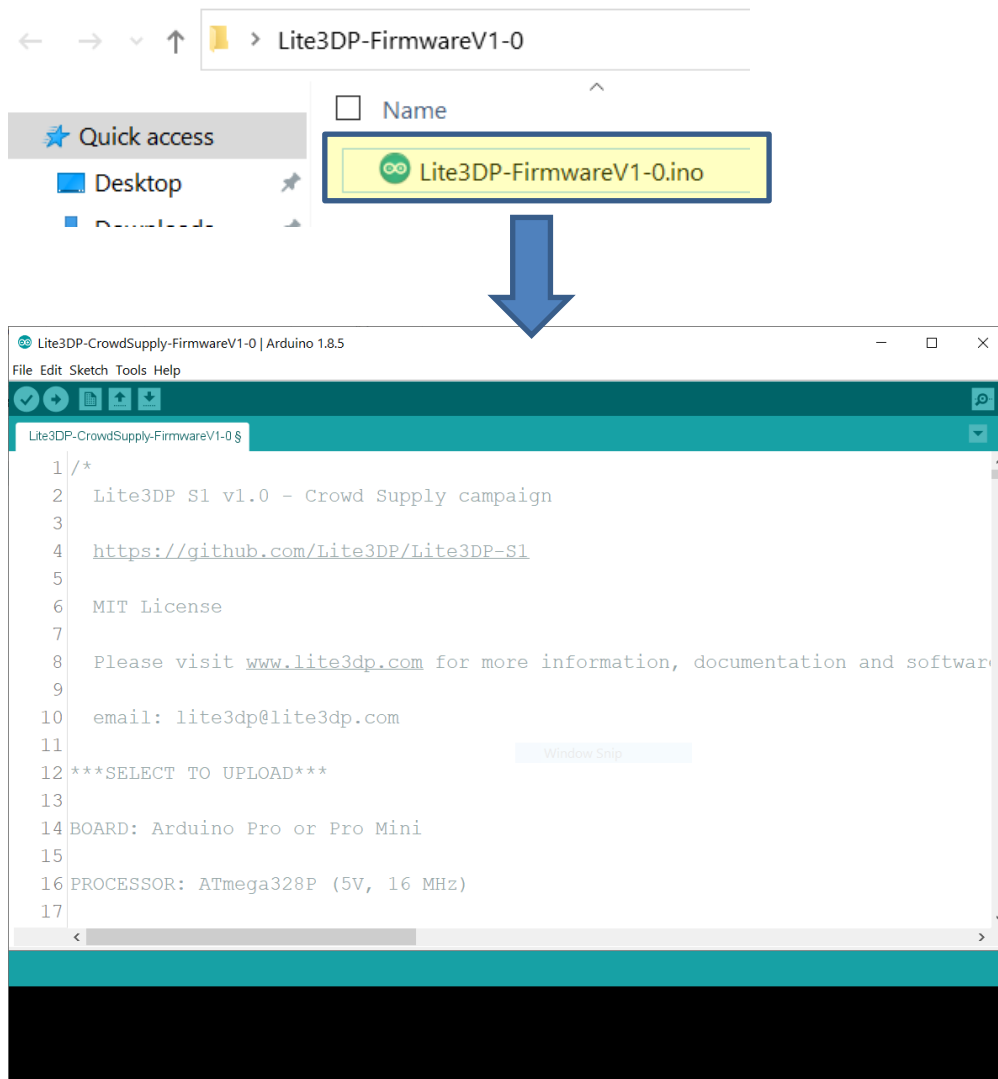
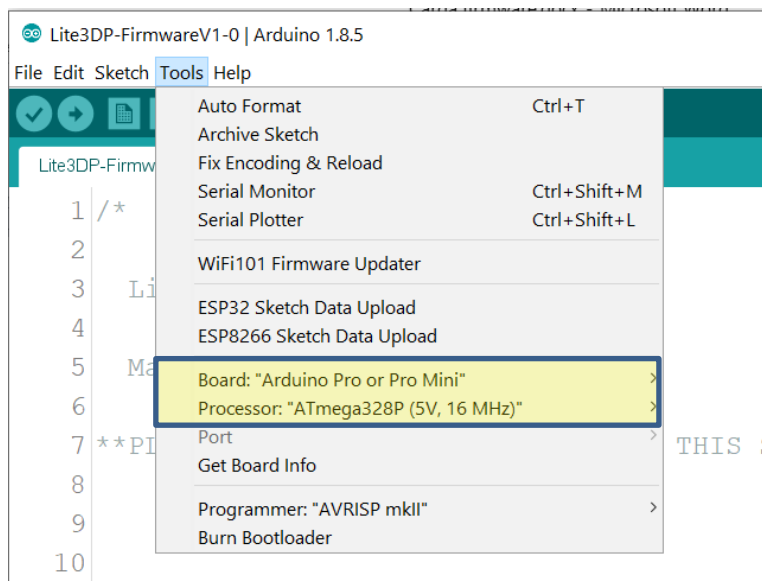**2)** Add the 3 attached libraries, one by one, in the Arduino IDE:



Libraries to be added:



Adafruit_GFX_AS.zip

Adafruit_ILI9341_AS.zip

SdFat.zip

**3)** Open the Lite3DP firmware in the Arduino IDE:



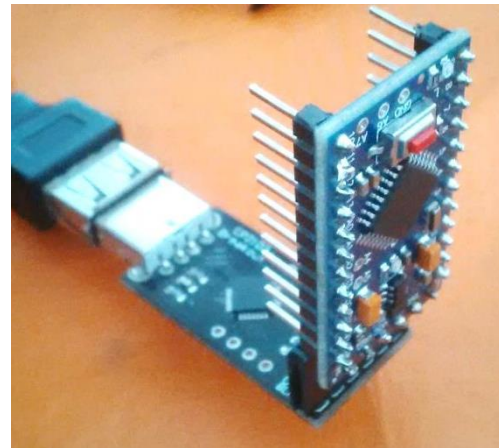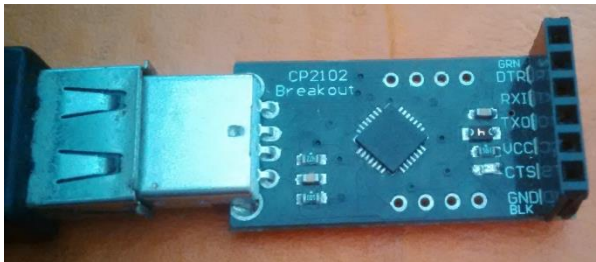Select Board: Arduino Pro or Pro Mini, Processor: ATmega328P (5V, 16 MHz)

Hit verify/compile  and you should get:



**4)** Upload the firmware to Arduino Mini

Connect the Arduino Mini to your CP2102 adapter or similar:



Select the correct COM port.

Hit Upload  until the upload is complete: