ESP32 Shutter Tester Parts V1.2

Below are links to the parts required to make the ESP32 Shutter Tester.

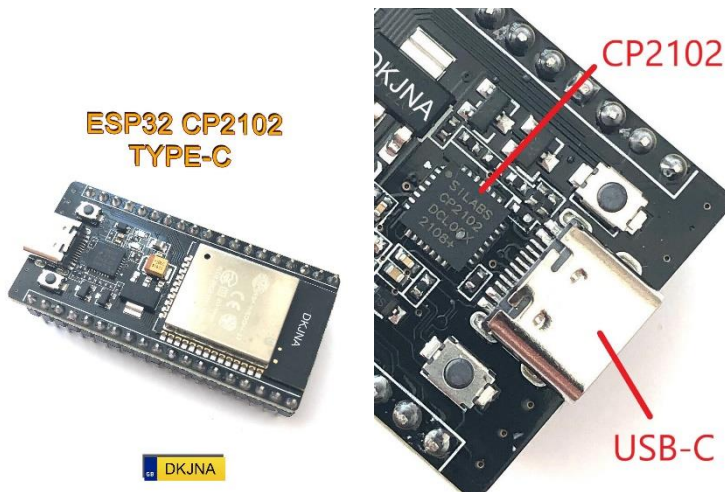Links are valid now, but of course could become dead in the future.

Links are (mainly) for UK suppliers and are a guide only. Use a supplier from your country.

Ordering from China either from eBay sellers or AliExpress, the parts will be much cheaper.

Note, often if buying from AliExpress, there is a free express shipping option, if buying parts over a set value.

ESP32 NodeMcu board. 38 pin version. USB-C   CP2102
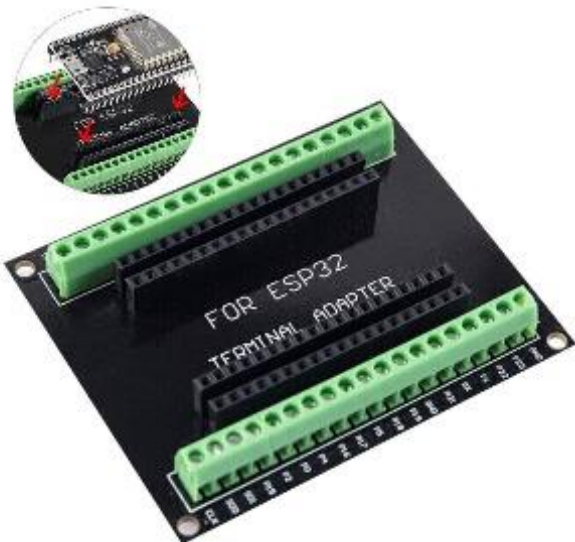[NodeMcu ESP32 WROOM-32 Type C Development Board Dual Core WLAN WiFi Bluetooth | eBay](#)

IMPORTANT. There are multiple variants of this board. Get 38 pin USB-C and CP2102 chip.
Note:- The guides have been written for this specific board type. Boards which differ with their USB chip and/or connector will still work, but the guides will not detail different driver installs or pin layout differences.

ESP32 prototype/breakout board (38 pin screw-terminal version)

[38 Pin ESP32 Breakout Board For ESP32 Development Board 2.4 GHz Wifi Dual | eBay](#)
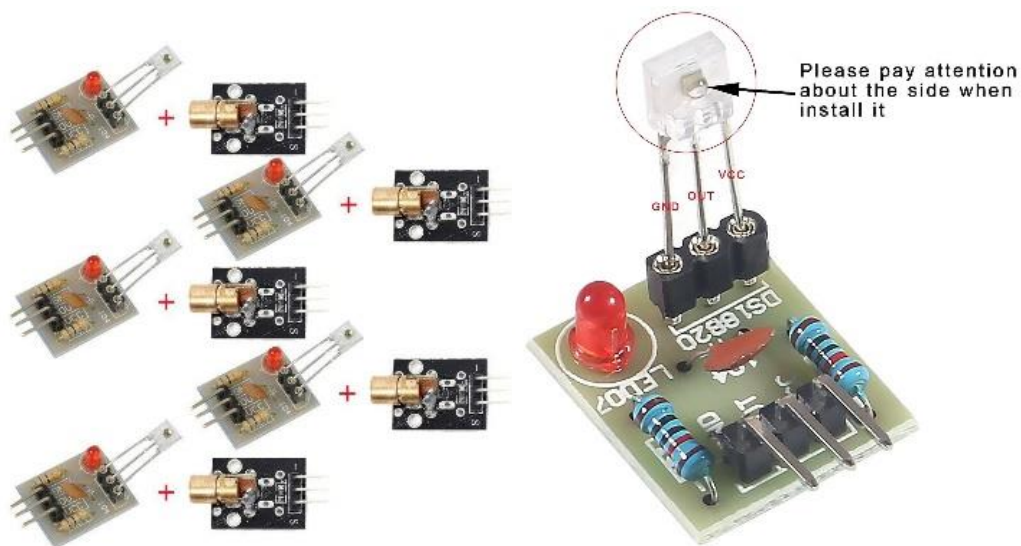
Laser tx & rx module.

Three or five Laser tx and rx module pairs are required.

The sensor is supplied loose. ENSURE YOU INSERT IT THE CORRECT WAY ROUND!!!. Little bubble lens points towards the header pins.

Note:- link is for a China supplied pack of 5 pairs. UK prices are far too high, I could not find a reasonably priced tx & rx pair in the UK when compiling this list.

Laser Receiver Sensor and KY-008 Transmitter Module Pair Set 10pcs for Arduino | eBay

LCD Module 2004 with IIC (optional)

Ensure you get a module that includes the IIC or i2C module. The LCD screen is not required if using the tft screen, or no screen is wanted, as all output is also sent to the computer monitor. However, future firmware upgrades may incorporate touch-screen functionality, which will require use of the tft screen.
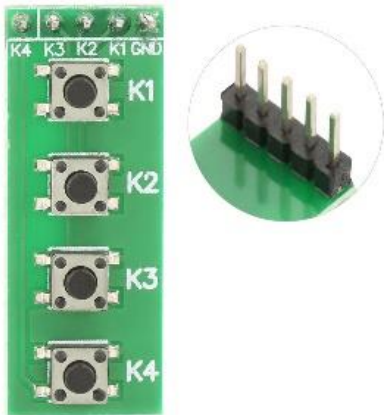
IIC/I2C/TWI 2004 20X4 Character LCD Module Display For Arduino Blue Serial 5056517066560 | eBay

Button Module.

There are all sorts of buttons available, feel free to choose different ones depending on your final design. This module has the advantage of header pins for use with Dupont jumper wires.

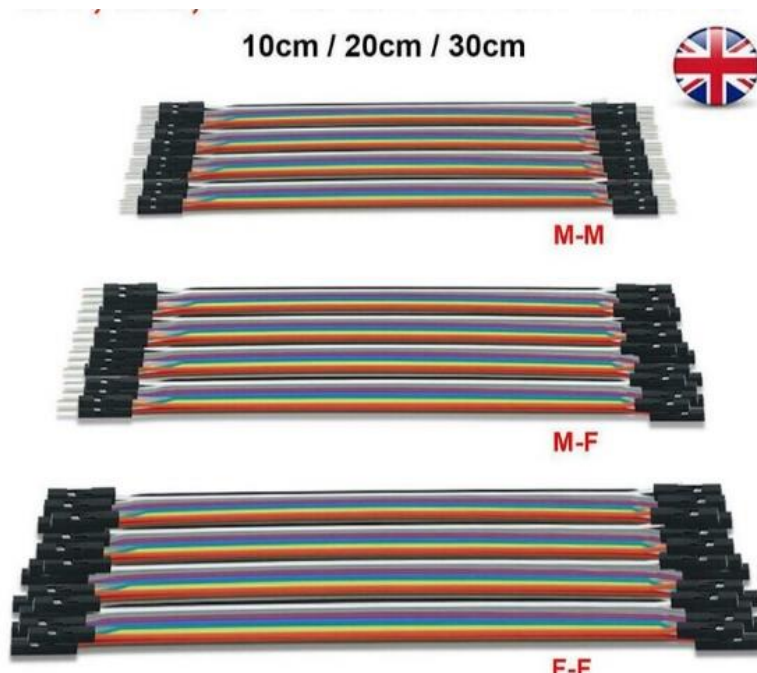4 Button Key Module Switch Keyboard Push Button Switch Board 7018965086109 | eBay

Dupont wires.
Get male to female ones if using the screw terminal prototype board.
Different lengths are available. It is suggested 30cm ones for the Laser tx & rx connections. 20cm for connection to buttons, LCD etc.
40PCS DUPONT JUMP WIRES M-F M-M F-F JUMPER BREADBOARD CABLES FOR DIY ARDUINO | eBay

Note. If following the wiring diagram colour code (recommended) there are far more Brown and Black colour wires used, than come in a standard mixed-colour pack.
Single colour wires can also be purchased. Purchase an additional pack of 10 Brown & Black wires (Male to Female) for connection to the Laser tx & rx modules.
A good wiring option is to use short wires for the power & GND connections & join them together with choc-bloc. Then use one single long wire back to the main board. There are of course multiple wiring options, including soldering directly to the module boards.
10pcs Breadboard Dupont Cable For Arduino Line 2.54mm Male Female Dupont Jumper Wire 26AWG Cable DIY Electronic 1P Connector - AliExpress

TFT display. (optional)
4" SPI Module ILI 9488 14 pin TFT LCD Display Screen with Touch. 480 * 320 resolution.
Note:- there are many similar panels but they have different driver chips (ILI9488) , the Shutter Tester only works with this specific screen.

Note, whilst all output is also sent to the computer screen, making the tft screen optional, future firmware upgrades may incorporate touch-screen functionality, which will require use of the tft screen.

4.0 inch SPI module 3.95 inch ILI9488 14 pin TFT LCD display scree Resistance touch panel PCB adapter base board 2.54 mm spacing - AliExpress