# Board

| Quantity | References | Value | buy suggestion |
|---|---|---|---|
| 9 | C11, C21, C31, C41, C51, C61, C71, C81, C201 | 100nF 50V | lcsc.com |
| 8 | C12, C22, C32, C42, C52, C62, C72, C82 | 1uF 50V | lcsc.com |
| 1 | C100 | 10nF 25V | lcsc.com |
| 1 | C101 | 470uF 50V | lcsc.com |
| 1 | C200 | 220uF 10V | lcsc.com |
| 8 | *R1, R2, R3, R4, R5, R6, R7, R8 | 0R36 +-1% | lcsc.com |
| 1 | R20 | 4k7 | lcsc.com |
| 1 | R100 | 82k | lcsc.com |
| 1 | R200 | 3k3 | lcsc.com |
| 8 | L1, L2, L3, L4, L5, L6, L7, L8 | 100uH, GLE GCNR6045-101MC | lcsc.com |
| 8 | D1, D2, D3, D4, D5, D6, D7, D8 | MBR0560 | lcsc.com |
| 1 | D100 | BZT52C10 | lcsc.com |
| 1 | D200 | Pow LED | lcsc.com |
| 8 | U1, U2, U3, U4, U5, U6, U7, U8 | PT4115 | lcsc.com |
| 1 | U10 | ESP32 mini (CP2104 drive) | aliexpress.com |
| 1 | U20 | DS18B20 | lcsc.com |
| 1 | U200 | step down 5V 1A | aliexpress.com |
| 1 | F100 | Holder 5.2x20mm | lcsc.com |
| | | 5A fast blowing | lcsc.com |
| 1 | F200 | 1A | lcsc.com |
| 9 | IN1, LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8 | Screw_Terminal_01x02 | lcsc.com |
| 1 | Q100 | BR50P06 | lcsc.com |
| 1 | J110 | Conn_01x06_Male | aliexpress.com |
| 1 | J120 | Conn_01x03_Male | aliexpress.com |
| 1 | J130 | Conn_01x04_Male | aliexpress.com |

**\* Note for R1 – R8**

The board can handle up to 500mA per channel. Changing the resistor has impact on Iled max which is calculated 0.1 / R.

With 0.36Ω, it's 0.1 / 0.36 = 278mA (measured 290mA)

I recommend using +-1% tolerance for constant Iled values over the different channels

Smallest recommended resistor is 0.22Ω which will end up in Iled max per channel little more than 450mA

## Installation

| Quantity | Reference | Value | buy suggestion |
|---|---|---|---|
| 1 | Power supply | 24V/100W | aliexpress.com |
| 1 | Enclosure box | 150x100x50mm | aliexpress.com |
| 4 | M3x5 screw | M3x6 | aliexpress.com |
| 4 | M3 washer | M3x6x0.8 | aliexpress.com |
| 9 | DC sockets | DC-022B | aliexpress.com |
| 9 | DC plugs | DC-022B | aliexpress.com |
| 100m | DC cable | 20AWG | aliexpress.com |
| 1 | Rotary encoder | EC11 | aliexpress.com |
| 1 | Blank cover panel | | aliexpress.com |
| 1 | Encoder knob | | aliexpress.com |
| 1 | Motion detection sensor | AM312 | aliexpress.com |
| 1 | Crimping plier JST XH | SN-2549 | aliexpress.com |