

Board

Quantity	References	Value	Purchase
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 $0.1 / 0.36 = 278\text{mA}$ (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	Purchase
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