

## Board

Quantity	References	Value	buy suggestion
9	C11, C21, C31, C41, C51, C61, C71, C81, C201	100nF 50V	<a href="http://lcsc.com">lcsc.com</a>
8	C12, C22, C32, C42, C52, C62, C72, C82	1uF 50V	<a href="http://lcsc.com">lcsc.com</a>
1	C100	10nF 25V	<a href="http://lcsc.com">lcsc.com</a>
1	C101	470uF 50V	<a href="http://lcsc.com">lcsc.com</a>
1	C200	220uF 10V	<a href="http://lcsc.com">lcsc.com</a>
8	*R1, R2, R3, R4, R5, R6, R7, R8	0R36 +-1%	<a href="http://lcsc.com">lcsc.com</a>
1	R20	4k7	<a href="http://lcsc.com">lcsc.com</a>
1	R100	82k	<a href="http://lcsc.com">lcsc.com</a>
1	R200	3k3	<a href="http://lcsc.com">lcsc.com</a>
8	L1, L2, L3, L4, L5, L6, L7, L8	100uH, Bourns SRN6045-101M	<a href="http://lcsc.com">lcsc.com</a>
8	D1, D2, D3, D4, D5, D6, D7, D8	MBR0560	<a href="http://lcsc.com">lcsc.com</a>
1	D100	BZT52C10	<a href="http://lcsc.com">lcsc.com</a>
1	D200	Pow LED	<a href="http://lcsc.com">lcsc.com</a>
8	U1, U2, U3, U4, U5, U6, U7, U8	PT4115	<a href="http://lcsc.com">lcsc.com</a>
1	U10	ESP32 mini (CP2104 drive)	<a href="http://aliexpress.com">aliexpress.com</a>
1	U20	DS18B20	<a href="http://lcsc.com">lcsc.com</a>
1	U200	step down 5V 1A	<a href="http://aliexpress.com">aliexpress.com</a>
1	F100	Holder 5.2x20mm	<a href="http://lcsc.com">lcsc.com</a>
		5A fast blowing	<a href="http://lcsc.com">lcsc.com</a>
1	F200	1A	<a href="http://lcsc.com">lcsc.com</a>
9	IN1, LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8	Screw_Terminal_01x02	<a href="http://lcsc.com">lcsc.com</a>
1	Q100	BR50P06	<a href="http://lcsc.com">lcsc.com</a>
1	J110	Conn_01x06_Male	<a href="http://lcsc.com">lcsc.com</a>
1	J120	Conn_01x03_Male	<a href="http://lcsc.com">lcsc.com</a>
1	J130	Conn_01x04_Male	<a href="http://lcsc.com">lcsc.com</a>

### \* 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  $0.36\Omega$ , it's  $0.1 / 0.36 = 278\text{mA}$  (measured 290mA)

Form factor 0805 or 1206 is recommended, please use +-1% tolerance for the value.

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

## Installation

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