

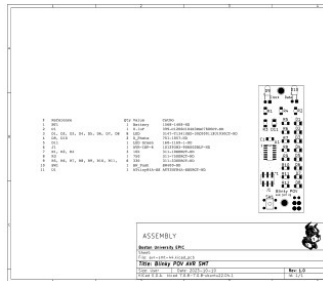
# Blinky POV Kit

## Assembly Notes

Rev 5/23/24



The assembly drawing is your main reference for placing components on the board. The bill of materials (parts list) includes a “Reference” column which matches the labels on the board (“R1” etc).



Docs page:

<https://github.com/eshazen/blinky-avr-smt>

Resistors and capacitors (R and C) are reversible and can be soldered either way around.

The rest of the parts are **not** reversible and must be installed the right way around.

Microcontroller (U1)

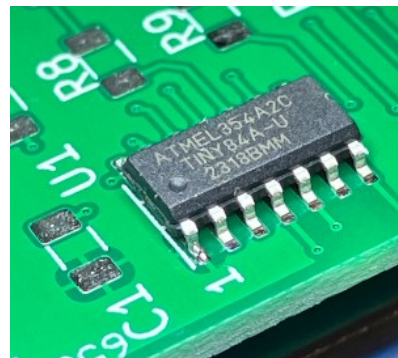
LEDs (D1-D8 and D11)

Light sensors (D9 and D10)

Battery holder wires

### U1 Orientation

Pin 1 is marked by a dimple in the top of the chip. This should go next to the number “1” on the board.



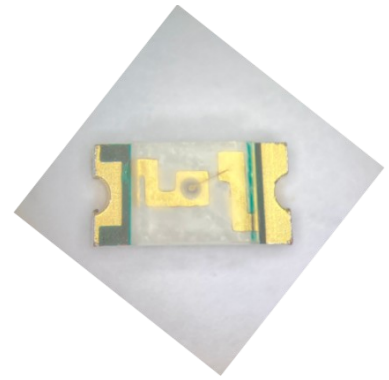
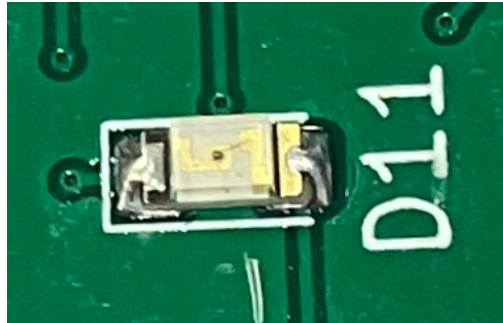
The LEDs D1-D8 should be mounted as shown, with the wider opening towards the board edge.

They should be mounted with the white surface with a transparent window facing up.



LED D11 orientation.  
You have to look closely  
for this one.

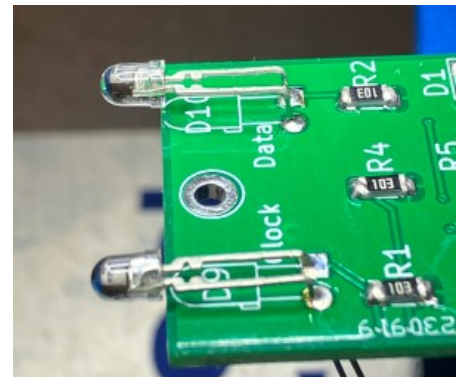
LEDs are the most common  
type of component to install  
incorrectly!



The light sensors (D9, D10) have  
leads of different lengths.  
Bend and install as shown.

**Long lead in left hole**

Trim the extra leads off on the back

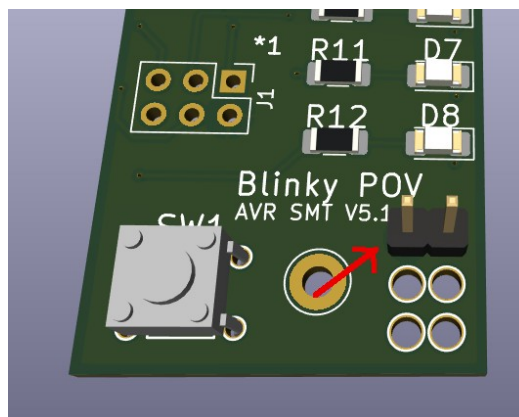


J1 is not installed

Install a two-pin header  
as shown for the battery.

Install the switch SW1  
as shown.

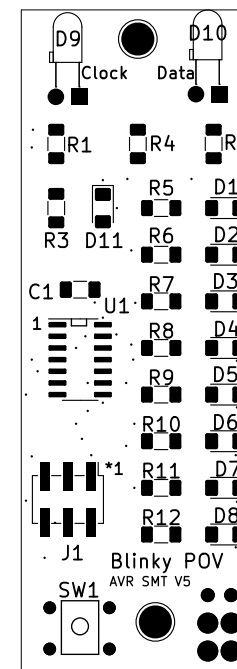
Battery connects with  
**Red** lead to *left*



#	Reference	Qty	Value	CatNo
1	BT1	1	Battery	1568-1408-ND
2	C1	1	0.1uF	399-C1206C104K3RAC7800CT-ND
3	D1, D2, D3, D4, D5, D6, D7, D8	8	LED	3147-T1341USD-30C000112U1930CT-ND
4	D9, D10	2	D_Photo	751-1057-ND
5	D11	1	LED Green	160-1169-1-ND
6	J1	1	AVR-ISP-6	10129383-906002BLF-ND
7	R1, R2, R4	3	10k	311-10KERCT-ND
8	R3	1	750	311-750ERCT-ND
9	R5, R6, R7, R8, R9, R10, R11,	8	330	311-330ERCT-ND
10	SW1	1	SW_Push	SW400-ND
11	U1	1	ATTiny84A-SS	ATTINY84A-SSURCT-ND

Suggested installation order:

U1  
R1-R12  
D1-D8 (double check orientation!)  
SW1, D9, D10  
J1  
Battery (note wire colors!)



## ASSEMBLY

**Boston University EPIC**

Sheet:

File: avr-smt-44.kicad\_pcb

**Title: Blinky POV AVR SMT**

Size: User

Date: 2023-10-10

**Rev: 1.0**

KiCad E.D.A. kicad 7.0.8-7.0.8-ubuntu22.04.1

Id: 1/1

