LED, transistor, phototransistor

Power Switch

VUSB VCC VBAT

SW1
MSS22D18G4

USB Input + Voltage Drop

WARNIING: V1.2 USB port must be on back side!

CN1

VUSB

R3
510

F1
BK60-005-DZ

D1
BZX55C3V3

GND

5 VBUS 4
3
6 GND

HX TYPE-C-2P+4J

GND

Battery

VBAT

CN2
CR2032-BS-6-1

GND

Adjust R2 to set brightness
Adjust R1 to set sensitivity

VCC

R2
510

LED1
Orange
TZ-L2-05YYBO3TDJ15-001

VCC

R1
47k

U1
HL504HP

Q1
BC337

GND

New in V1.2:
  Added power switch to save battery
  Added USB port for constant displaying
  Added fuse to USB input
  Added zener to regulate USB 4v to 3v
    Consistent brightness, dimming cutoff of battery

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| Last Updated | 2026-01-14 | Tiger Soldering Demo Schematic 1.2 | |

RIT | SHED

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