Component	Current (mA)	Voltage (V)	Duty Cycle (%)	Usage (mAh)	Power (mW)	Average Power (mW)	Datasheet
ESP32-C3	80	3.3	50	40	264	132	https://wiki.seeedstudio.com/XIAO_ESP32C3_Getting_Started/#check-the-battery-voltage
SSD1306 Display	15	3.3	80	12	49.5	39.6	https://cdn-shop.adafruit.com/datasheets/SSD1306.pdf
WS2812B LED	60	5	20	12	300	60	https://cdn-shop.adafruit.com/datasheets/WS2812B.pdf
X27 Stepper Motor	20	5	40	8	100	40	https://4tronix.co.uk/zeropoint/x27_spec.pdf

Component	Current (mA)	Voltage (V)	Duty Cycle (%)	Usage (mAh)	Power (mW)	Average Power (mW)	
ESP32-C3	80	3.3	30	24	264	79.2	
Moisture Sensor（SEN0193）	5	3.3	50	2.5	16.5	8.25	https://mm.digikey.com/Volume0/opasdata/d220001/medias/docus/2107/SEN0193_Web.pdf?_gl=1*us5au9*_up*MQ..*_gs*MQ..&gclid=CjwKCAiAqrG9BhAVEiwAaPu5zjtTmUU1dTjpzScml3qbw81T6SekHpCZYKstLlkZYkntXSVQT_CgNhoCAHQQAvD_BwE&gclsrc=aw.ds

Device	Daily Power Usage (mWh)	Estimated Battery Needed (mAh)	Chosen Battery (mAh)
Soil Moisture System	2098.8	567	1200
Display System	6518.4	1762	2600

Device	Battery Type	Capacity	Estimated Runtime
Soil Moisture System	Li-ion (LiPo)	1200mAh, 3.7V	**~2 days**
Display & Stepper Motor System	18650 Li-ion	2600mAh, 3.7V	**~1.5 days**