

38.4V 50Ah TM Smart

LiFePO4 Battery



Part Number: L36V50-50-TM-BT-12-A100

Basic Specification

Nominal Voltage	38.4V
Nominal Capacity	50Ah
Nominal Energy	1920Wh
Internal Resistance	≤40mΩ
Function	Bluetooth/ Low Temp
Max. Continuous Output Power	1920W
BMS Board	50A
Max. Batteries in Series and Parallel	4P1S
System Max. Extended Power	7.68kW
System Max. Extended Energy	7.68kWh

Mechanical Specification

Dimension(L * W * H)	L13*W6.77*H8.5 inch 330*172*216mm
Weight	Approx. 33.14 lbs/15.03kg
Terminal Type	M8*16mm
Terminal Torque	12-14 N·m
Case Material	ABS
IP Rating	IP65
Cell Type-chemistry	LiFePO4
BCI	Group31

Charge Specification

Max. Continuous Charging Current	50A
Recommended Charging Current	10A
Recommended Charging Voltage	43.2±0.6V

Safety Specification

Certifications	CE, FCC, RoHS, UN38.3, UL-1973
Protection	Over-temperature/Over-discharge/ Over-charge/Over-current/Over-voltage/Short-circuit/Low-temperature

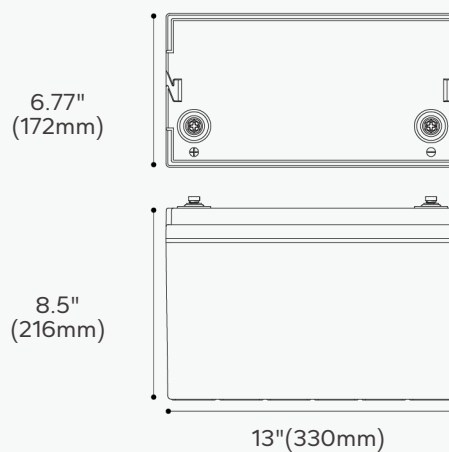
Discharge Specification

Max. Continuous Discharging Current	50A 60A@30 mins
Peak Discharging Current	250A/s

Environment Specification

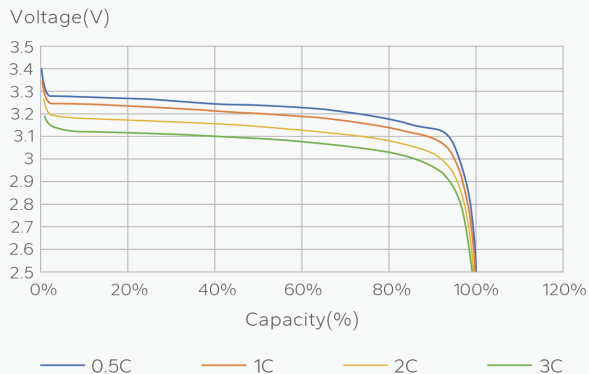
Storage Temperature Range	-10°C - 50°C (14°F - 122°F)
Recommended Storage Temperature	10°C - 35°C (50°F - 95°F)
Charging Temperature Range	0°C - 50°C (32°F - 122°F)
Discharging Temperature Range	-20°C - 60°C (-4°F - 140°F)

Dimensions

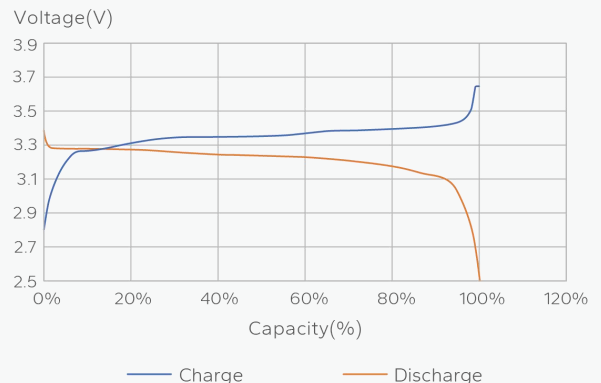


Performance Curves

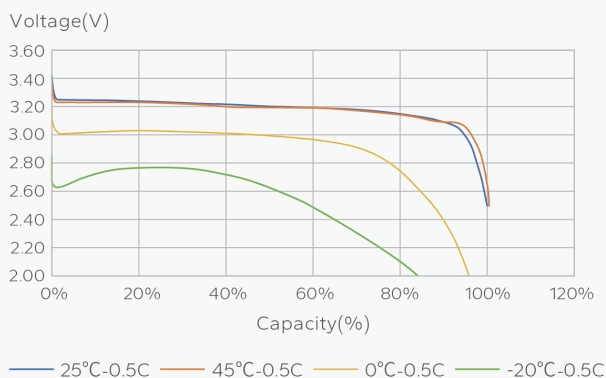
Discharge Performance at 25°C



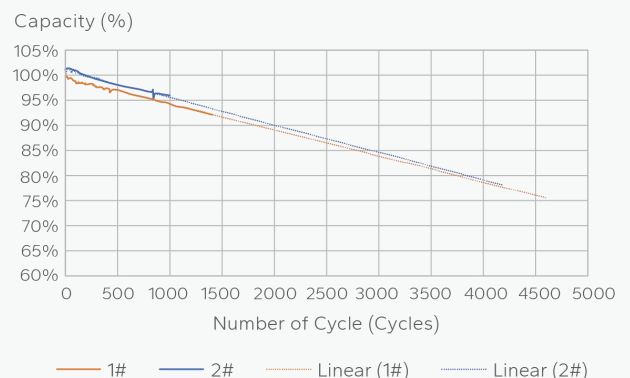
Charge and Discharge at 25°C, 0.5C



Discharge Curves at Different Temperature



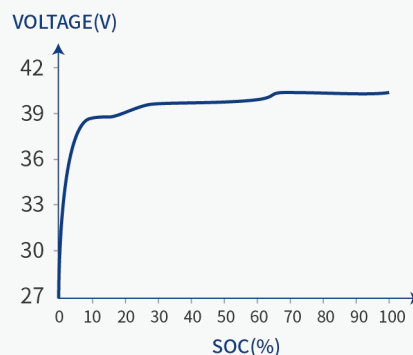
Cycle Life with DOD at 25°C



How to Estimate the Battery Capacity

The battery capacity could be roughly estimated by its **resting voltage** (not charging/discharging voltage). Since the voltage of each battery is slightly different, and the voltage measurement is affected by the measuring instrument, ambient temperature, etc., the following parameters are for reference only.

Resting Voltage: The voltage is measured after the battery has been disconnected from the charger and loads with zero current, and left alone for 30 minutes.



SOC (%)	VOLTAGE (V)
0	30 to 36
25	39 to 39.45
50	39.45 to 39.6
75	39.9 to 39.99
100	≥39.99

① Based on the characteristics of LiFePO₄ batteries, the voltage measured by all LiFePO₄ batteries during charging/discharging is not the real voltage of the battery. Therefore, after charging/discharging and disconnecting the battery from the power source, the voltage of the battery will gradually drop/increase to its real voltage.