

12.8V 50Ah Bluetooth

LiFePO4 Battery

Part Number: L12V50-50-TM-BT-4-A38



Basic Specification

Nominal Voltage	12.8V
Nominal Capacity	50Ah
Nominal Energy	640Wh
Internal Resistance	≤40mΩ
Function	Bluetooth
Max. Continuous Output Power	640W
BMS Board	50A
Max. Batteries in Series and Parallel	4P4S
System Max. Extended Power	10.24kW
System Max. Extended Energy	10.24kWh

Charge Specification

Max. Continuous Charging Current	50A(1C)
Recommended Charging Current	10A(0.2C)
Recommended Charging Voltage	14.4±0.2V

Discharge Specification

Max. Continuous Discharging Current	50A(1C)
Peak Discharging Current	250A(5C)/s 60A(1.2C) -30mins

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)

Mechanical Specification

Dimension(L * W * H)	7.68*6.54*6.77 in 195*166*172 mm
Weight	Approx. 11.13 lbs/ 5.05 kg
Terminal Type	M8*14mm
Terminal Torque	13±1 N·m
Case Material	ABS
IP Rating	IP65
Cell Type-chemistry	LiFePO ₄
BCI	A38

Safety Specification

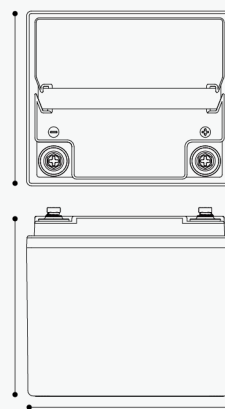
Certifications	FCC ID,UL-1973,CE,RoHS,UN38.3,MIC
Protection	Over-temperature/Over-discharge/Over-current/Over-voltage/Short-circuit /Low temperature

Dimensions

6.54"
(166 mm)

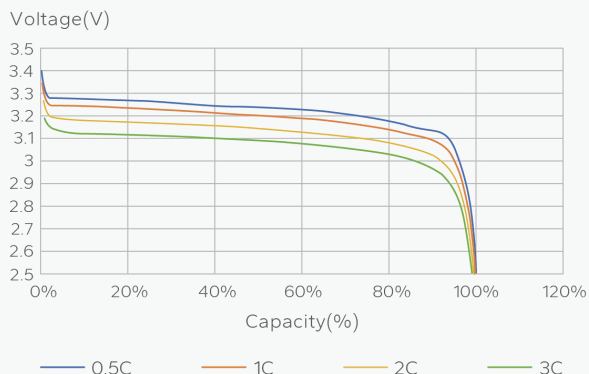
6.77"
(172 mm)

7.68"(195 mm)

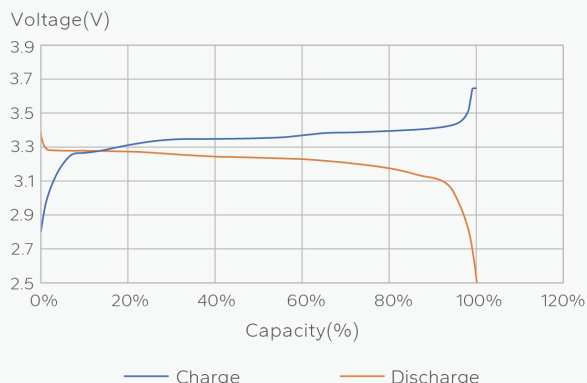


Performance Curves

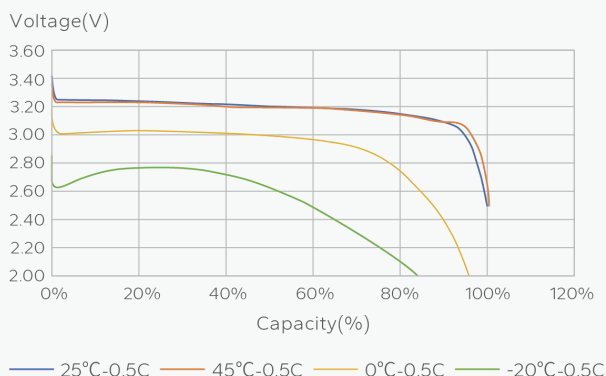
Discharge Performance at 25°C



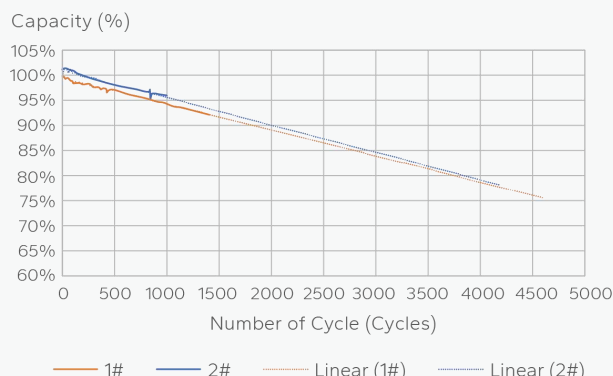
Charge and Discharge at 25°C, 0.5C



Discharge Curves at Different Temperature



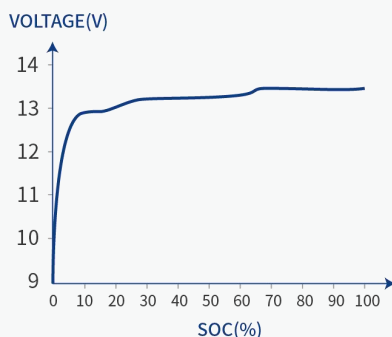
Cycle Life with DOD at 25°C



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	10 to 12
25	13 to 13.15
50	13.15 to 13.2
75	13.3 to 13.33
100	≥13.33

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.