

51.2V 100Ah Communication

LiFePO4 Battery Part Number: L51.2V100-100-COM-16-S3U



Basic Specification

Nominal Voltage	51.2V
Nominal Capacity	100Ah
Nominal Energy	5120Wh
Internal Resistance	≤40mΩ
Function	CAN / RS485
Max. Continuous Output Power	5120W
BMS Board	100A
Max. Batteries in Series and Parallel	16P1S
System Max. Extended Power	81.920kW
System Max. Extended Energy	81.920kWh

Mechanical Specification

Dimension(L * W * H)	L17.4*W18.9*H5.24 inch L442*W480*H133 mm
Weight	Approx. 98.33 lbs / 44.6 kg
Terminal Type	M8*14mm
Terminal Torque	13±1 N·m
Case Material	Steel Plate Cold Common (SPCC)
Shell Size	3U
Cell Type-chemistry	LiFePO4

Charge Specification

Max. Continuous Charging Current	100A(1C)
Recommended Charging Current	20A(0.2C)
Recommended Charging Voltage	57.6±0.8V

Safety Specification

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

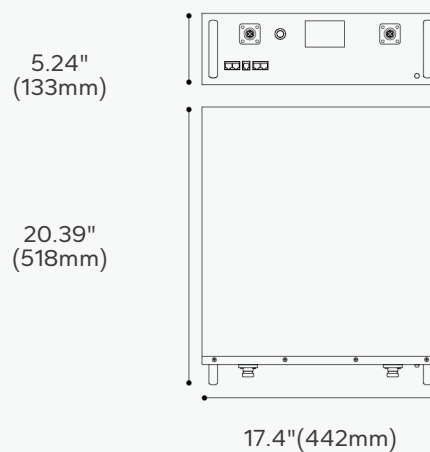
Discharge Specification

Max. Continuous Discharging Current	100A(1C)
Peak Discharging Current	110A(1.1C) /s

Environment Specification

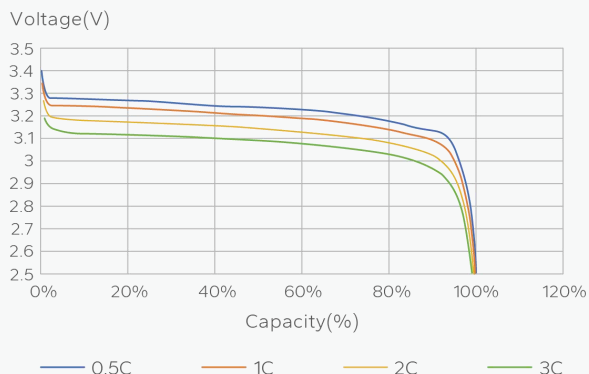
Storage Temperature Range	-10°C - 50°C (14°F - 122°F)
Recommended Storage Temperature	10°C - 35°C (50°F - 95°F)
Charging Temperature Range	0°C - 50°C (32°F - 122°F)
Discharging Temperature Range	-20°C - 60°C (-4°F - 140°F)

Dimensions

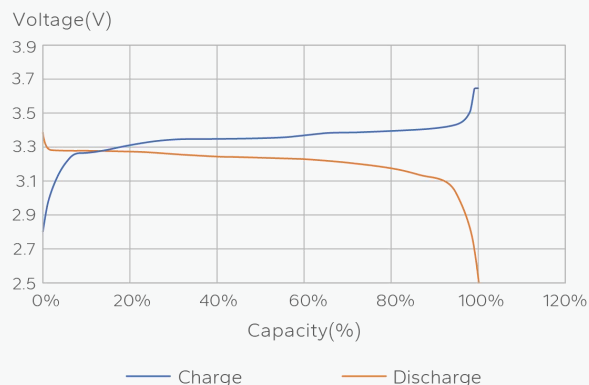


Performance Curves

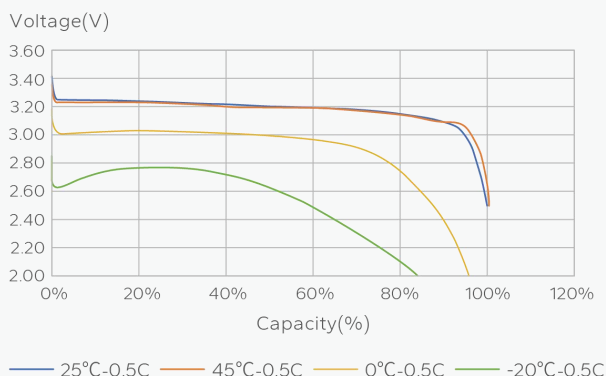
Discharge Performance at 25°C



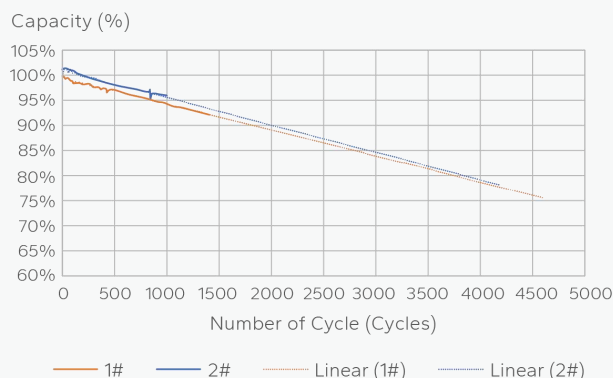
Charge and Discharge at 25°C, 0.5C



Discharge Curves at Different Temperature



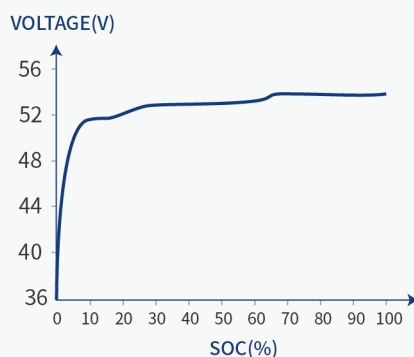
Cycle Life with DOD at 25°C



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	40 to 48
25	52 to 52.6
50	52.6 to 52.8
75	53.2 to 53.32
100	≥53.32

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.