

38.4V 45Ah GC Smart

LiFePO4 Battery

Part Number: L36V45-90-GC-BT-36-AGC2



Basic Specification

Nominal Voltage	38.4V
Nominal Capacity	45Ah
Nominal Energy	1728Wh
Internal Resistance	≤40mΩ
Function	Bluetooth/Low Temp/2C discharge
Max. Continuous Output Power	2000W (For Electric Cart); 3456W (For Energy Storage)
BMS Board	90A
Max. Batteries in Series and Parallel	6P1S
System Max. Extended Power	20736W
System Max. Extended Energy	10368Wh

Charge Specification

Max. Continuous Charging Current	45A(1C)
Recommended Charging Current	9A(0.2C)
Recommended Charging Voltage	43.2±0.6V

Discharge Specification

Max. Continuous Discharging Current	90A(2C)
Max. Instantaneous Discharge Current	225A/s(5C)

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)

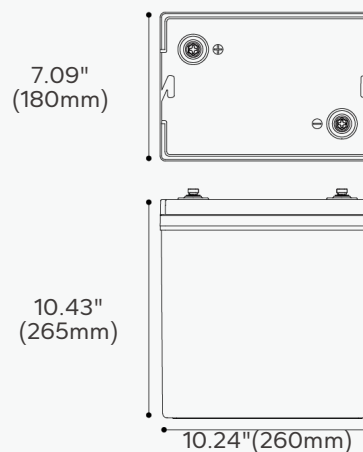
Mechanical Specification

Dimension(L * W * H)	L10.24*W7.09*H10.43 inch 260*180*265mm
Weight	Approx. 31.95 lbs/14.49kg
Terminal Type	M8*16mm
Terminal Torque	12 to 14 N·m
Case Material	ABS
IP Rating	IP65
Cell Type-chemistry	LiFePO4
BCI	GC2

Safety Specification

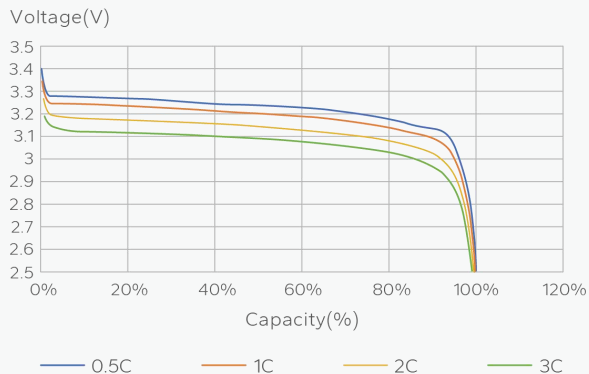
Certifications	CE, FCC, RoHS, UN38.3, UL-2271, FCC ID
Protection	Over-temperature/Over-discharge/Over-current/Over-voltage/Short-circuit/ Low-temperature charging protection/ Low-temperature discharge protection

Dimensions

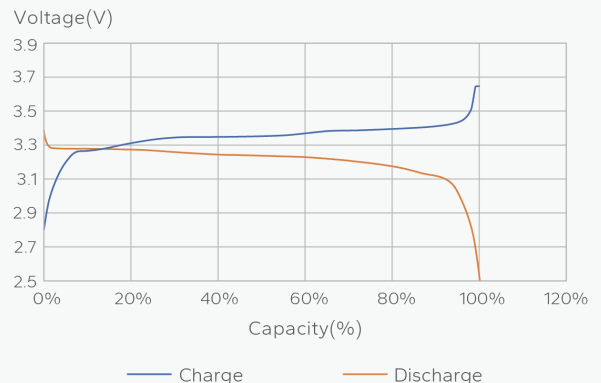


Performance Curves

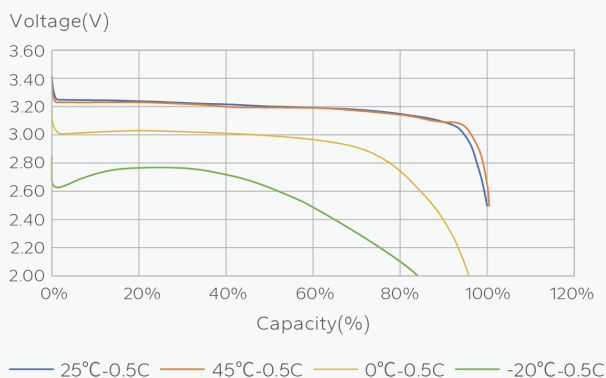
Discharge Performance at 25°C



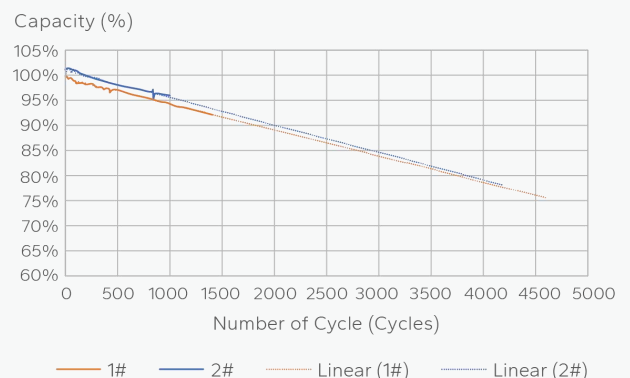
Charge and Discharge at 25°C, 0.5C



Discharge Curves at Different Temperature



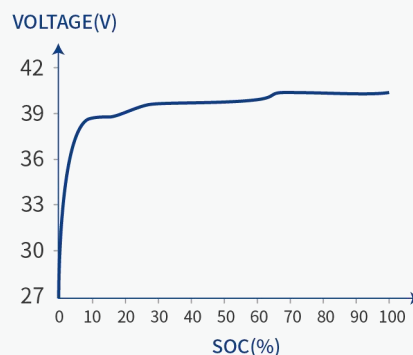
Cycle Life with DOD at 25°C



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.