

HCG-31 Series

/ Data sheet



- 12V 150Ah
- 12V 132Ah
- 12V 165Ah
- 24V 80Ah
- 48V 40Ah



Model Included:

- HCG31-12132** 12V 132Ah LiFePO4 Battery
- HCG31-12150** 12V 150Ah LiFePO4 Battery
- HCG31-12165** 12V 165Ah LiFePO4 Battery
- HCG31-2480** 24V 80Ah LiFePO4 Battery
- HCG31-4840** 48V 40Ah LiFePO4 Battery

Advanced Lithium Batteries		Model				
		HCG31-12132	HCG31-12150	HCG31-12165	HCG31-2480	HCG31-4840
Electrical Specifications	Nominal Voltage	12.8V	12.8V	12.8V	24V	48V
	Nominal Capacity	132Ah	150Ah	165Ah	80Ah	40Ah
	Parallel Connection	Max. 6units	Max. 6units	Max. 6units	Max. 6units	Max. 6units
	Serial Connection	Max. 4units	Max. 4units	Max. 4units	Max. 2units	No
	BMS	4S150A	4S150A	4S150A	8S80A	16S50A
	Circuit Protection	Over charge, Over discharge, Over current, Over temp, Short, Balance				
	Cycle Life	3000times Cycles @100%DOD and 6000times @80% DOD				
	Self Discharge	Less than 3% per month				
	Charge Efficiency	100% @0.2C				
	Discharge Efficiency	98-100% @1C				
Charge Specifications	Charge Voltage	14.4±0.2V	14.4±0.2V	14.4±0.2V	28.8±0.4V	57.6±0.8V
	Standard Current	26A	30A	33A	16A	8A
	Fast Current	66A	75A	82A	40A	20A
Discharge Specifications	Standard Current	26A	30A	33A	16A	8A
	Max. Con. Current	132A	150A	150A	80A	40A
	Peak Current	600A(300ms)	600A(300ms)	600A(300ms)	400A(300ms)	200A(300ms)
	Cut-off Voltage	10V	10V	10V	20V	40V
Mechanical Specifications	Dimensions (mm)	330×173×216mm (Group 31)				
	Approx Weight(KG)	15	15.5	15.5	15	15
	Terminal Type	M8				
	Case Color/material	Black Plastic case (ABS)				
	IP Rating	IP65				
	Cell Type	Cylinder LiFePO4 cell				
	Cell holder	Yes				
Temperature Specifications	Charge Temp	0°C to 55°C		(32°F to 131°F)		
	Discharge Temp	-20°C to 60°C		(-4°F to 140°F)		
	Storage Temp	-5°C to 45°C		(23°F to 113°F)		

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Key Points for Quality control:

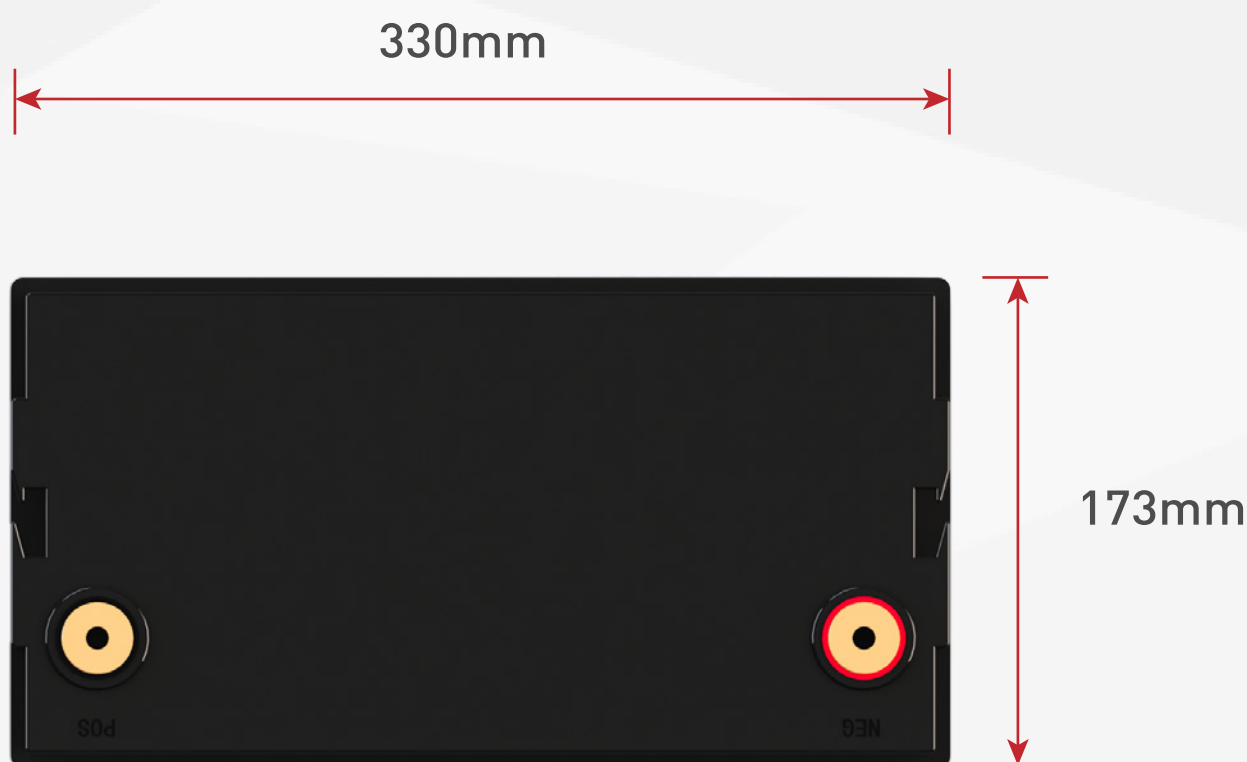
- **Cell match:**
More strict cell matching standard, the difference of Internal resistance is 1mΩ and voltage is 5mV.
- **Automatic cells welding:**
Cells are assembled by Automatic welding equipments to ensure the quality reliability and consistency.
- **100% Cycle test:**
All battery packs are 100% cycle tested (Fully Discharged→Fully Charged→Fully Discharged→60% Charged) before package and all test reports are stored.
- **Unique tracking number:**
All battery packs are lasered an unique number on the case side for quality tracking.

Certifications:

- UL1642 (Cell)
- IEC62133 (Cell)
- IEC62619 (Cell)
- CE (Pack)
- UN38.3 (Cell / Pack)
- ROHS (Cell)



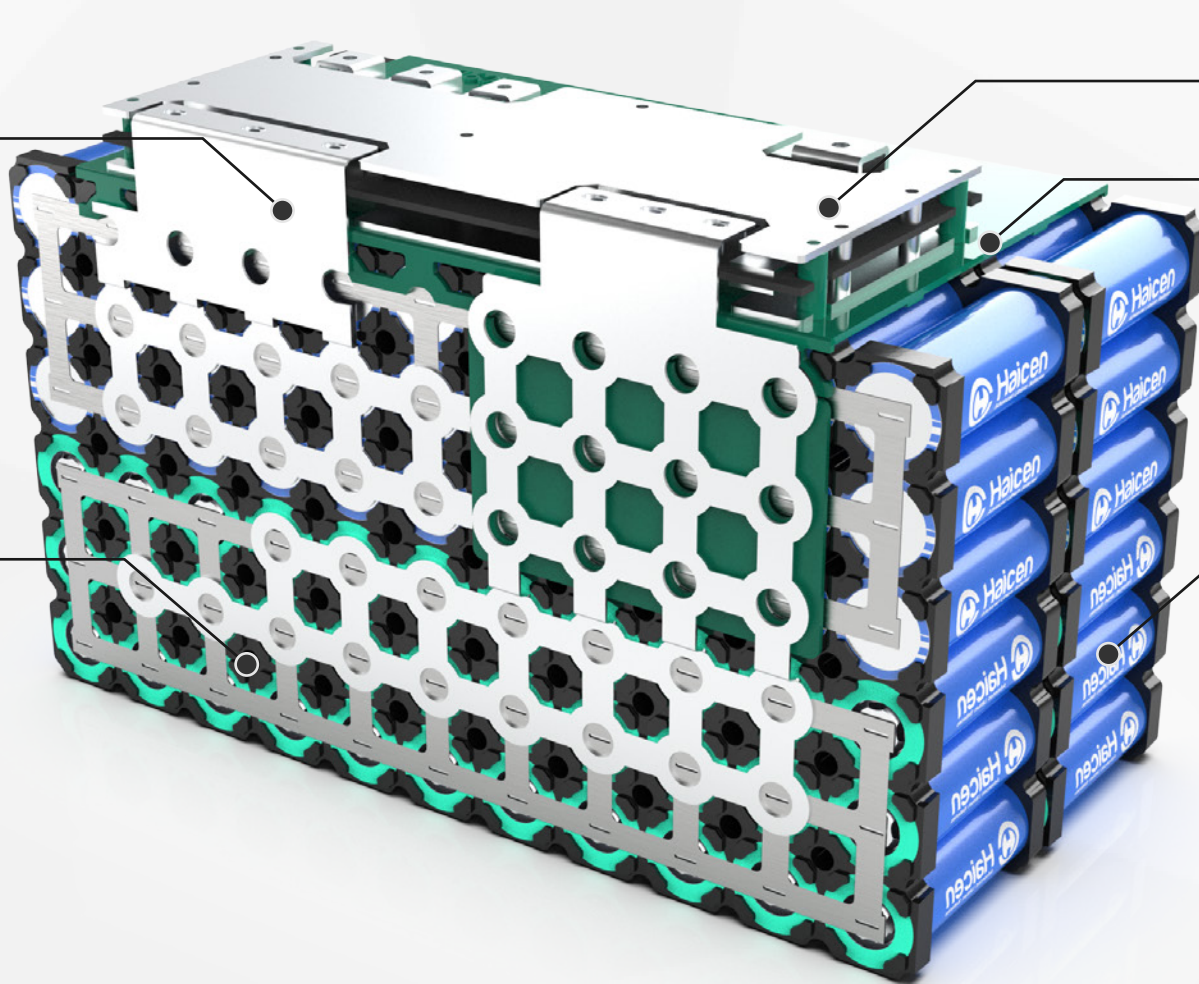
Dimensions:



Internal Structure:

Molded Nickel sheet

Molded Plastic cell holder



BMS
BMS holder

Cell

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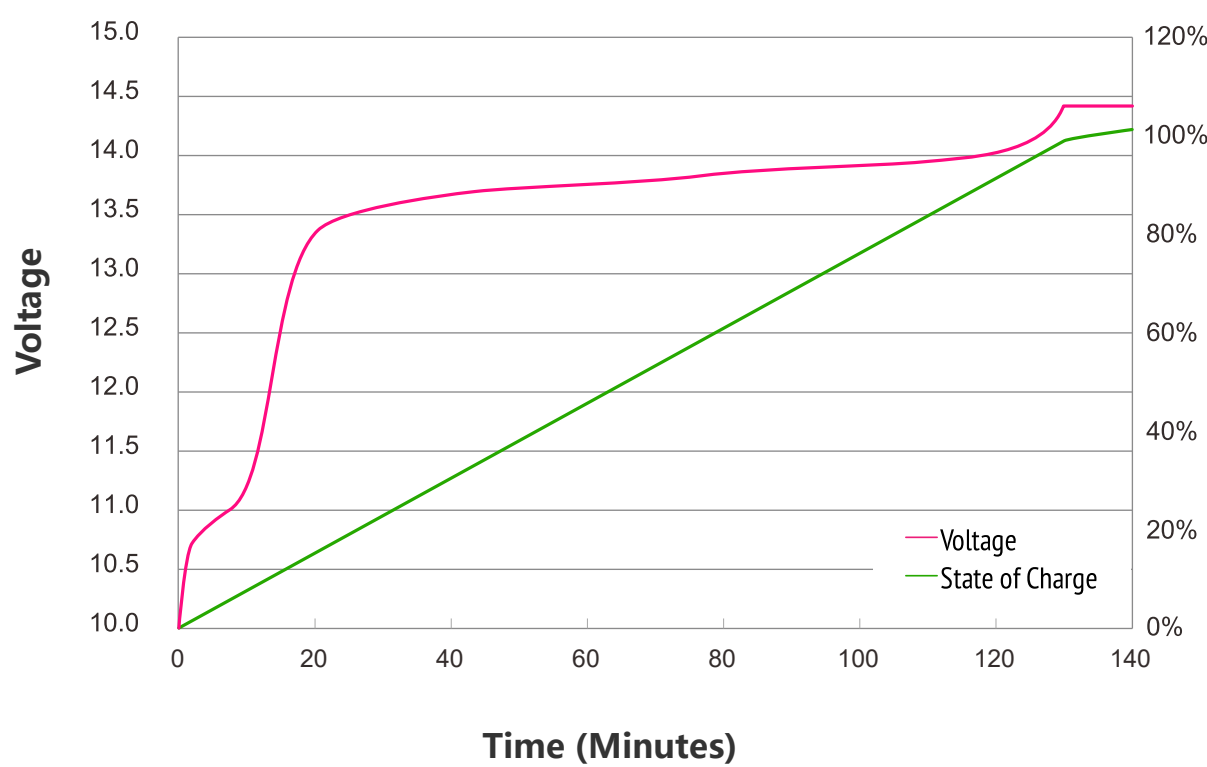
12V 165Ah

24V 80Ah

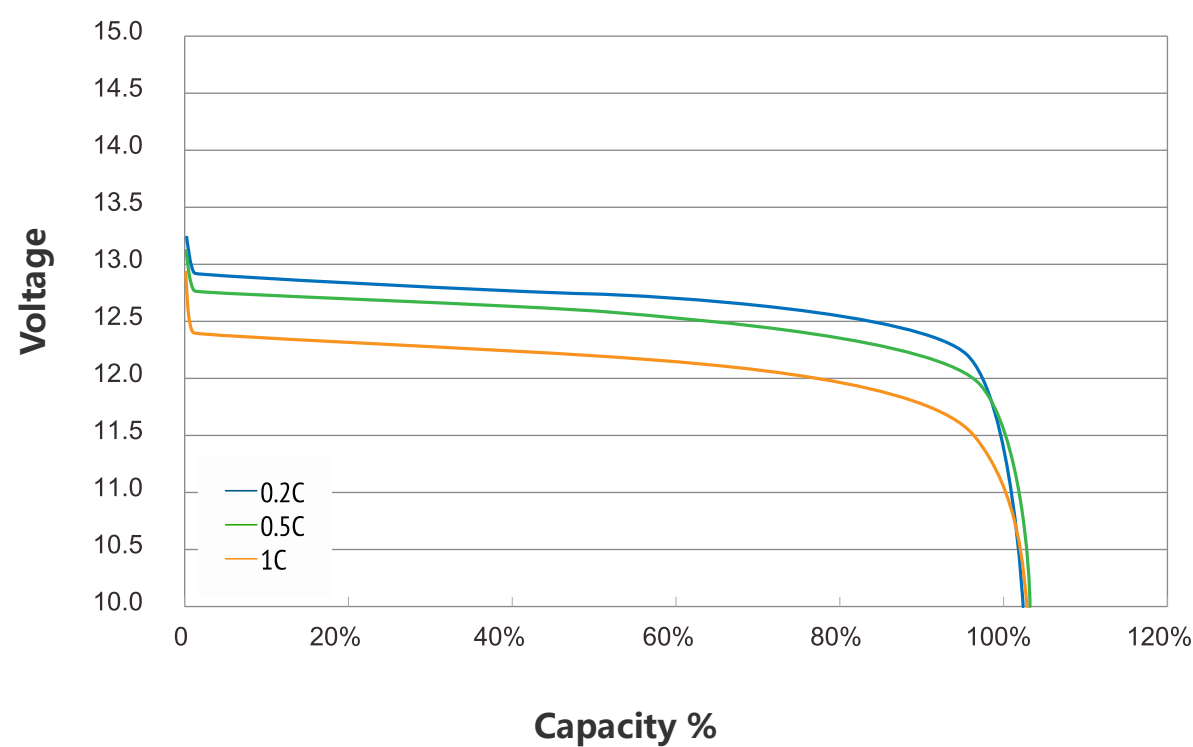
48V 40Ah

Characteristics Curve:

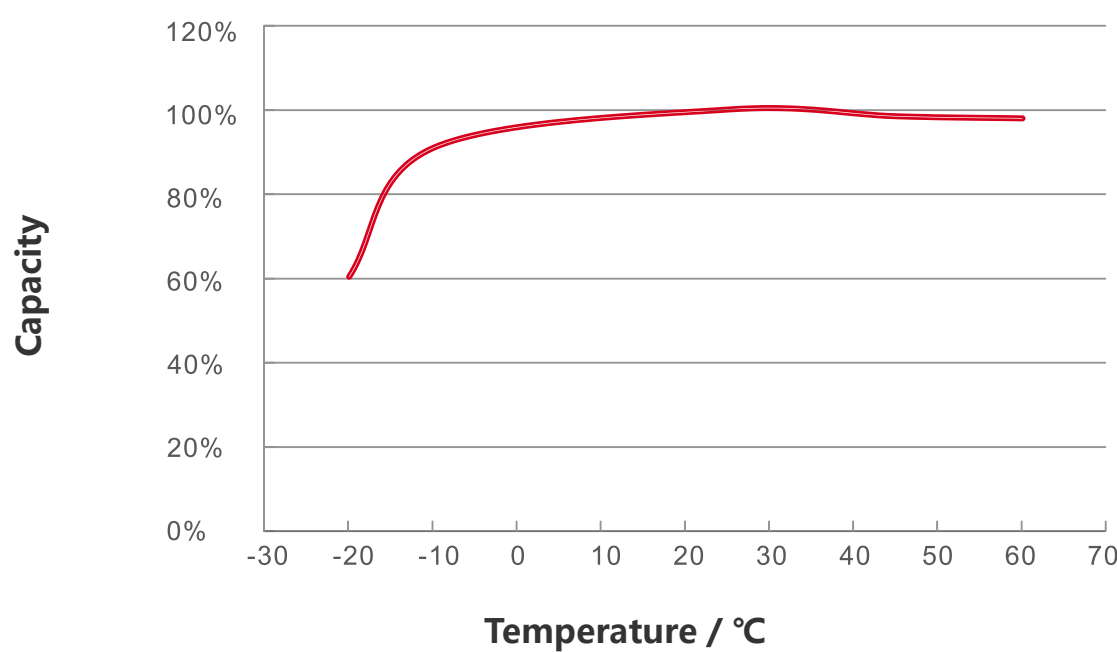
Charging Characteristics (0.5C @25°C)



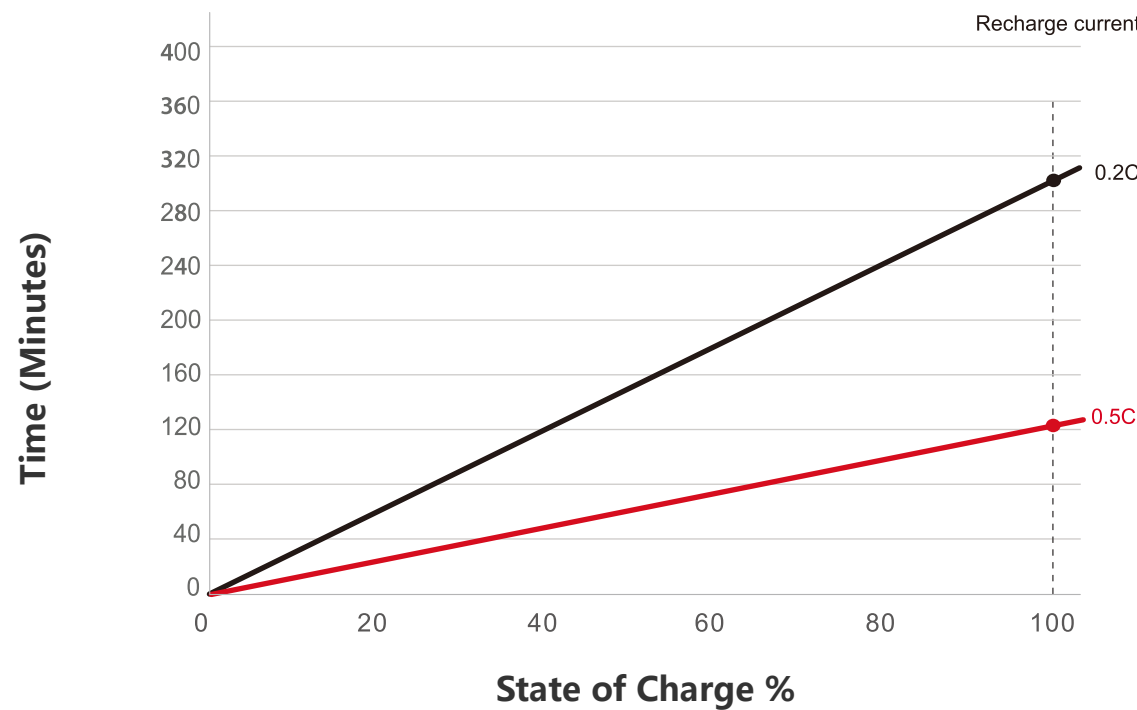
Discharging Characteristics (0.2C, 0.5C, 1C @25°C)



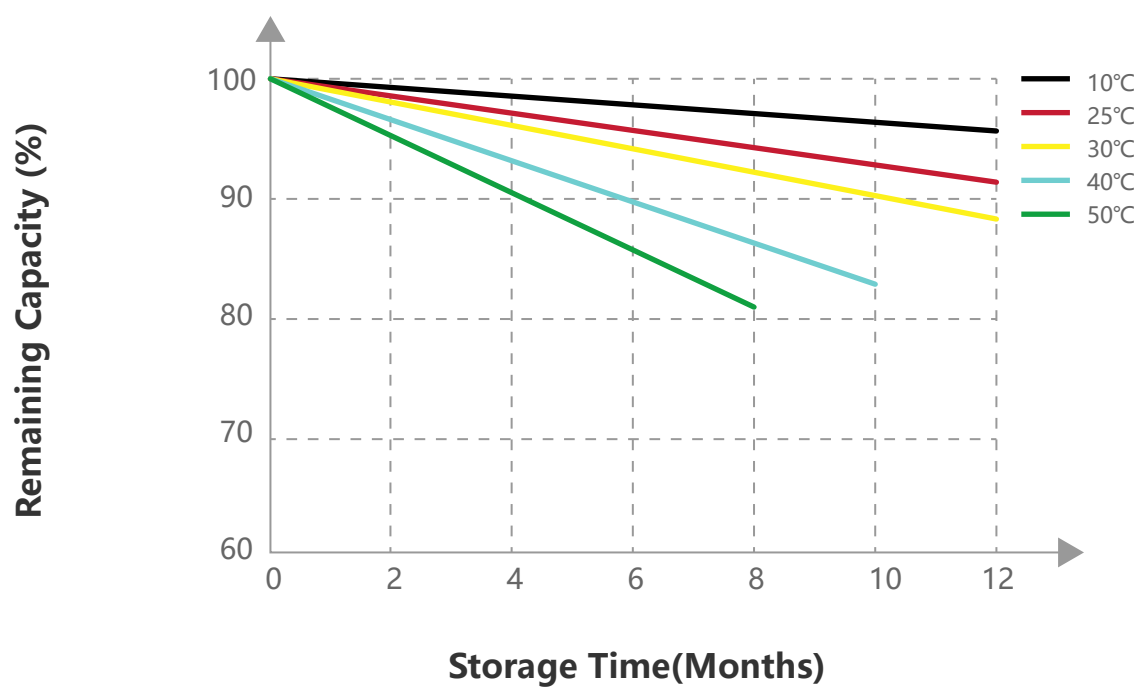
Different Temperature Capacity Curve



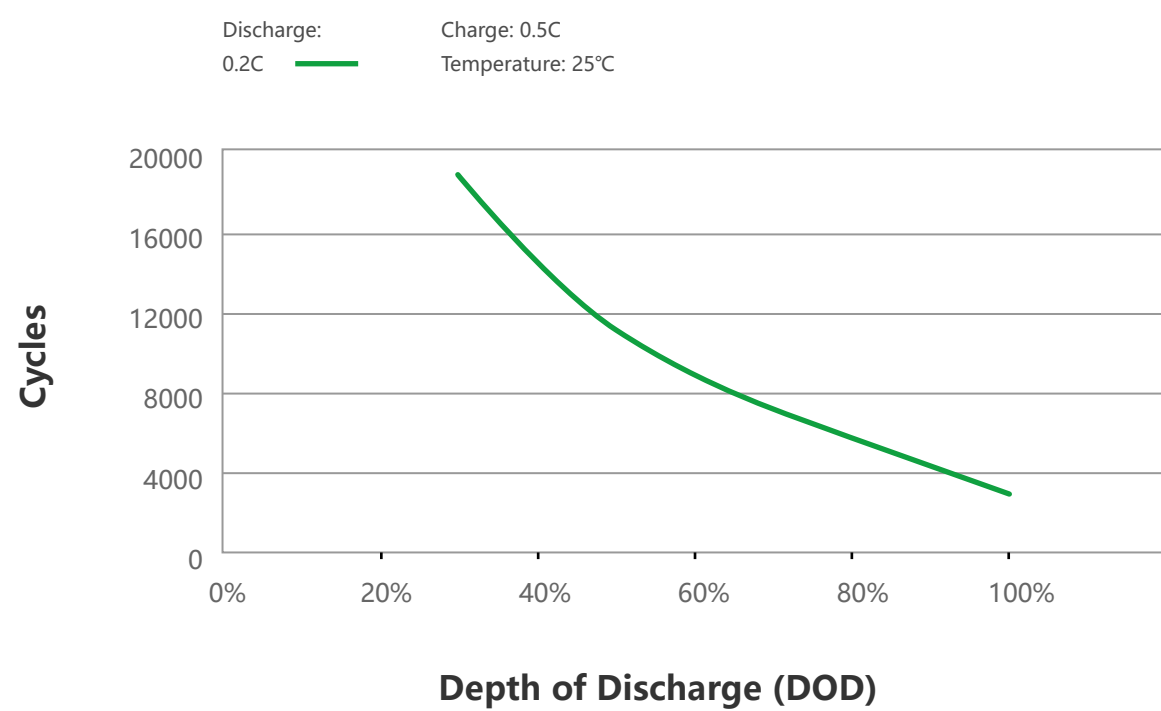
Typical Charge Time Curve



Different Temperature Self Discharge Curve



Different DOD Discharge Cycle Life Curve



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Key Benefits:

- **Higher qualified cylindrical cell:**
UL1642, IEC62619, IEC62133 listed with Cycle life more than 3000times and excellent consistency.
- **Stronger BMS:**
Can support the batteries in parallel and series connection
- **More stable and firm internal structure:**
Cell holders can well protect and separate the cells to avoid any circuit short risk caused by vibration or impact or over current, and improve the heat dissipation.
- **Smaller size and less weight:**
The size of our battery is just 3/4 size of the standard 12V 150Ah battery from other suppliers.

Market Applications:



RV



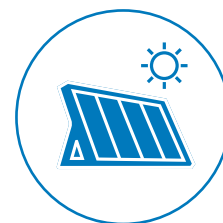
Marine



Golf cart



Light EV



Energy storage



Cleaning



Robotics



Lighting

Package:

20' Container=10Pallets=720Cartons=720Units;
40' Container=20Pallets=1440Cartons=1440Units;



Internal Package
Forming pearl foam



1Carton=1Unit

Weight: 16Kg/carton
Size(L×W×H): 410×250×310mm



1Pallet=72Cartons

Weight: 1167Kg/pallet
Size(L×W×H)=1.2×1×1.9m ≈ 2.3CBM

Customized items:

- **Case color:** Customized case color is acceptable based on quantity more than 300pcs per batch.
- **Label design:** We can help you to design customized label on the battery.
- **Carton design:** Customized carton is acceptable based on quantity more than 200pcs per batch.
- **Certificates:** 50% discount on certificates cost for first bulk order and 100% reback for future orders.
- **NDA agreement:** NDA agreement is allowed and necessary to protect your benefits.