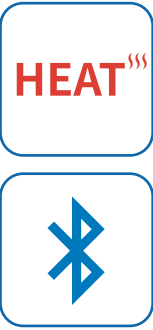


# HCG-24S Series / Data sheet



- 12V 100Ah
- 12V 120Ah
- 12V 135Ah
- Bluetooth
- HEAT<sup>™</sup>



## Model Included:

- HCG24S-12100BT** 12V 100Ah LiFePO4 Battery with Bluetooth
- HCG24S-12100BH** 12V 100Ah LiFePO4 Battery with Bluetooth and Heat (cold-weather performance battery)
- HCG24S-12120BT** 12V 120Ah LiFePO4 Battery with Bluetooth
- HCG24S-12120BH** 12V 120Ah LiFePO4 Battery with Bluetooth and Heat (cold-weather performance battery)
- HCG24S-12135BT** 12V 135Ah LiFePO4 Battery with Bluetooth
- HCG24S-12135BH** 12V 135Ah LiFePO4 Battery with Bluetooth and Heat (cold-weather performance battery)

<div>Haicen Advanced Lithium Batteries</div>		Model					
		HCG24S-12100BT	HCG24S-12100BH	HCG24S-12120BT	HCG24S-12120BH	HCG24S-12135BT	HCG24S-12135BH
Electrical Specifications	Nominal Voltage	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V
	Nominal Capacity	100Ah	100Ah	120Ah	120Ah	135Ah	135Ah
	Parallel Connection	Max. 6units	Max. 6units	Max. 6units	Max. 6units	Max. 6units	Max. 6units
	Serial Connection	Max. 4units	Max. 4units	Max. 4units	Max. 4units	Max. 4units	Max. 4units
	BMS	4S100A	4S100A	4S150A	4S150A	4S150A	4S150A
	Bluetooth	Android/IOS	Android/IOS	Android/IOS	Android/IOS	Android/IOS	Android/IOS
	Heat	No	Yes	No	Yes	No	Yes
	Circuit Protection	Over charge, Over discharge, Over current, Over temp, Short, Balance,Low temp					
	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	14.4±0.2V	14.4±0.2V	14.4±0.2V
	Standard Current	20A	20A	24A	24A	27A	27A
	Fast Current	50A	50A	60A	60A	67A	67A
Discharge Specifications	Standard Current	20A	20A	24A	24A	27A	27A
	Max. Con. Current	100A	100A	120A	120A	135A	135A
	Peak Current	700A(300ms)	700A(300ms)	800A(300ms)	800A(300ms)	800A(300ms)	800A(300ms)
	Cut-off Voltage	10V	10V	10V	10V	10V	10V
Mechanical Specifications	Dimensions (mm)	260×170×208mm (Group 24)					
	Approx Weight(KG)	11.5	12	13	13.5	13	13.5
	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)	-20°C to 55°C (-4°F to 131°F)	0°C to 55°C (32°F to 131°F)	-20°C to 55°C (-4°F to 131°F)	0°C to 55°C (32°F to 131°F)	-20°C to 55°C (-4°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:

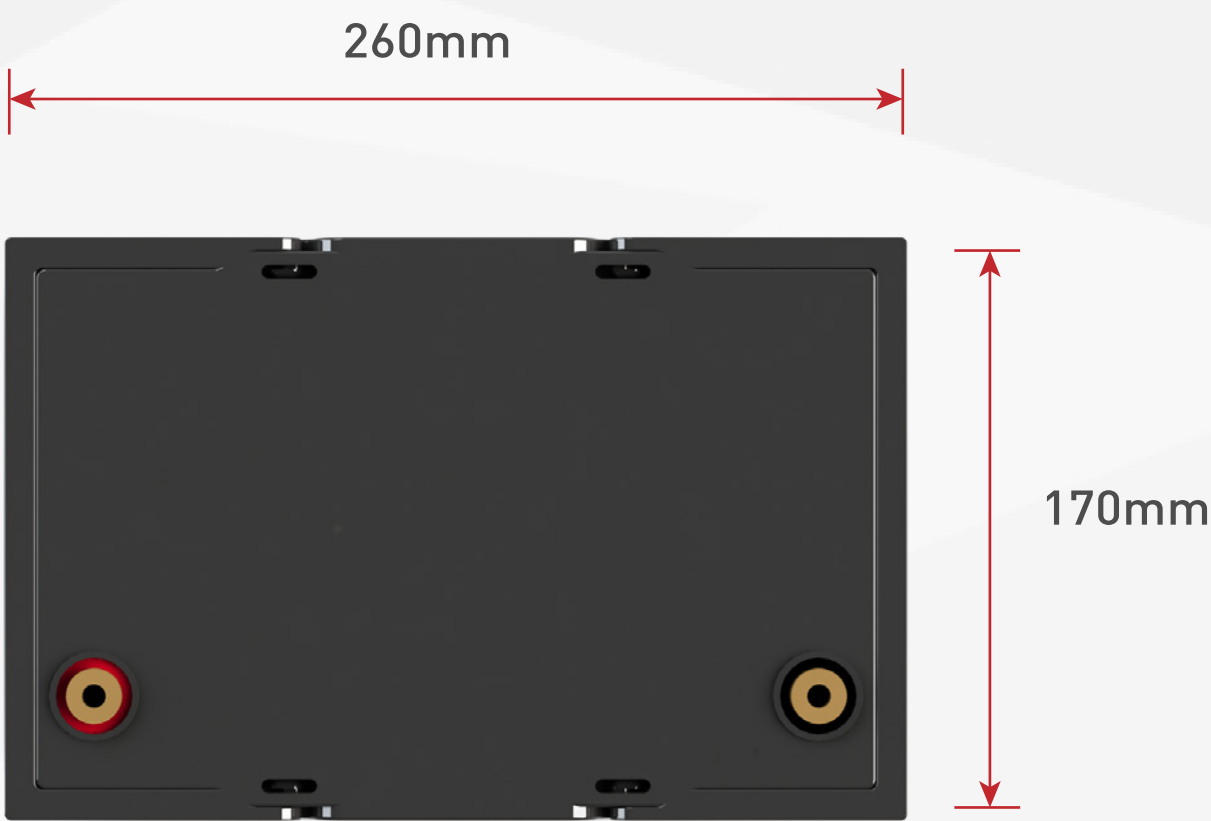
- Cell match:**  
More strict cell matching standard, the difference of Internal resistance is 1mΩ and voltage is 5mV.
- Automatic cells welding:**  
Cells are assembled by Automatic welding equipments to ensure the quality reliability and consistency.
- 100% Cycle test:**  
All battery packs are 100% 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:

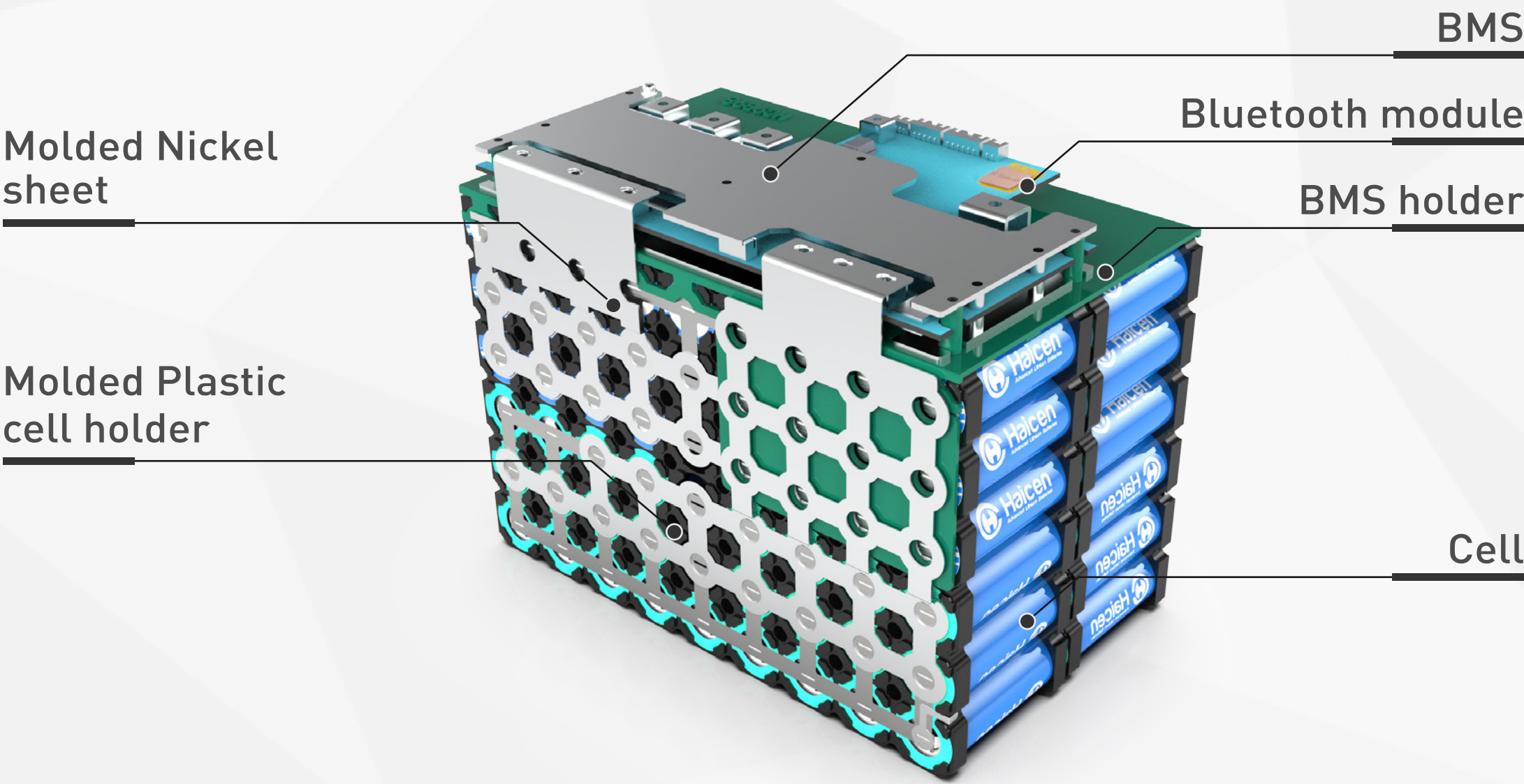
- UL1642 (Cell)
- IEC62133 (Cell)
- IEC62619 (Cell)
- CE (Pack)
- UN38.3 (Cell / Pack)
- ROHS (Cell)



## Dimensions:



## Internal Structure:





# HCG-24S Series / Data sheet



12V 100Ah

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12V 135Ah

Bluetooth

HEAT™

## SOC Display (optional)



### ALM

Alarming  
The red LED will flash when the battery sends an alarm.

Customized logo is acceptable.

### RUN

Working status of the battery  
The green LED will be on when charging or discharging.

### SOC (State of Charge)

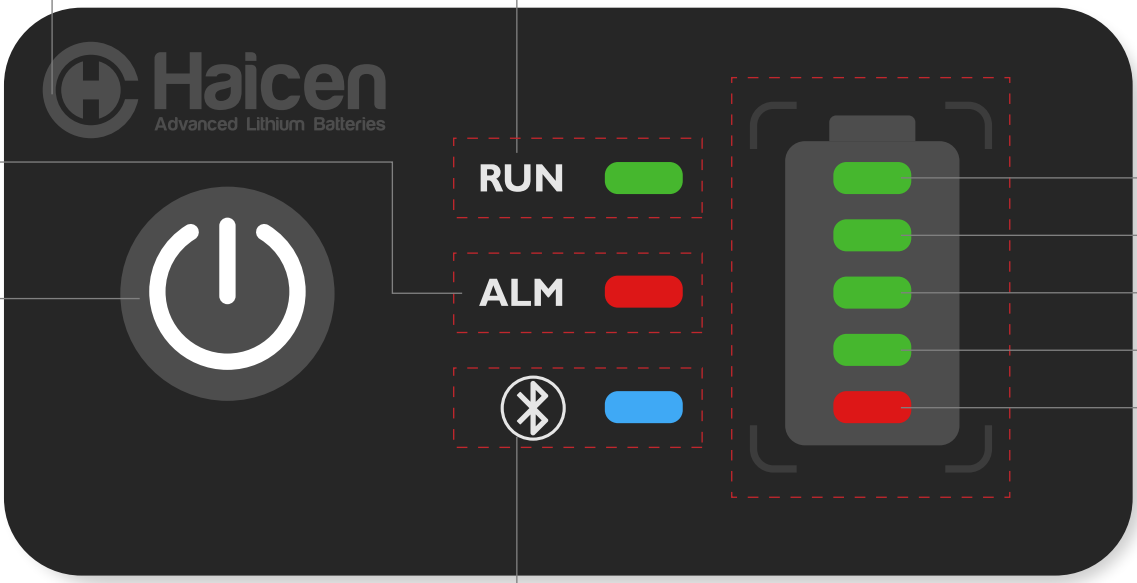
100% SOC (Full Charge)  
80% SOC  
60% SOC  
40% SOC  
20% SOC

### Switch

- 1.With the standby state, touch the “Switch” key, then the SOC LED will be on to show the current SOC and the RUN LED will be on. After 5s later, all LEDs in panel will turn off.
- 2.Press and hold the switch for 3s, then the BMS will immediately go to Sleep mode. With the Sleep state, press on the “Switch” key for 3s, then the BMS will wake up.

### Bluetooth

Bluetooth connection status  
The blue LED will be on when the battery is connected to Bluetooth.



# HCG-24S Series / Data sheet



12V 100Ah

12V 120Ah

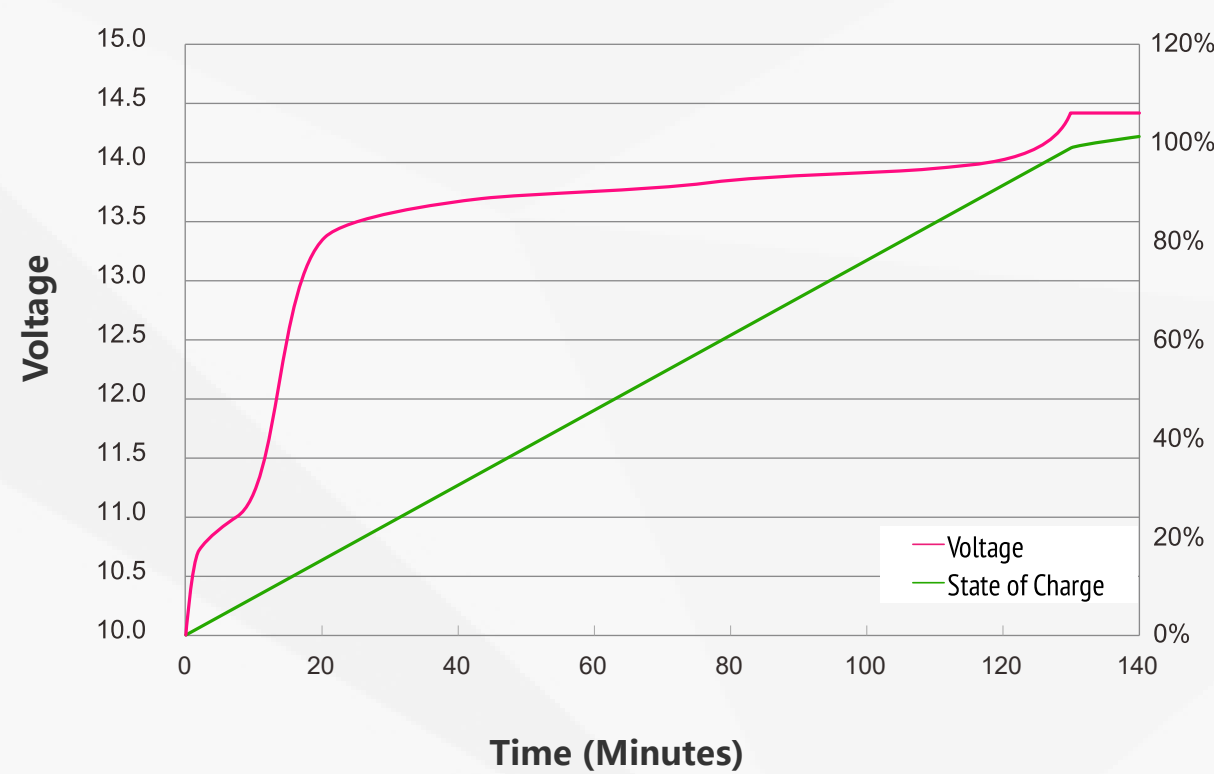
12V 135Ah

Bluetooth

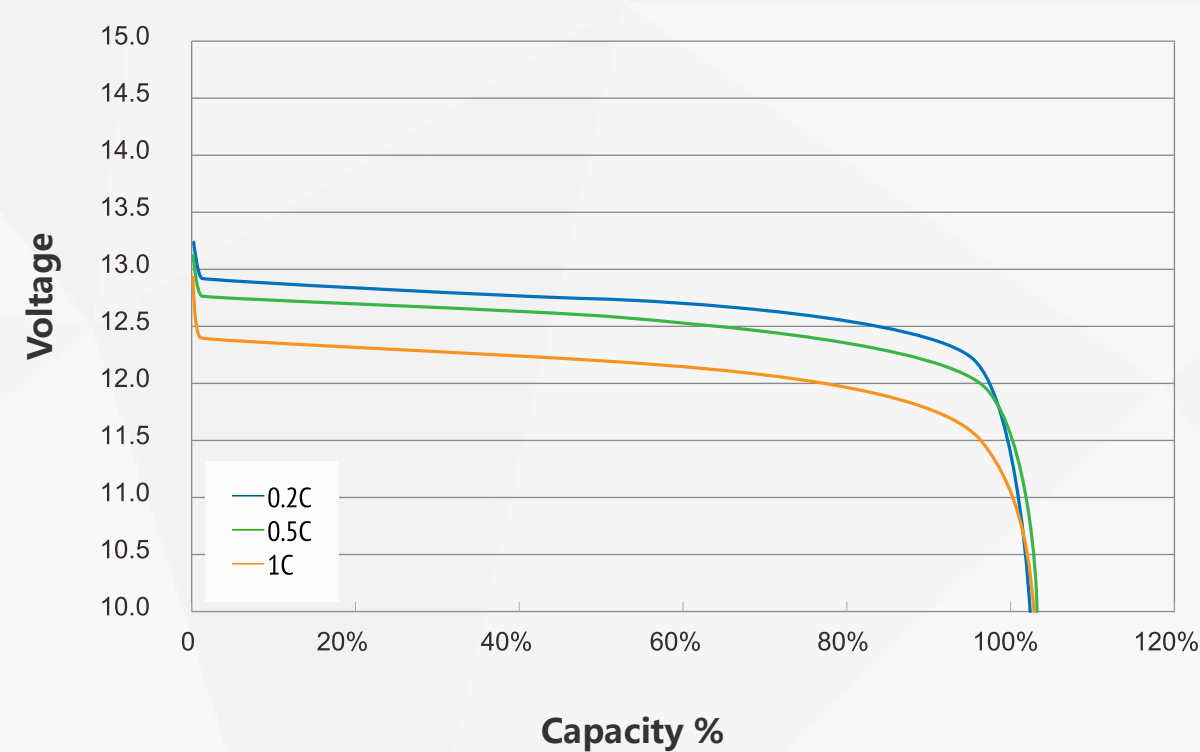
HEAT<sup>™</sup>

## Characteristics Curve:

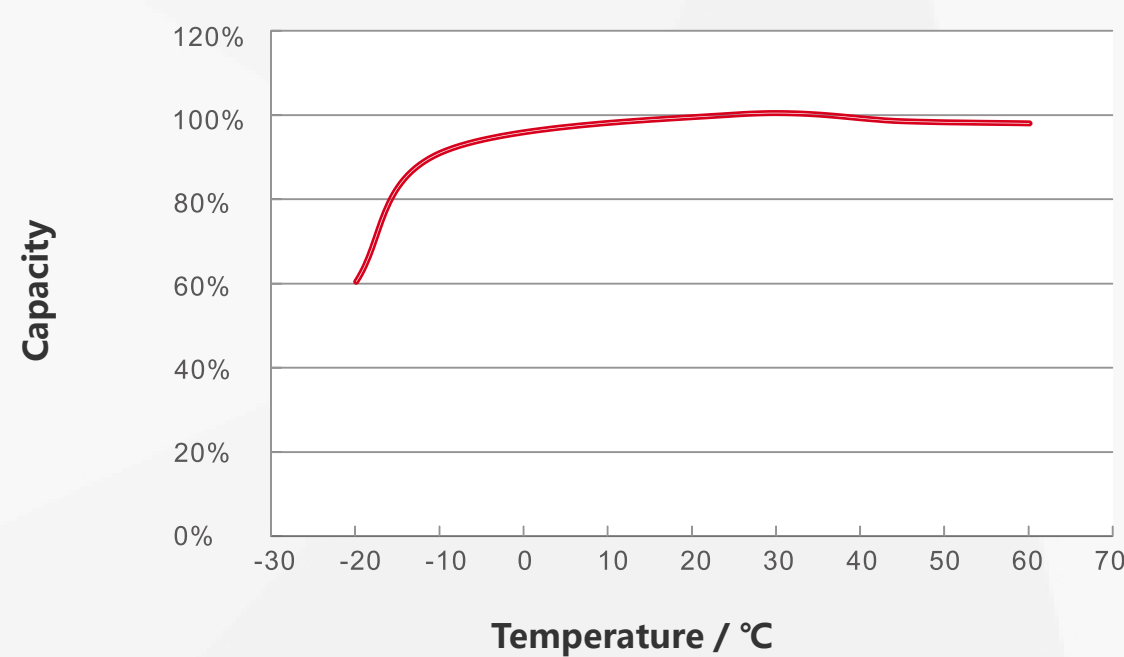
Charging Characteristics (0.5C @25°C)



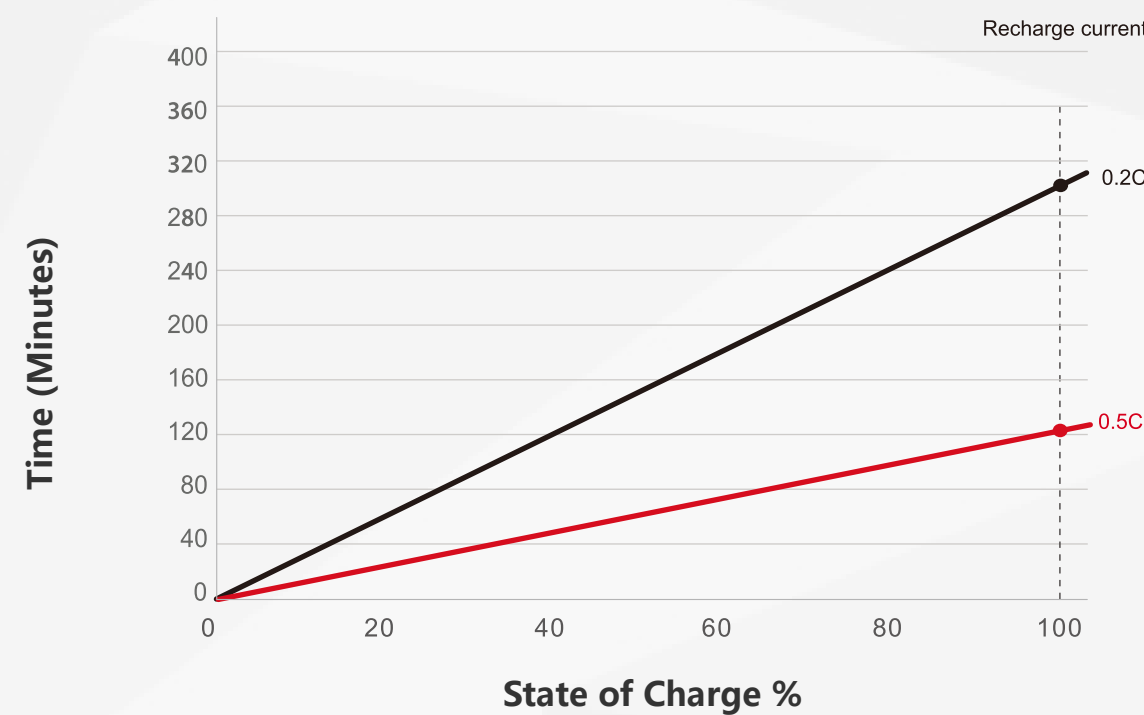
Discharging Characteristics (0.2C, 0.5C, 1C @25°C)



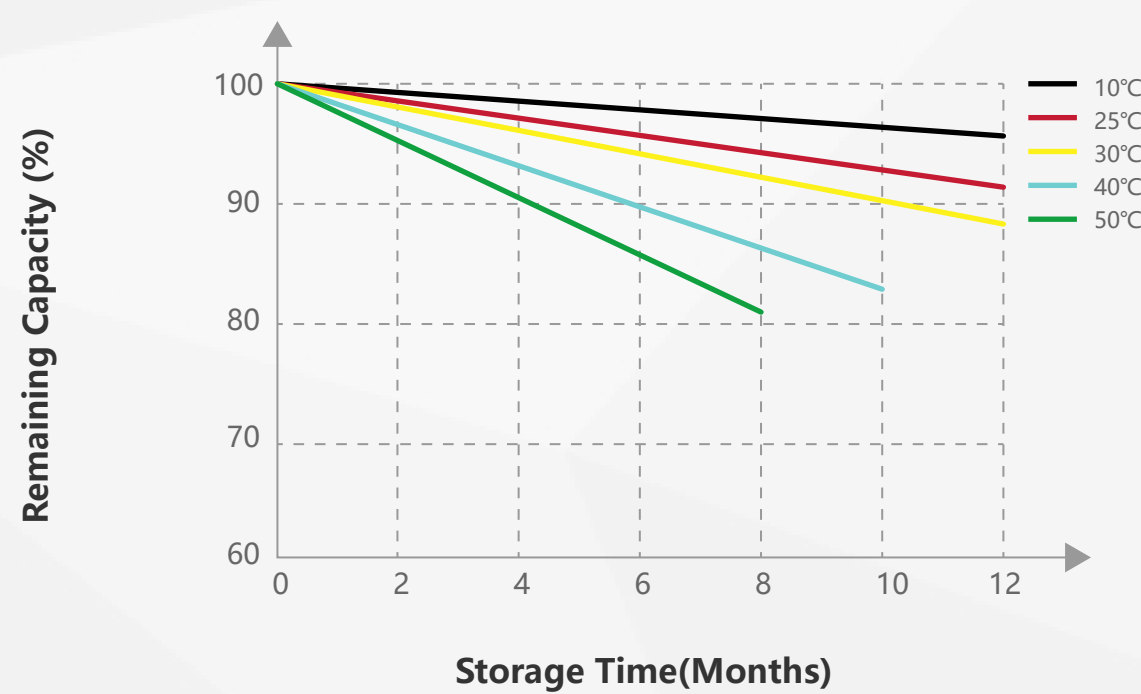
Different Temperature Capacity Curve



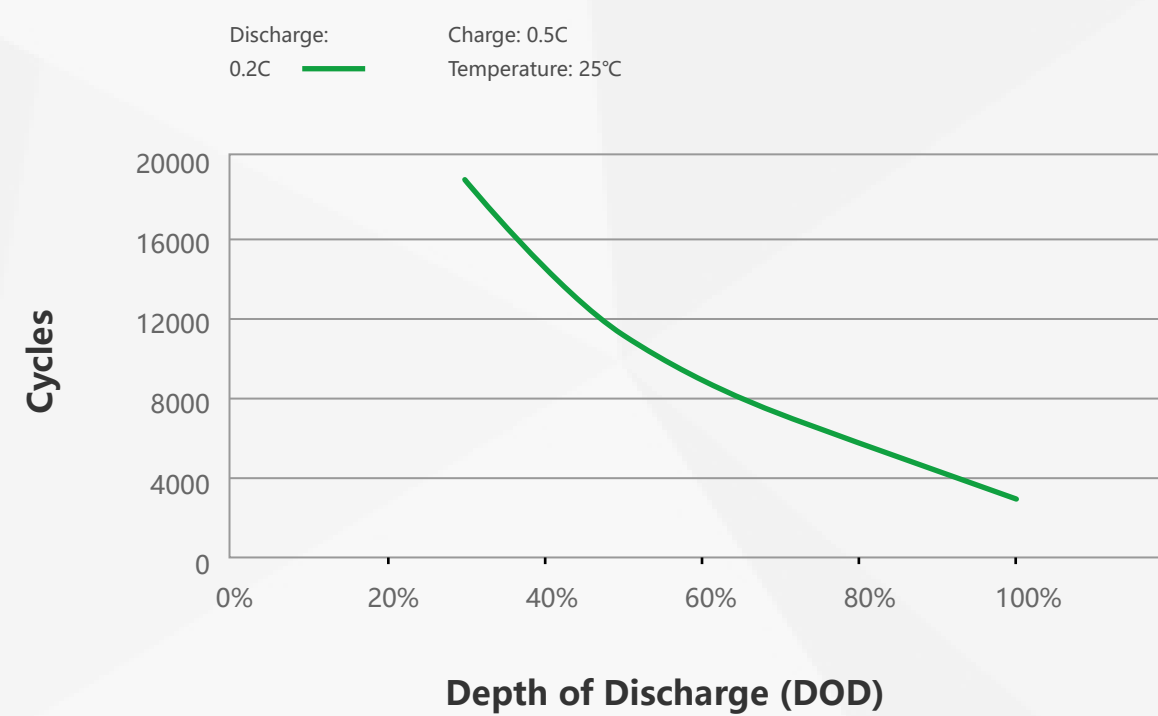
Typical Charge Time Curve



Different Temperature Self Discharge Curve



Different DOD Discharge Cycle Life Curve



# HCG-24S Series / Data sheet



12V 100Ah

12V 120Ah

12V 135Ah

Bluetooth

HEAT<sup>™</sup>

## Key Benefits:

- **Higher qualified cylindrical cell:**  
UL1642, IEC62619, IEC62133 listed with Cycle life more than 3000times and excellent consistency.
- **Bluetooth:**  
can monitor the battery status(charge, discharge, current, temperature, cycle life and so on) and change the data for different applications.
- **Heat:**  
Uniform internal heating is an important feature of our cold-weather performance batteries, as many external heating blanket options currently available cannot sense the internal temperature of the cells and may not be completely effective at heating the battery throughout. The system features proprietary technology that draws power from the charger itself, requiring no additional components. The entire process of heating and charging is completely seamless. Simply plug the battery into the regular lithium charger and the internal heating and monitoring system takes care of the rest.
- **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 100Ah battery from other suppliers.

## Market Applications:



RV



Marine



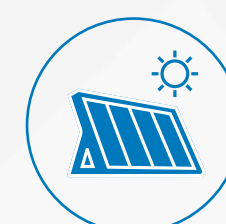
Golf cart



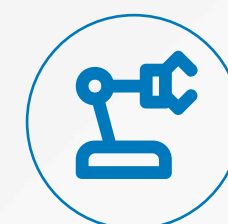
Cleaning



Light EV



Energy storage



Robotics



Lighting

## Package:

20' Container=10Pallets=900Cartons=900Units;  
40' Container=20Pallets=1800Cartons=1800Units;



Internal Package  
Forming pearl foam



1Carton=1Unit

Weight: 12Kg/carton  
Size(L×W×H): 320×230×282mm



1Pallet=90Cartons

Weight: 1095Kg/pallet  
Size(L×W×H)=1.2×1×1.8m ≈ 2.2BM

## Customized items:

- **Bluetooth App design:** Help you to design and upload customized App, or supply you our Source code for your design.
- **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 benifits.