

LIMITLESS TECHNOLOGY, LIMITLESS DREAMS



ULTRA-LOW TEMPERATURE LITHIUM-ION BATTERY

Zhongke Hongtai New Energy Technology Co., Ltd

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Zhongke Hongtai New Energy
Technology Co., Ltd.
中科弘泰（安徽）新能源科技有限公司

New Era New Energy New Life

CORPORATE CULTURE 企业文化

Aspiration

Become a benchmark enterprise for ultra-low temperature special power supply and the leader of the new energy industry.

Mission

Provide customers with the highest quality ultra-low temperature battery and power supply solutions.

Value

Achieve large enterprises,
Feed back to society at scale,
And use technology to benefit mankind.

We would never forget why we started,
and we will always keep the mission in our mind.
With our great honesty and professionalism,
any cooperation will be a double win.

Dr. Liu Yuanjian (Chairman)



INTRODUCTION



Zhongke Hongtai (Anhui) New Energy Technology Co., Ltd, established in 2023, is a production and sales integration company located in Tongling City, Anhui Province; And fully funded by Xi'an YaHongTai New Energy Technology Co., Ltd.

The company relies on the material research, technology development and advanced achievements transformation of Professor Liu Yuanli during his work in the U.S. Department of Energy; also combines with the valuable experience of the scientific research and technology team of the Chinese Academy of Sciences and many senior experts and scholars in the new energy industry. The company is jointly established by a number of new energy professionals who have been working in the new energy industry for more than 10 years.



We mainly produce ultra-low temperature lithium batteries for civil use, battery management systems and related supporting materials; We are committed to making up for the gap in the large-scale production of high-performance -50 °C ultra-low temperature special batteries in the market, and to meet the current demand for high-tech batteries in the high-end civil market in specific areas. We also cooperate with scientific research institutions to develop the next generation of solid-state, graphene cryogenic batteries.

Performance Advantages:

Low Temperature Resistance:

Can work normally at -50°C , and discharge efficiency is $>90\%$

High Specific Energy:

The mass specific energy of a single battery can reach 200-300Wh/kg

Long Cycle: special battery 100% DOD cycle life >6000 times

Environmental Adaptability:

Suitable for harsh environments such as high altitudes, deep seas, and alpine wilderness

PRODUCT OVERVIEW

Product series / List of battery cell

No.	Model	Type	Capacity (mha)	Materials	Nominal voltage(V)	Work Temp	Shape
1	YHTD18650	Low-Temp	2200	NCM	3.7	-50-65°C	Cylinder Battery
2	YHTD18650	Low-Temp	2600	NCM	3.7	-50-65°C	
3	YHTD18650	Low-Temp	2800	NCM	3.7	-50-65°C	
4	YHTR18650	Low-Temp	3200	NCM	3.7	-20-65°C	
5	YHTR18650	Low-Temp	3500	NCM	3.7	-20-65°C	
6	YHTR14500	Low-Temp	1200	NCM	3.7	-20-65°C	
7	YHTD21700	Low-Temp	4000	NCM	3.7	-50-65°C	
8	YHTD26650	Low-Temp	3400	LFP	3.2	-50-65°C	
9	YHTR32650	High-Cap	6000	LFP	3.2	-20-65°C	
10	YHTR601013	High-Cap	50	NCM	3.7	-20-65°C	
11	YHTR651135	High-Cap	210	NCM	3.7	-20-65°C	
12	YHTR701360	High-Cap	500	NCM	3.7	-20-65°C	
13	YHTR504070	High-Cap	2000	NCM	3.7	-20-65°C	
14	YHTR306084	High-Cap	2500	NCM	3.7	-20-65°C	
15	YHTD704764	Low-Temp	3000	NCM	3.7	-50-65°C	
16	YHTD855560	Low-Temp	3600	NCM	3.7	-50-65°C	
17	YHTR5068135	High-Cap	4000	NCM	3.7	-20-65°C	
18	YHTD4062140	Low-Temp	5000	NCM	3.7	-50-65°C	
19	YHTD5065160	Low-Temp	6400	NCM	3.7	-50-65°C	
20	YHTB7284120	High-Cyc	7500	NCM	3.7	-20-65°C	
21	YHTD6566160	Low-Temp	10000	NCM	3.7	-50-65°C	
22	YHTB70100200	High-Cyc	10000	NCM	3.7	-20-65°C	
23	YHTD58126175	Low-Temp	20000	NCM	3.7	-50-65°C	
24	YHTR78128152	High-Cap	26000	NCM	3.85	-20-65°C	
25	YHTD12185265	Low-Temp	42000	LFP	3.2	-50-65°C	Aluminum Shelled Battery
26	YHTD27148134	Low-Temp	40000	LFP	3.2	-50-65°C	
27	YHTR27148127	High-Cap	50000	LFP	3.2	-20-65°C	
28	YHTR50160115	High-Cap	100000	LFP	3.2	-20-65°C	
29	YHTR48173166	High-Cap	165000	LFP	3.2	-20-65°C	
30	THTR54174208	High-Cap	228000	LFP	3.2	-20-65°C	
31	YHTR72174207	High-Cap	304000	LFP	3.2	-20-65°C	

PRODUCT LINE

YHTD18650-2800mAh

Low-Temperature Cylinder Battery Cell



Ultra-low temperature
special lithium
battery manufacturer

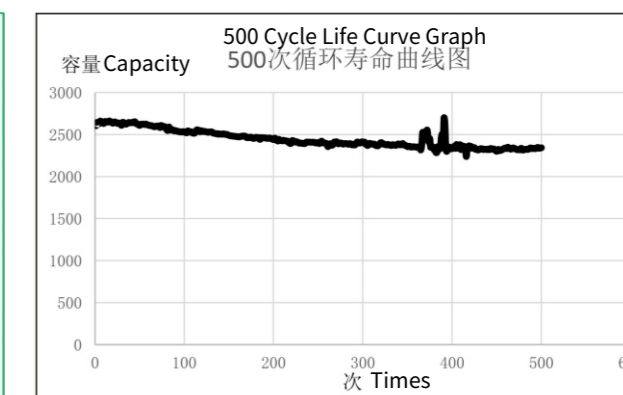
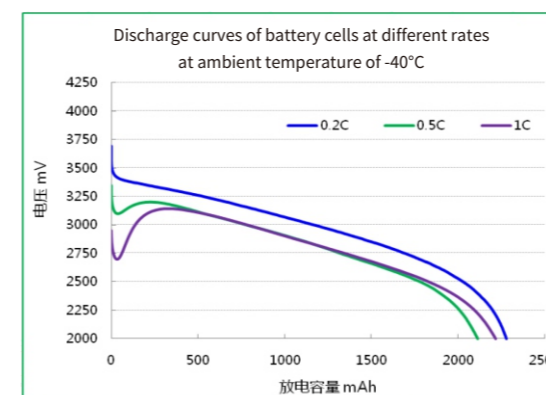
Product introduction

Nominal capacity: 2800mAh, Minimal capacity: 2750mAh, Nominal Voltage: 3700mV, Maximum Continuous Charging Current: 2800mA, Charging Voltage: 4200mV, Discharge Termination Voltage: 2750mV, Maximum Discharge Current: 8400mA, Internal Resistance: $\leq 20\Omega$, Weight: 48g, Standard Charging Current: 560mA, Fast charging current: 1400mA, Diameter: $\leq 18.5\text{mm}$, Height: 65.5mm, Standard Discharge Current: 560mA, Fast Discharge Current: 2800mA.

Standard Charging: 0.2C constant current charging till 4200mV, Constant pressure 4200mV, cutoff current 0.02C,

Operating Temperature: -50°C~65°C. **Fast Charging:** 0.5C constant current charging till 4200mV, Constant pressure 4200mV, cutoff current 0.02C, Nominal Capacity: 2800mAh. **Standard Discharging:** 0.02C constant current discharging till 2750mV, Storage temperature within 3 month: 0~45°C; within 1 year: 0~25°C. **Fast Discharging:** 1C constant current discharging till 2750mV, Cycle life 0.5C 500 cycles, Capacity retention rate $\geq 90\%$.

Suitable type: Ultra-Low Temperature Communication Equipment



PRODUCT LINE

YHTD27148134-40000mAh

**Low-Temperature
Aluminum Shell Battery Cell**

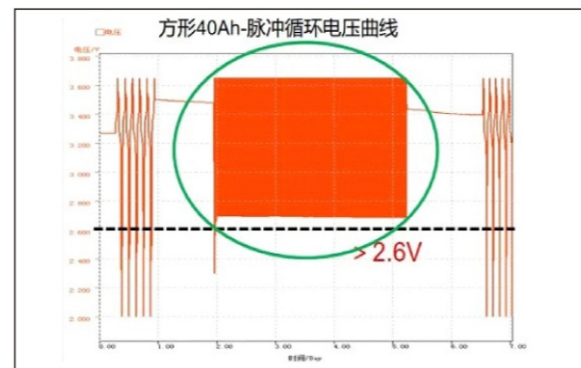
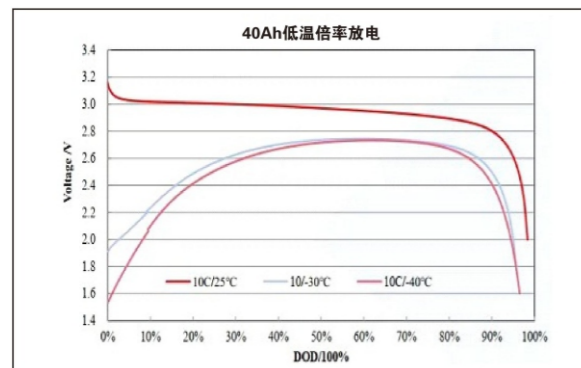


Product introduction

Minimum capacity: 39900mAh, nominal voltage: 3200mV, maximum continuous charging current: 120000mA, charging voltage: 3650mV. Discharge termination voltage: 2000mV, maximum discharge current: 400000mA, internal resistance: $\leq 0.5m\Omega$, weight: $\leq 1050g$, Size: (T)27mmx(W)148mmx(H)134mm, standard charging current: 20000mA. Fast charging current: 40000mA, Standard discharge current: 40000mA, Fast discharging current: 200000mA, Operating temperature: $-50^{\circ}C \sim 65^{\circ}C$.

Fast charging: 0.5C, Constant current charging till 3650mV, constant voltage 3650mV, charging cut-off current 0.02C, nominal capacity: 40000mAh. Standard discharge: 0.5C constant current discharge till 2000mV, storage temperature: within 3 months $0 \sim 45^{\circ}C$; within 1 year $0 \sim 25^{\circ}C$. Cycle life: 0.5C, 6000 cycles, capacity retention rate $\geq 80\%$

Applicable type: ultra-low temperature power battery



PRODUCT LINE

YHTD12185265-42000mAh

**Low-Temperature
Polymer Soft Pack Battery Cell**



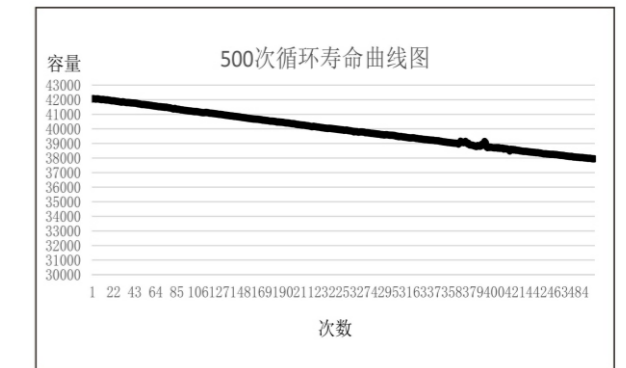
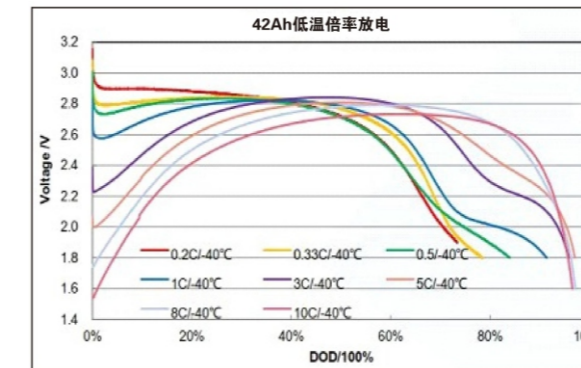
Product introduction

Minimum capacity: 41900mAh, nominal voltage: 3200mV, maximum continuous charging current: 42000mA, charging voltage: 3650mV, discharge termination voltage: 2000mV, maximum discharge current: 126000mA, internal resistance: $< 0.5m$, weight: 1120g, standard charging current: 8400mA, fast charge current: 21000mA, size:

(T)12mmx(W)85mmx(H)265mm, standard discharge current: 8400mA, fast discharge current: 42000mA.

Standard charging: 0.2c, constant current charging to 3650mV, constant voltage: 3650mV, charging cut-off current: 0.02C, operating temperature: $-50^{\circ}C \sim 65^{\circ}C$ Fast charging: 0.5C constant current charging till 3650mV, constant voltage 3650mV, charging Cut-off current 0.02C, nominal capacity: 40000mAh. Standard discharge: 0.2 constant current discharge to 2000mV, storage temperature: within 3 months $0 \sim 45^{\circ}C$; within 1 year $0 \sim 25^{\circ}C$, cycle life: 0.5C 6000 cycles, capacity retention rate $\geq 80\%$.

Applicable type: ultra-low temperature vehicle power battery.



PRODUCT LINE

YHT-614.4V/720Ah

Replaceable Battery for Heavy Truck



Product introduction

Rated voltage: 614.4V, Rated capacity: $\geq 720Ah$

Working voltage: 480V-700.8V, Adaptable ambient temperature: $-50^{\circ}C \sim 65^{\circ}C$

Dimensions: L:1350mm* W:2500mm* H:2200mm

Weight: $\leq 49000Kg$

Applicable type: Heavy Truck



PRODUCT LINE

YHT-28.8V/112Ah

Trolley Case Mobile Power Supply



Product introduction

Rated voltage: 28.8V, Rated capacity: $\geq 112Ah$

Working voltage: 20V-33.6V, Adaptable ambient temperature: $-50^{\circ}C \sim 65^{\circ}C$

Dimensions: L:550mm* W:305mm* H:200mm

Weight: $\leq 30Kg$

Applicable type: Outdoor



PRODUCT LINE

YHT-51.2V/100Ah

House Storage



Product introduction

Rated voltage: 52.1V, Rated capacity: $\geq 100\text{Ah}$

Working voltage: 32V-58.4V,

Adaptable ambient temperature: $-20\text{C}\sim 65\text{C}$ (Normal temperature type) $-50\text{C}\sim 65\text{C}$ (Low temperature type)

Dimensions: L:510mm* W:440mm* H:180mm

Weight: $\leq 50\text{Kg}$

Applicable type: Family



PRODUCT LINE

YHTHW500

Outdoor mobile power supply



Product introduction

Rated power: 500W, AC output: 500W/220V50HZ sine wave, DC output: 12V/10A and 12V/5A

Wireless charging output: Max10W supports 7.5W/5W, Charging input: Adapter 12V5A or solar panel 100W

working temperature: $-20\text{C}\sim 60\text{C}$ (normal temperature type) $-50\text{C}\sim 65\text{C}$ (low temperature type)

Size: L:344mm*W:196mm*H:201mm

Weight: $\leq 7\text{Kg}$,

Applicable type: Outdoor Camping

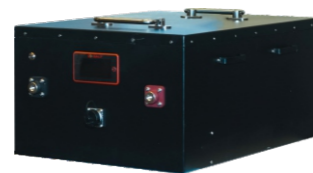


PRODUCT LINE

PRODUCT LINE

YHT-51.2V/105Ah

Golf Cart Power Battery Pack



YHT-358.4V/165Ah

Speedboat Battery Pack



Product introduction

Rated voltage: 51.2V, Rated capacity: $\geq 105\text{Ah}$

Working voltage: 40V-58.4V, adaptable ambient temperature: $-20^{\circ}\text{C}\sim 55^{\circ}\text{C}$

Maximum discharge current: 300A

Weight: $\leq 50\text{Kg}$, Size: L500mm*W370mm*H230mm

Applicable type: Golf Cart

Product introduction

Rated voltage: 358.4V, rated capacity: $\geq 165\text{Ah}$

Working voltage: 280V-408.8V, adaptable ambient temperature: $-20^{\circ}\text{C}\sim 55^{\circ}\text{C}$

Maximum discharge current: 330A

Weight: $\leq 485\text{Kg}$ Size: L1060mm*W860mm*H350mm

Applicable type: speedboat



PRODUCT LINE

YHT-48V/270Ah

Grass-Cutter Battery



Product introduction

Rated voltage: 48V, rated capacity: $\geq 270Ah$

Working voltage: 36.4V-54.6V, adaptable ambient temperature: -20C~55° C

Maximum discharge current: 270A

Weight: $\leq 90Kg$, Size: L570mm*W305mm*H350mm

Applicable type: Lawn Mower



PRODUCT LINE

YHT-12.V/2.0Ah

General battery pack



Product introduction

Rated voltage: 12.8V, rated capacity: $\geq 2.0Ah$

Working voltage 10V-14.6V, adaptable to ambient temperature: -40C~55C

Maximum discharge current: 30A

Weight: $\leq 0.5Kg$, Size: L110mm*W70mm*H30mm

Applicable type: Starting Power Supply



PRODUCT LINE

YHT-46.2V/26Ah

Drone Battery Pack



Product introduction

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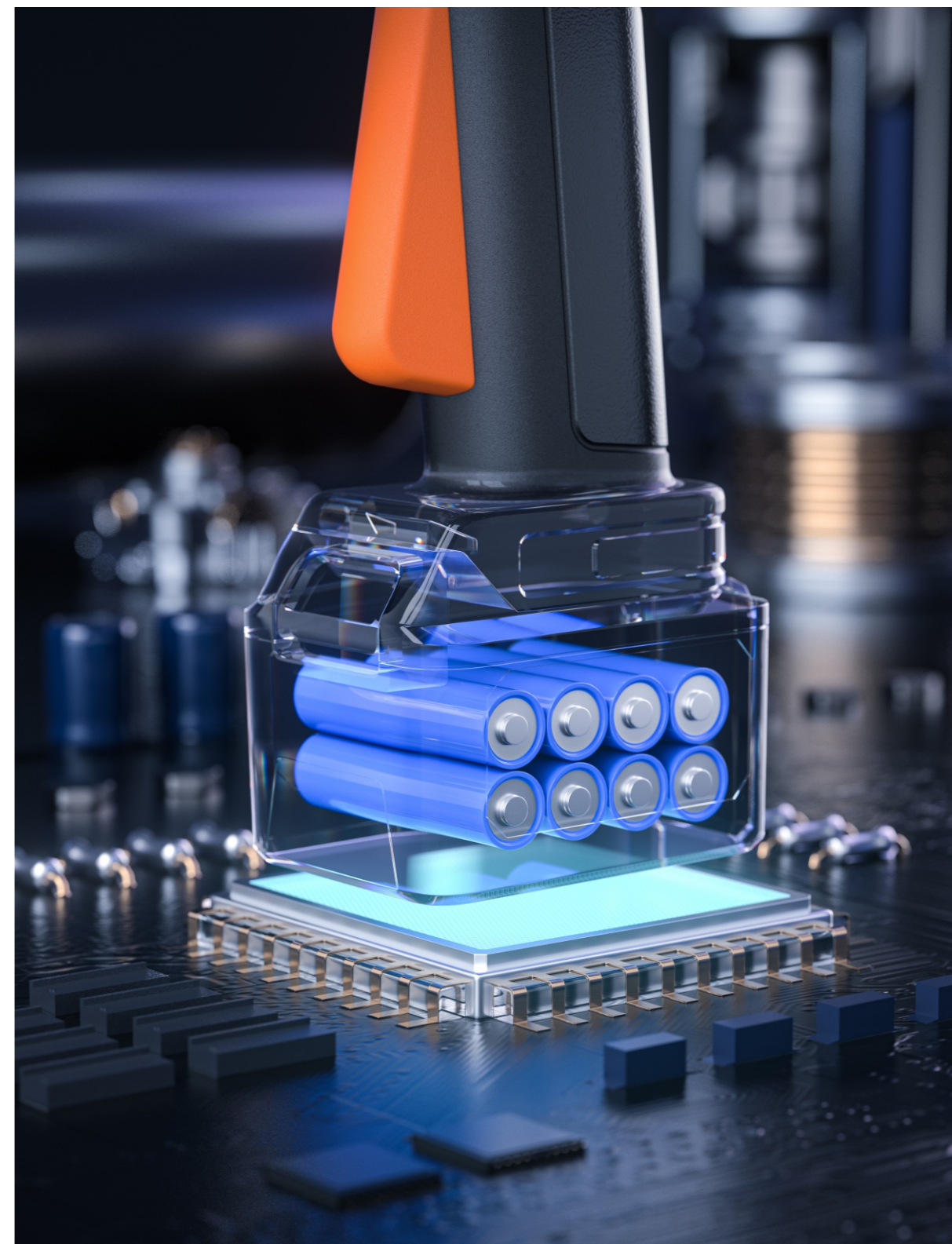
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PRODUCT LINE

Ultra-low temperature
special lithium
battery manufacturer



PARTNERS




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Future Business Plans of HonTai Group

