51.2V 100Ah Energy Storage Battery

Compact Size and Easy Installation

The module design enables quick installation.

Expandable at Need

Units can be combinded to increase energy capacity.

Systematic Safety Design & Technologies

Multi-stage protection design enhances the safe storage; meets the standards of international safety certifications.

High Energy Density

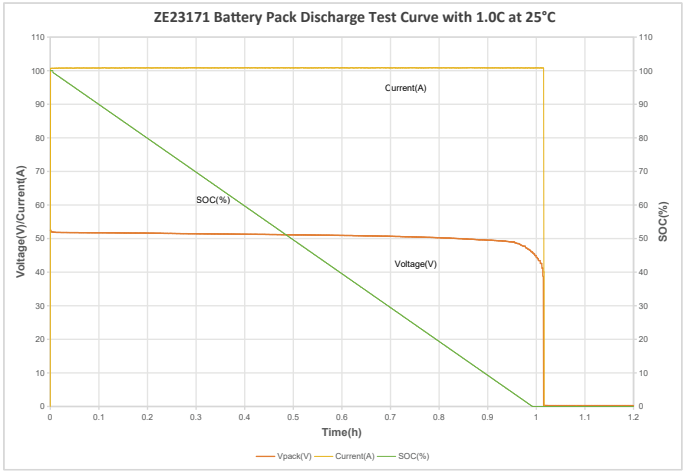
The compact structure achieves market-leading energy density.

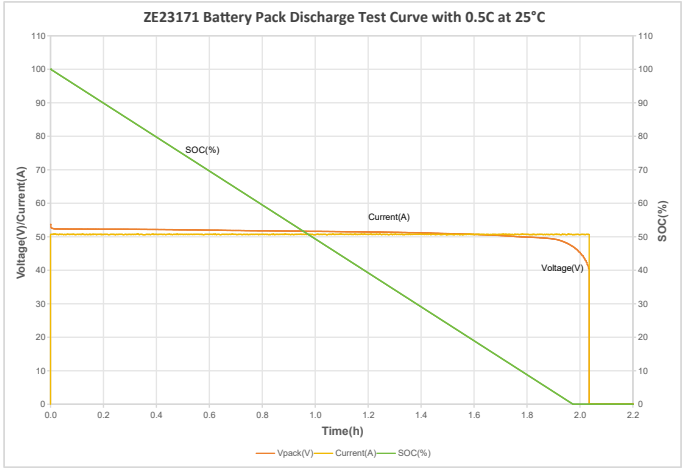
TECHNICAL DATA

Battery Model	ZE23171
Cell Chemistry	LFP
Cell Manufacturer and Model	ACE 52148112-Fe-100
Number of Cells	16pcs(16S1P)
Nominal Voltage (V)	51.2
Cycle Life	5800 cycles,70% SOH @ 0.5C/0.5C, 90%DoD(5%SOC~95%SOC), 25±5°C
Expected Cycle Life①	6500 cycles,70% SOH @ 0.5C/0.5C, 90%DoD(5%SOC~95%SOC), 25±5°C
Calendar Life	10 years
DC Round Trip Efficiency At BOL	93%
DC Round Trip Efficiency At EOL	91%
Typical Capacity (Ah)	100
Nominal Energy Capacity (Wh)	5120
DOD	90%
Usable Energy Capacity (Wh)	4608
Rated DC Power (kW)	5.12
Weight (Kg)	41±2.0
Dimension (W*D*H) (mm)	482*400*130.5
Max Continuous Discharge Current (A)	100
Discharge Overcurrent	125A±5A (6mins) & 150A±5A (0.5mins) & 180A±5A (2 secs)
Operating Voltage (V)	44~56
Recommended Charge Voltage (V)	56
Max Continuous Charge Current (A)	100
Charge Overcurrent	115A±5A (6mins) & 125A±5A (0.5mins) & 140A±5A (2 secs)
Circuit Breaker Model	NDB1-125
Operating Ambient Temperature Range °C	Charge: 0°C~60°C Discharge: -20°C~60°C
Recommended Operating Temperature Range°C	Charge: 15°C~35°C Discharge: 15°C~35°C
Storage Temperature Range°C	-20°C~60°C
Recommended Storage Temperature Range°C	20±5°C
Communication	RS485, CAN, RS232
IP Rating	IP20
Operating Humidity Range	0%RH-95%RH (Non - condensing)
Installation	Floor-mounted
Scalability	Max.10 modules in parallel (51.2kWh)
Protection	Voltage protection, Temperature protection, Current protection
Certification	UN38.3, IEC62619, UL1973, CE EMC, RoHS, Reach, EU Declaration of Conformity, RCM
Country of Manufacture	China

① Simulation data for reference, not for warranty

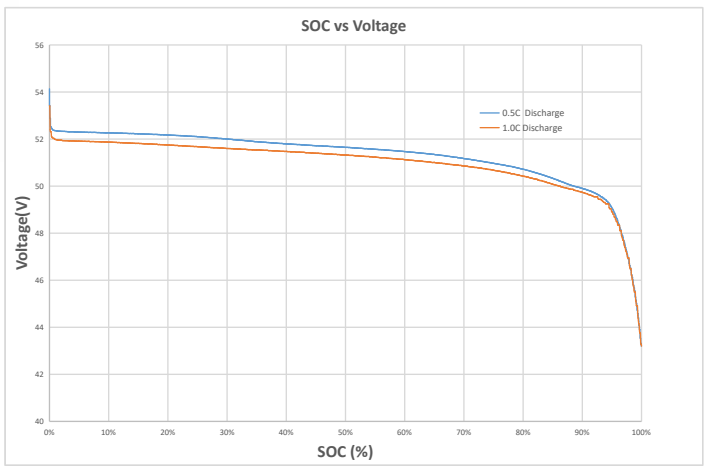
Discharge performance characteristics at different C rates





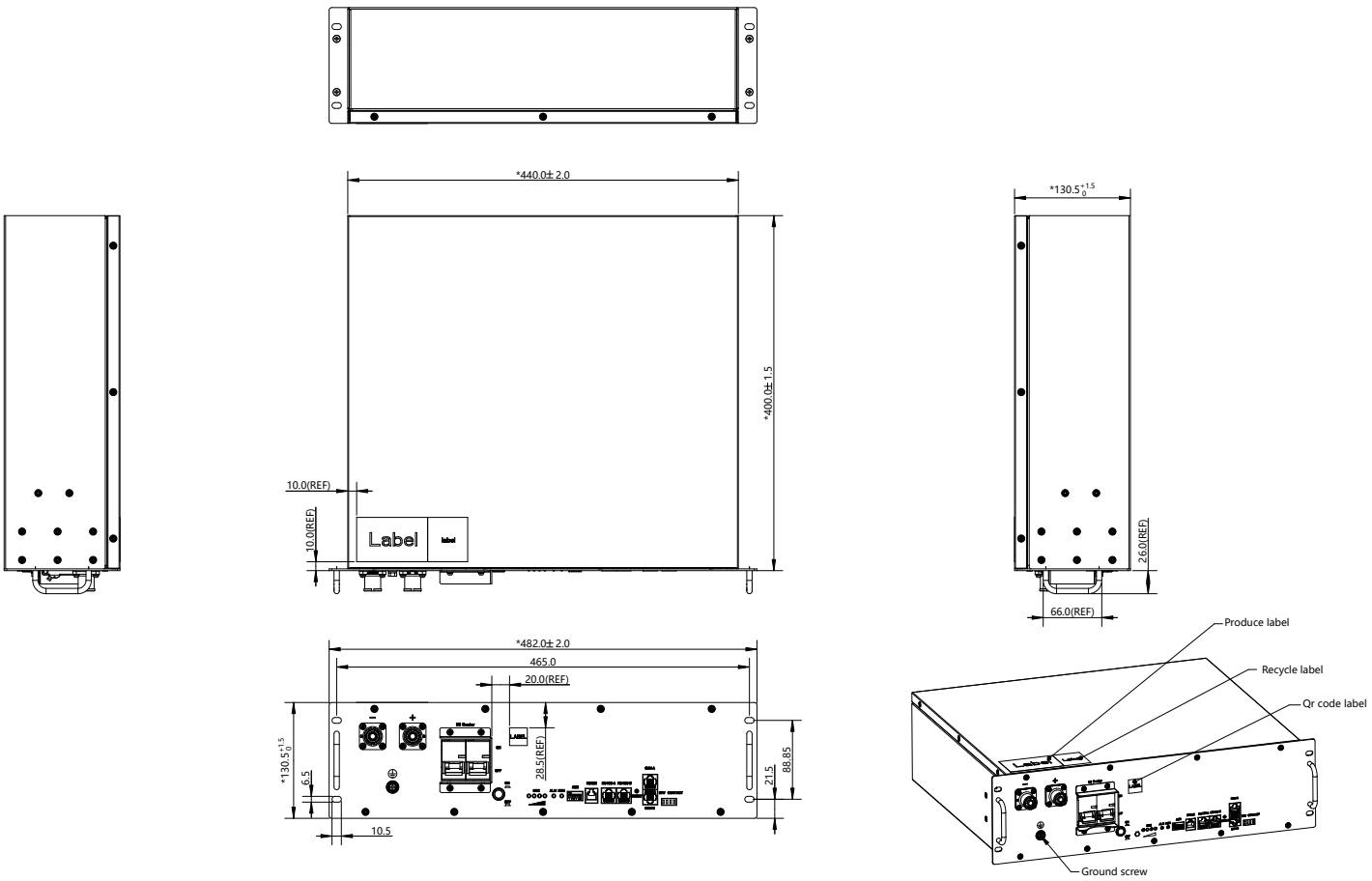
0.5C discharge at 25°C			1.0C discharge at 25°C		
Vpack(V)	SOC(%)	Current(A)	Vpack(V)	SOC(%)	Current(A)
53.69	100	50	52.48	100	100
52.32	98	50	51.83	98	100
52.30	95	50	51.79	95	100
52.25	90	50	51.74	90	100
52.18	80	50	51.63	80	100
51.99	70	50	51.45	70	100
51.79	60	50	51.30	60	100
51.61	50	50	51.12	50	100
51.46	40	50	50.94	40	100
51.21	30	50	50.72	30	100
50.77	20	50	50.29	20	100
50.00	10	50	49.60	10	100
49.58	5	50	49.12	5	100
49.12	3	50	48.51	3	100
47.02	0	50	46.00	0	100

SOC VS voltage at different C rates



0.5C discharge at 25°C		1.0C discharge at 25°C	
SOC(%)	voltage(V)	SOC(%)	voltage(V)
0	54.14	0	53.41
3	52.31	3	51.93
5	52.29	5	51.92
10	52.27	10	51.87
20	52.17	20	51.75
30	52.00	30	51.60
40	51.79	40	51.48
50	51.65	50	51.32
60	51.47	60	51.13
70	51.17	70	50.85
80	50.71	80	50.43
90	49.90	90	49.73
95	49.09	95	48.90
98	46.71	98	46.55
100	43.20	100	43.20

Battery design



SHENZHEN ACE BATTERY CO., LTD.

Email: sales@acebattery.com
Phone: +86 755 8887 8567
www.acebattery.com

ACE-RESS-ZE23171 | REV 08 | OCT.2025