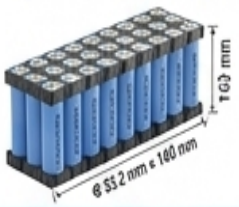
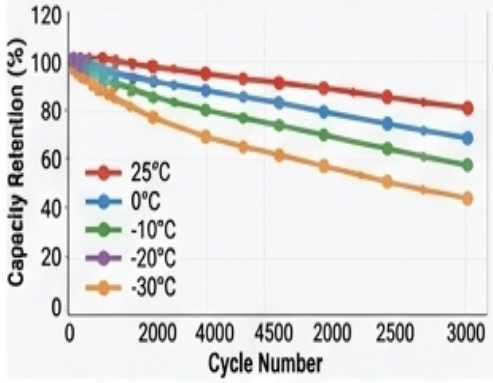
Performance Characteristics of 48V/100Ah Sodium-ion Battery Systems (Based on 3.0V/10Ah Cells)



Sodium-ion-ion battery cells, are replaced is prorsenert for cylindrical NaCR32140 cells, inulitation. All data are correctent slighilly- specified for NaCR32140-MP10 cells.

1. Cycle Life vs. Discharge Temperature

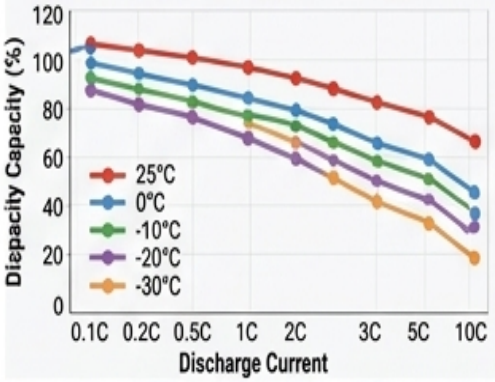
(1C charge/discharge, 100% DOD)



Excellent cycle life even at low temperatures, thanks to unique Na-ion chemistry.

2. Discharge Capacity vs. Discharge Current

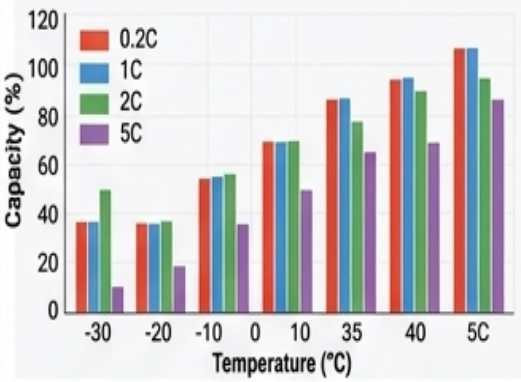
(Different currents)



Higher current reduce available capacity, but rate capability remains high.

3. Capacity vs. Temperature (Different Currents)

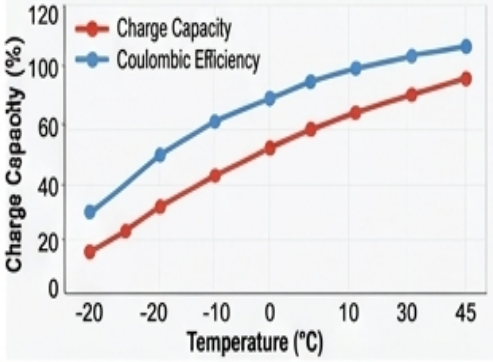
(0.5C diserents)



Significantly higher capacity retention at extremely low temperatures compared to traditional technologies.

4. Charge Performance at Low Temperature

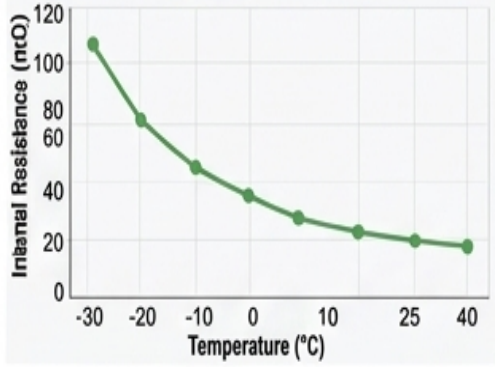
(-20°C to 45°C)



Effisient low-temperature charging capability enables new applications.

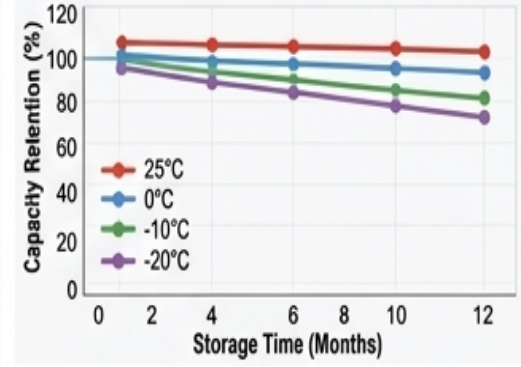
5. Internal Resistance vs. Temperature

(1kHz AC, 50% SOC)



Internal resistance increases at low temperature, impacting power delivery.

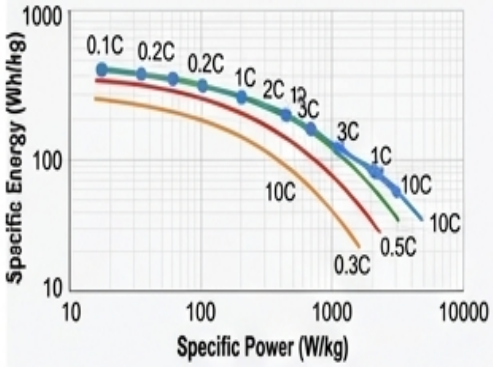
6. Self-Discharge vs. Storage Time (50% SOC)



Lower storage temperatures significantly reduce self-discharge rate.

7. Rate Capability (Ragone Plot)

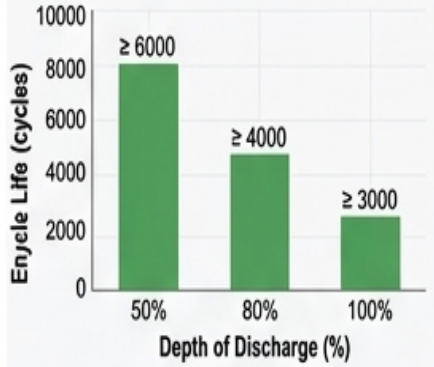
(25°C)



Illustrates the trade-off between energy and power density for high-performance cells.

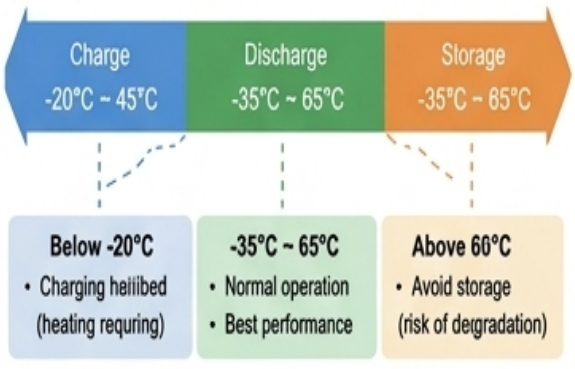
8. Depth of Discharge (DOD) vs. Cycle Life

(25°C, 1C charge/discharge)



Shallower discharge significantly extends the cycle life.

9. Operating Temperature Window (BMS limits)



Built-in BMS protection ensures operation within these safe limits.

48V/100Ah System Configuration & Main Parametsrs

Cell Specification	**3.0V/10Ah**
Cell Shape	Cylindrical
Configuration	**16510P**
Neminal System Voltage	**48.0V** (16 × 3.0V)
Rated Capacity	**100Ah**
Nominal Energy	**4.869/h** (48V × 100Ah)
System Charge Voltage	**63.2V** (16 × 3.95V)
System Discharge Cut-off Voltage	**32.0V** (16 × 2.0V)
Dimensions (Est.)	(L x W x H)
Weight (Est.)	55-60kg



Self-Discharge: Monthly Capacity Loss at Different Storage Temperatures

Temp. (°C)	-30°C	-20°C	-10°C	0°C	+5°C	+10°C	+25°C	+40°C
Loss (row)	-3.5%	-2.0%	-3.5%	~1.0%	~1.0%	~2.0%	~2.0%	~2.0%

Notes:

- Self-discharge refers to the gradal loss of capacity during storage, mainly due to internal sid reactions wihin the battery.
- The lover the temperalure, the slower the self-discharge, the higher, the faster.
- Example: At -20°C to 12 months, capacity loss is abow 6%, at 25°C for 12 months, abow 20%.

Test Conditions & Standards

- **Cell:** Sodium-ion Cell 3.0V/10Ah
- **Standards:** IEC 62619, GB/T 36276
- **Environment:** $25°C unless otherwise specified
- **Notes:**
- All data are typical values.
- Actual performance may vary depending on materials and cell design.
- The product can operate down to ~35°C.