

**50.4V200Ah Lithium-ion(NMC) Battery
Pack Specification**

DOC NO. :PK-0327
REV : A2.0
PAGE: 1 of 7
DATE: 2019-04-16

**Lithium-ion(NMC) Battery
Pack Specification**

Product Name: Lithium-ion(NMC) Battery Pack

Product Specification :50.4V200AH

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1. Preface

This manual describes the type and size, performance, technical characteristics, warning and caution of the 50.4V200Ah rechargeable pack. The specification only applies to 50.4V200Ah system.

2. Product and Model

2.1 Product: 50.4V200Ah Lithium-ion(NMC) Battery Pack

2.2 System Configuration:

Standard pack: 26650-4500mAh-3.6V-44P14S



Charge/Discharge	Positive	Red one wire with 6 AWG, 120A Grey Anderson plug
	Negative	Black one wire with 8 AWG, 120A Grey Anderson Plug

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3. Battery Pack Specifications

Items	Standard	Comments
Nominal voltage	50.4V	
Typical capacity	198±0.5Ah	At 0.2C discharge rate
Max continuous discharge current	100A	
Discharge cut-off voltage	About 42V	
Charge input voltage	58.8±0.05V	Charge mode: CC/CV, Use a constant current, constant voltage(CC/CV)
Charge current	≤100A	
Operation temperature range	Charge/ Discharge	0°C ~ +45°C / -20°C ~ +60°C
	Discharge	When the environment temperature is higher than 45°C, please pay attention to ventilation and heat rejection.
Storage temperature range	0°C ~ 40°C (Capacity 80%)	Recommended long-term storage temperature is 15~25°C
Humidity	5%≤RH≤85%	
Cabinet Material	Steel case	
Total Weight	100±0.2kg	
Size (L*W*H)	L(1020±2mm)* W(560±2mm)* H(200±2mm)	
Protection function	Over charge protection、Over discharge protection、Over current protection、Short circuit protection, Temperature protection.	

4. Standard Test Conditions

All test in this specification should be in standard atmospheric conditions: temperature:

25± 5°C, relative humidity: 65±20%.

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5. Characteristics

5.1 Standard charge

Charge the battery with the Battery special test cabinet, supply 58.8V voltage, constant-current 0.2C(A) current until current down to 0.02C (A) .

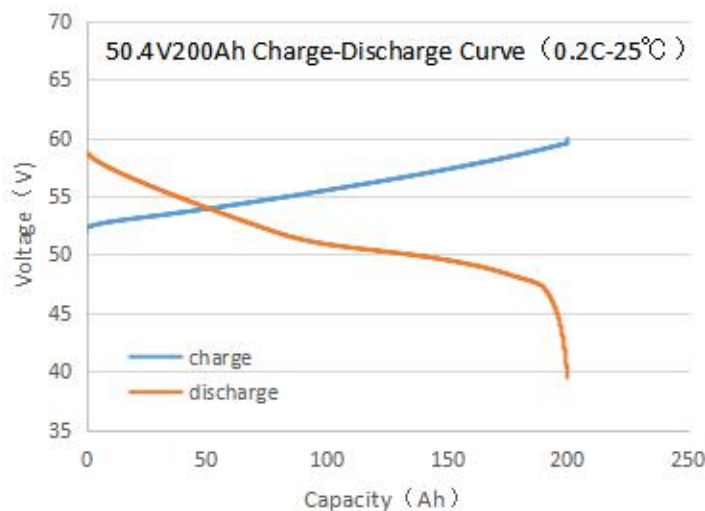
5.2 Standard discharge

Discharge the battery at 0.2C (A) to 42V or battery cut off voltage.

5.3 Electrical Performance

Test Items	Test Methods	Test Standards
Capacity retention rate	After standard charge under 5.1 specified conditions, store the cells for 28 days, then discharge at 0.2C (A) to cut-off voltage.	Capacity retention rate≥80%
Cycle Life	1) Standard charge at 0.2C (A) , 2) Rest 0.5~1 h 3) Discharge at 0.2C to cut off voltage 4) Capacity retention rate≥80%	>2000cycles @ 100% DOD; >3000cycles @ 90% DOD; >4000cycles @ 80% DOD;

6.Characteristics Curve



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7. Cautions

- 7.1 Charging current should not be more than maximum charge current specified in the Product Specification, Charging current bigger than recommended current may damage the battery;
- 7.2 Discharging current should be no more than maximum discharge current specified in the Product Specification ; Discharging current bigger than recommended discharge current may damage the battery;
- 7.3 It should be noted that the cell would be possible to be at a over-discharged state by its self-discharge characteristics in case the cell is not used for long time. In order to prevent over-discharging, the cell shall be charged periodically to maintain between 51.8V and 56V (Recommended 3 months one cycle) .Over-discharging may causes loss of cell performance, characteristics, or battery functions;
- 7.4 Please charge the battery within 12 hours after use;
- 7.5 Battery storage environment follow the above conditions and in standard atmosphere, should be without strong magnet, no power, no static;
- 7.6 Do not reverse the polarity of the battery pack for any reason;
- 7.7 Do not short circuit the battery pack;
- 7.8 Do not reverse polarity charging;
- 7.9 Battery packs can be combined in series or in parallel according to the specification;
- 7.10 Do not immerse the battery pack in water or sea water, or get it wet;
- 7.11 Do not disassemble battery;
- 7.12 Do not expose the battery to extreme heat or flame;
- 7.13 Please use a compatible charger for charging;