



# Technical specification

## I. Technique specs

No.	Item	value	remark
1.	Cell type	Ni-MH SC	
2.	Norminal voltage	18V	
3.	Normimal capacity	3000mAh	
4.	Charging method	CC、 $- \square V$ 、Trickle Charge、time protection, temperature protection	
5.	Standard charging current	0.1C	16 hours to charge fu
6.	Normal charging current	0.2C	6.5 hours to charge fu
7.	Fast charging current	0.5C	2.3 hours to charge fu
8.	MAX Charging current	1C	1.2 hours to charge fu
9.	Trickle Charge	0.05C~0.1C	
10.	Resistance	$\leq 185m\Omega$	Under condition 2 after fully charged, with 1kHz
11.	Normal discharge current	0.2C	
12.	High rate discharge	20A	Continuous discharge
13.	MAX DisCharge current	30A	Instantaneous discharge (3 second
14.	Discharge limited	15V	$\leq 1C$ discharge

	voltage	12V	$\geq 5C$ discharge
15.	Temperature test method	NTC test cell temperature	
16.	Temperature protection	70°C	Thermal Protector
17.	Working condition	charge: 0~40°C discharge: -20~+50°C MAX temperature: 80%	

## II. Performance test method and requirement

SN	Item	Test condition	requirement
1.	appearance	visually	Shell surface should smooth without scratches burrs and other mechanical damage, there should be no exposed oxidation on metal parts, plastic shell can not be deformed.
2.	Nominal capacity	Ambient temperature: 20±5°C 1) Standard charging method: 0.1C charge 16 hours, Hold 15 minutes after charging. 2) Discharge With 0.2C constant current to 15V	Allow 3 recycles, Discharge capacity $\geq 90\%$ nominal capacity
3.	Fast discharge	After Standard charged, hold for 15 minutes, then 1C discharge till 15V	Allow 3 recycles Discharge time $\geq 50$ min
4.	High rate discharge	After Standard charged, hold for 15 minutes, then 1C discharge till 15V , then 20A discharge till 12V	Allow 3 recycles Discharge time $\geq 7$ min
5.	Charge retention	Charged the battery fully by standard charging method, hold for 28 days, then 0.2C	Discharge time $\geq 150$ min

	Ability	discharge till 15V	
6.	Transportation voltage	Before ship out, Use a voltmeter to test the voltage across the positive and negative	$\geq 20V$
7.	Low temperature discharge	After standard charged, hold at $0 \pm 2^{\circ}C$ for 24 hours, then 0.2C discharge till 15V	Discharge time $\geq 250m$
8.	Anti-vibration performance	Amplitude: 4mm (0.158 inch), Frequency: 1000 times/minutes, vibration test the battery by 30 minutes, the battery still in good condition	Batteries should be obvious damage, no leak, no smoke, no fire, explosion.

### III. Storage Requirements

1. Keep the battery in a cool dry place, Temperature: storage for 1 year:  $20 \sim +35^{\circ}C$ ; storage for 3 months:  $-20 \sim +45^{\circ}C$ ; storage for 1 month:  $20 \sim +55^{\circ}C$ , MAX humidity: 80%.
2. During the storage of the battery, charge it every 3 months to keep it from damage due to over discharge.

### IV. Precautions

1. Prohibit reverse polarity charge.
2. Do not burn or damage the battery, otherwise battery will explode or release hazardous gases.
3. Stop use when there is noise, heat or leakage.
4. Stop use when there is power shortage, to avoid damage to the battery due to over discharge.
- 5) Do not throw the battery into water.
- 6) Do not attempt to disassemble or press, hit the batteries, which may cause over heat or fire.
- 7) Keep it from kids.
- 8) Short circuit, over charge or improper charging method will bring damage to the battery.
- 9) Please use the original charger to charge the battery.

