镍氢电池规格书

SEALED Ni-MH RECHARGEABLE BATTERIES SPECIFICATION SHEET

TO：
（客户）

CUSTOMER APPROVED P/N.:
（客户产品编号）

LIPENG MODEL NO.:
（产品型号） H23AAAL350

BATTERY TYPE:
（电池型号） H23AAAL350

TOTAL NO. OF PAGES:
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VERSION NO.:
（版本号） A/3

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1、Application range：

This specification sheet apply to sealed Ni-MH rechargeable batteries.

Model：**H23AAAL350**

2、Performance summary：

No.	Item		Unit	Specification	Applications/Conditions
2.1	Nominal Item	Voltage	V	1.2	
		Capacity	mAh	350	Standard charge/discharge
2.2	Standard Charge	Current	mA	35	
		Time	h	16	
2.3	Rapid Charge	Current	mA	175	With –Δ V=5~10mV;
		Time	min	144	Value of dT/dt=1~2℃/3min.
2.4	Trickle Charge		mA	17~28	
2.5	Discharge Cut-off Voltage		V	1.0	≤1.0C discharge (Unit cell)
2.6	Temperature range for operation	Standard Charge	℃	0~45	
		Rapid Charge	℃	0~35	
		Trickle Charge	℃	0~45	
		Discharge	℃	-10~55	
2.7	Temperature range for storage	Within 12 months	℃	-20~30	
		Within 6 months	℃	-20~35	
		Within 1 month	℃	-20~45	
		Within 1 week	℃	-20~55	
2.8	Ambient humidity			≤85%	

3、Performance & testing：

3.1、Test conditions：

The battery to be tested is the product within one month after being received by customer.

Ambient request：Temperature：20℃±5℃；

Humidity：65%±20%.

Standard charge：35mA×16hrs，rest 1 hour.

Standard discharge：70mA to 1.0V.

3.2、Test items & methods：

Item	Unit	Requirement		Test standard or methods
Open circuit Voltage	V/cell	≥1.25		After 24 hours standard charge.
Capacity	mAh	Typical	360	Standard charge/discharge, up to 3 cycles are allowed.
		Minimum	350	
0.5C discharge	min	≥114		Standard charge before discharge. End voltage is 1.0V/cell.
Self-discharge	min	≥195		Standard charge; Storage：28 days; Standard discharge.
Internal impedance	mΩ/cell	≤45		Following a standard charge period, checked at 1000Hz with 1~4hour.
Cycle Life	cycle	≥500		IEC61951-2：2003.
Charge Efficiency	min	≥270		Standard discharge; Discharge the battery again at 0.2C up to 1.0V after recharge 10 hours at 0.1C.
Overcharge		No leakage nor deformation		Standard discharge; 0.1C charge 48 hours.
Leakage		No leakage nor deformation		Fully charge at 0.5C, then storage 14 days.

3.3、IEC61951-2：2003：

Cycle No.	Charge	Rest	Discharge
1	0.10C for 16h	——	0.25C for140min
2~48	0.25C for 190min	——	0.25C for140min
49	0.25C for 190min	——	0.25C for 1.0V/pks

3.4、Performance of safety：

3.4.1、Short

The cells shall not explode after 1 hour short-circuit test.

3.4.2、Humidity

The cells shall not leak during the 14 days when it is submitted to the condition of a temperature of 33±3℃ and a relative humidity of 80±5% (salting is allowed).

3.4.3、Over-discharge

The cells shall not explode after forced discharge is conducted for 60minutes at a constant current of 1.0C after pre-discharge at a constant current of 0.2C up to 0.0V.

3.4.4、Vibration

The cells shall be mechanically and electrically normal after vibration which has an amplitude of 4mm(0.1575 inches) a frequency of 1000 cycle per minute, which should be continued in any directions during 60 minutes.

3.4.5、Drop

The cells shall be mechanically and electrically normal after being subjected to a drop from a height of 900mm(35.432 inches) onto an oak board in a voluntary anis respectively 3 times.

4、Matters need attention：

4.1、Before testing or using, the cells shall be correctly charged in accordance with specification. The cut-off voltage is recommend at 1.0V/cell, if it is below 1.0V/cell, the cells may have over-discharge or reverse charged.

4.2、Do not solder directly to the cell，avoid affecting the battery performance by high temperature.

4.3、Please observe the polarity(+/-) when charging.

4.4、Store the cells uncharged in a cool and dry place.

4.5、Do not allow use cells irrationality (such as short circuit、over-charge、reverse charge and so on),which would reduce the cells life, even destroy the cells.

4.6、Do not dispose of in fire for preventing accident.

4.7、We recommend cells are charged after one cycle every 3~6 months.

4.8、The offered information just for reference only. Any information beyond our supply, please refer to us.

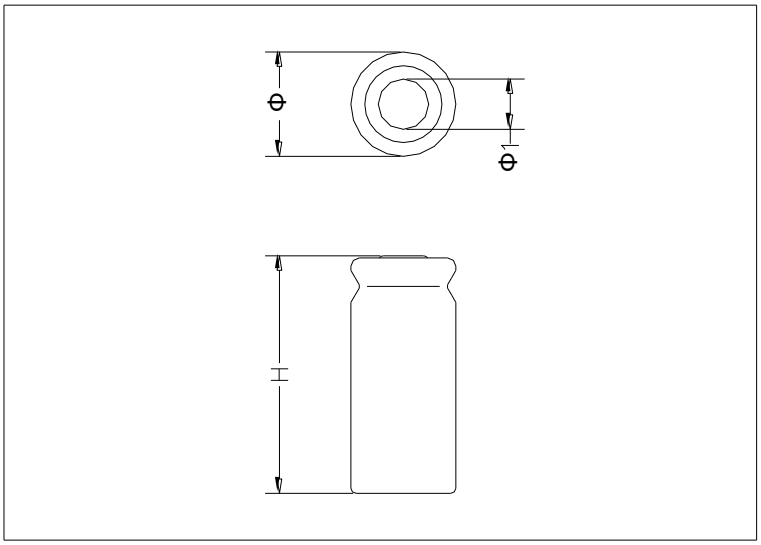
4.9、When the above items are changed, we do not inform advance.

H23AAAL350 Specification

Battery specification

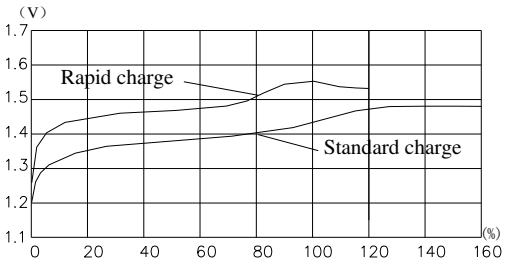
Name	Ni-MH rechargeable battery	
Model	H23AAAL350	
Nominal voltage	1.2V	
Application current	35mA-1050mA	
Capacity	Discharge current	0.2C（70mA）
	Minimum	350mAh
	Typical	360mAh
Size (Uncased)	H	22.8± 0.3mm
	Φ	10.2± 0.2mm
	Φ 1	4.8± 0.2mm
Charge	Standard charge	35mA×16hrs
	Rapid charge	175mA×144min
Cycle life		≥500 cycle
Internal impedance		≤45 mΩ
Weight		About 6.0g
Temperature range for operation	Standard Charge	0℃ to 45℃
	Rapid Charge	10℃ to 35℃
	Discharge	-10℃ to 55℃
	Storage	-20℃ to 45℃

Sketch map

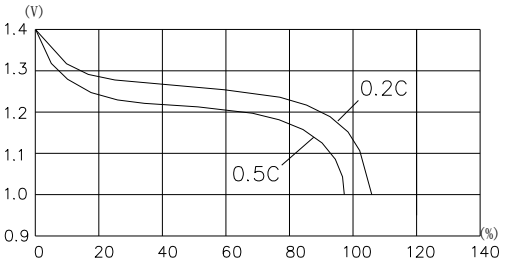


Characteristics curve

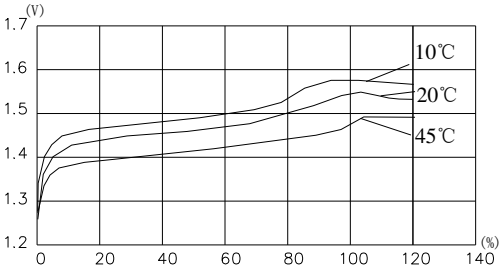
20℃ charge characteristic



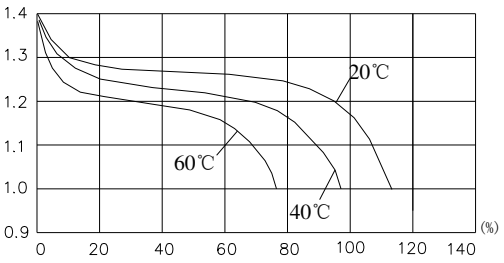
20℃ discharge characteristics



Charge efficiency temperature characteristics



Discharge efficienc temperature characteristics



Note：

1、Ambient request：

Temperature：20℃±5℃；

Humidity：65%±20%.

2、The offered information just for reference only.

Any information beyond our supply,

please refer to us.