



Great Power Battery Co. Ltd.

Excellent Quality, Prompt Delivery and Competitive Price

APPROVAL SHEET

To: _____

Model: PH-AAA1000H

Prepared by: _____

Checked by: _____

Approved by: _____

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GREAT POWER BATTERY CO., LTD.

1. Preface

This specification is suitable for the performance of the **GREAT POWER** Ni-MH rechargeable battery.

2. Model

PH-AAA1000H

3. Appearance

There shall be no such defects as deformation,flaw,stain,discoloration or electrolyte leakage.

4. Nominal specification

Description		Specification	
Model		PH-AAA1000H	
Size		AAA	
Dimensions	Diameter(mm)	10.1 ± 0.2	
	Height(mm)	44.2 ± 0.3	
	Weight(g)	Approx.14g	
Nominal Voltage(V)		1.2	
Nominal capacity(mAh)		1000	
Internal Impedance(m Ω)		≤ 45	
Discharge Cut-off Voltage		1.0V	
Ambient temperature	Charge	standard	0 $^{\circ}$ C to 40 $^{\circ}$ C
		fast	10 $^{\circ}$ C to 40 $^{\circ}$ C
	Discharge		-10 $^{\circ}$ C to 50 $^{\circ}$ C
	Storage	<1 year	-10 $^{\circ}$ C to 30 $^{\circ}$ C
		<3 months	-10 $^{\circ}$ C to 40 $^{\circ}$ C
The relative humidity should keep with in $65 \pm 20\%$			

5.Characteristics

Unless otherwise specified, the standard range of atmospheric conditions for test as follows:

Ambient temperature $20 \pm 5^{\circ}\text{C}$

Relative humidity $65 \pm 20\%$

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Atmospheric pressure $960 \pm 100\text{mbar}$

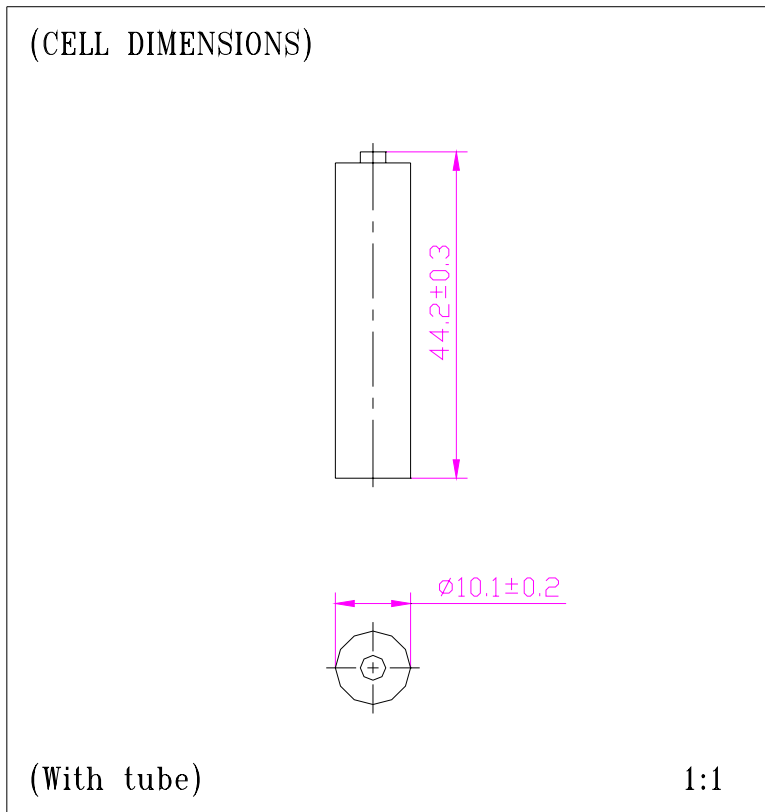
Accuracy of voltmeters and amperometers to be used in testing shall be equal to or better than the grade 0.5.

Test item		Condition		Specification
1. Charge	Standard	Charge at 0.1C for 16 hours		
	Fast	Charge at 0.5C to $-\Delta V=5-10\text{mV}$		
2. Discharge		At 0.2C to 1.0V		
3. Discharge cut-off voltage				1.0V
4. Capacity (mAh)	Minimun	Standard charge/discharge		950mAh
	Typical	Standard charge/discharge		1000mAh
5. Internal resistance		After fully charge, rest 1 hour, measured at 1000Hz		$\leq 45\text{m}\Omega$
6. Self-Discharge		The charged battery is stored for 28 days at $20^\circ\text{C} \pm 5^\circ\text{C}$. And the discharge time is measured at standard discharge		$\geq 180\text{minutes}$
7. High temperature test		Store at 40°C 、 50°C 、 60°C for 2 hours then charge/discharge		No leakage
8. Low temperature test		Store at 0°C for 2 hours then charge/discharge		No leakage
9. Short circuit test		Short circuit after fully charge		No explode
10. Drop test		Free fall on the concrete floor from 1 meter after fully charged		No leakage No short-circuit
11. Cycle life	Charge	Rest	Discharge	Capacity retention $\geq 60\%$ after 500cycles
1	0.1C for 16h	0	0.25C for 2h20min	
2~48	0.25C for 3h10min	0	0.25C for 2h20min	
49	0.25C for 3h10min	0	0.2C to 1.0V	
50	0.1C for 16h	1~4h	0.2C to 1.0V	

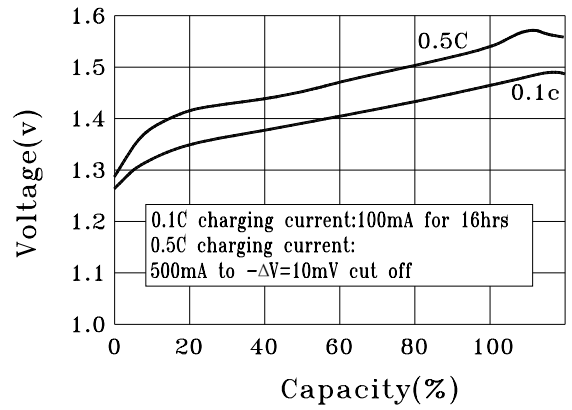
Ni-MH rechargeable cylindrical cell (Data Sheet)

Specification

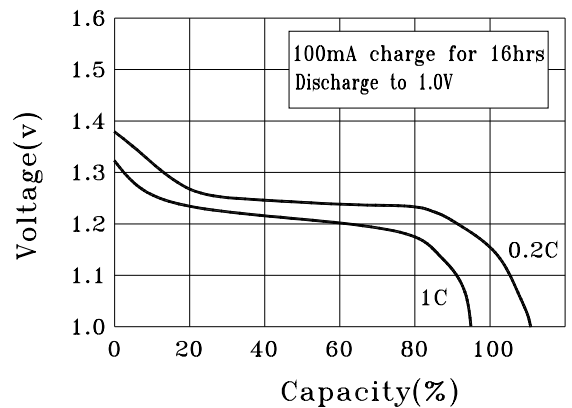
Nominal Voltage		1.2V	
Dimensions	Diameter	10.1±0.2mm	
	Height	44.2±0.3mm	
	Apx. Weight	14g	
0.2C Discharge Capacity	Minimum	950mAh	
	Typical	1000mAh	
Typical Internal Impedance		Less than 45mΩ	
Charge	Standard	100mA for 16hrs	
	Fast	500mA for about 150min	
Life expectancy		500 cycles	
Operating Temperature	Charge	Standard	0°C to 40°C
		Fast	10°C to 40°C
	Discharge		-10°C to 50°C
	Storage	< 1 year	-10°C to 30°C
< 3 months		-10°C to 40°C	



CHARGE CHARACTERISTICS



DISCHARGE CHARACTERISTICS



DISCHARGE CHARACTERISTICS AT DIFFERENT TEMPERATURE

