



深圳市宇能达科技有限公司

EAST(SHENZHEN) TECHNOLOGY CO.,LTD

SEALED NICKEL METAL HYDRIDE
RECHARGEABLE BATTERY

APPROVAL SHEET

Eunicell

Model: EU-AA900mAh

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电话 (TEL): 0755-86006961

传真 (FAX): 0755-86968868

网址 (NET): <http://www.eunicell.com>

邮箱 (Email): salesmanager@eunicell.com

(Information in the document is just for reference, not for gurantee of battery performance)

1. Scope

This specification is suitable for the performance of following nickel-metal hydride cylindrical cell and its stack-up battery packs:

Model: EU-AA900mAh Flat Cap
Size: AA

The data involving nominal voltage and approximate weight of a battery pack shall be equal to the value of the unit cell multiplied by the number of unit cells in the battery pack.

Nominal voltage of unit cell = 1.2V

2. Performance and Test Methods

Unless special stated, tests should be done within one month of delivery under the following conditions:

Ambient Temperature: $20 \pm 5^{\circ}\text{C}$.

Ambient Humidity: $65 \pm 20\%$.

Test Item	Test Conditions	Request
1. Standard Charge	Charge is conducted continuously for 16 hours at the constant current of 90mA after pre-discharge at the constant current of 180mA up to an cut-off voltage of 1.0V.	
2. Open-circuit Voltage	Voltage between terminals of the charged battery specified in item(1) is measured after rest for 1 hour.	$\geq 1.25\text{V}$
3. Capacity	Discharge time of the charged battery specified in item(1) is measured at 180mA up to an cut-off voltage of 1.0V after rest for 30 minutes. If the discharge time doesn't reach the specified value, the test may be carried out further, up to five times in total.	≥ 300 minutes

Test Item	Test Conditions				Request
4.Cycle Life	Cycles	Charge	Rest	Discharge	≥ 500 cycles
	1	0.1CmA \times 16h	None	0.25CmA \times 140min	
	2-48	0.25CmA \times 190min	None	0.25CmA \times 140min	
	49	0.25CmA \times 190min	None	0.25CmA to 1.0V/Cell	
	50	0.1CmA \times 16h	1-4h	0.2CmA to 1.0V/Cell	
	Cycles 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3h. Note: IEC 61951-2 0.1CmA=900mA \times 0.1=90mA ,the rest may be deduced by analogy.				
5.Internal Resistance	The battery is measured at 1KHz with charge state.				$\leq 40\text{m}\Omega$
6.Over-charge	Charge is conducted continuously for 48 hours at 90mA after the capacity test specified in item(3).				No deformation and leakage
7.Over-discharge	Forced discharge is conducted for 24hours at a constant current of 1 Ω after pre-discharge at a constant current of 180mA up to 1V.				No external deformation
8.Self-discharge	The charged battery specified in item(1) is stored for 28 days at 20 $^{\circ}\text{C}$, and the discharge time is measured at 180mA.				≥ 180 minutes
9.Humidity	The charged battery is stored for 10 days at 33 \pm 3 $^{\circ}\text{C}$ and 80 \pm 5% of relative humidity.				No electrolyte leakage
10.Safety Valve Operation	Forced discharge is conducted for 30 minutes at a constant current of 900mA after pre-discharge at a constant current of 180mA up to 0V.				Not explode or disrupt. *
11.Drop Test	The battery is subjected to a drop, which has a height of 1m to an oak board of 10mm or more thick in a voluntary axis respectively 3 times.				Mechanically and electrically normal
Note: * Electrolyte leakage and deformation of battery are acceptable.					

3. Configuration, Dimensions and Markings

Please refer to the attached drawings.

4. General Characteristics

Please refer to the attached drawings.

5. Suggestions & Cautions:

5.1 The cut-off voltage is recommended at $1.0 \pm 0.1V$.

5.2 Charge the batteries prior to use.

5.3 Don't solder directly to the battery.

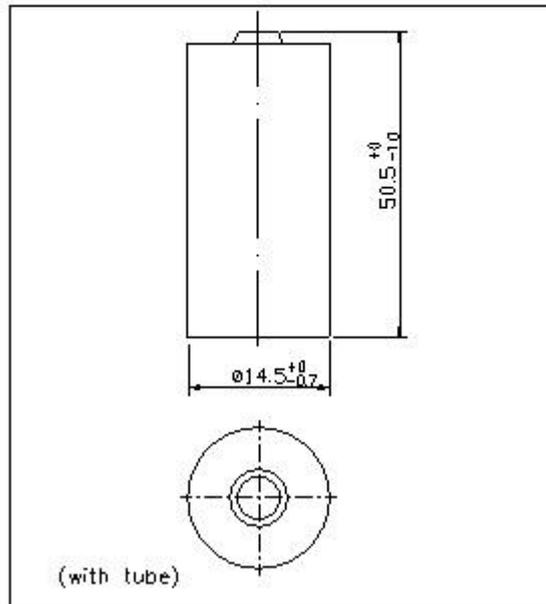
5.4 Don't short circuit and reverse charge.

5.5 Do not dispose of in fire and keep away from damage.

5.6 Store the batteries uncharged in a cool and dry place.

5.7 The batteries' life may be reduced if they are subjected to adverse conditions such as: extreme temperature, deep cycling, excessive overcharge/discharge.

Single Specification		
Product Name	Sealed Nickel Metal Hydride Cylindrical Rechargeable Battery	
Model	EU-AA900mAh	
Nominal Voltage	1.2V	
Nominal Capacity	900mAh	
Dimension (with tube)	Diameter	14.5 ⁺⁰ _{-0.7}
	Height	50.5 ⁺⁰ _{-1.0}
Internal Resistance at 1000Hz		< 40mΩ (After charge)
Charge	Standard	90mA×16h
	Rapid	900mA×1.2h
	Trickle	27~45mA
Discharge Cut-off Voltage		1.0V
Cycle Life		≥ 500 Cycles
Ambient Temperature	Standard Charge	0°C to 45°C
	Rapid Charge	10°C to 40°C
	Trickle Charge	0°C to 45°C
	Discharge	-20°C to 50°C
	Storage	-20°C to 45°C
Ambient Humidity		65±20%



General Characteristics

