



# E&J TECHNOLOGY GROUP CO., LTD

# Ni-MH Low Self-Discharge Battery Specification

Model Number: EJ50AA1000S

Doc No: <u>SPE-NH-0131</u>

Version: 01

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Prepared	Checked	Approved	
Sara	Jess	John	

#### **E&J TECHNOLOGY GROUP CO., LTD**

Tel:+86-755-23762949 Fax:+86-755-22635063

Website: http://www.enjbattery.com E-mail:<u>sales@ejtechgroup.com</u>



#### 1、Scope

This specification is suitable for the performance of the E&J Ni-MH Low Self rechargeable battery.

#### 2. Model

EJ50AA1000S

### 3.Appearance

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

# 4. Nominal specification

Desription			Specification			
Model			EJ50AA1000S			
Size			AA			
	Diameter(mm)		14.5+0/-0.7			
Dimensions	Height(mm)		50.5+0/-1.5			
	Weight(g)		Approx. 17g			
No	Nominal Voltage(V)		1.2			
Non	Nominal capacity(mAh)		1000			
Inter	Internal Impedance(mΩ)		≤45			
Disch	Discharge Cut-off Voltage		1.0V			
	Ch a va	standard	0°C to 40°C			
	Charge	fast	10℃ to 40℃			
Ambient	Discharge	9	-10℃ to 50℃			
temperature	Storage	<1 year	-10℃ to 30℃			
		<3 months	-10℃ to 40℃			
		The relative humidity should keep with in 65±20				

#### 5. Characteristics

Unless otherwise specified, test: should be done within one month of delivery under the following conditions:

♦ Ambient temperature 20±5°C

◆ Relative humidity 65±20%

◆ Atmospheric pressure 960±100mbar

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

#### **Professional NI-MH Battery manufacturer**

Test item			Condition	Specification	
1. Charge	Standard	Cha	arge at 0.1C for 16 hours	Ta=0~40°C	
	Fast	Charge at 0.5C to -△V=0~5mV		Ta=10~40℃	
	Trickle		(0.03C)-(0.05C)	Ta=0~40°C	
2. Discharge	2. Discharge		At 0.2C to 1.0V		
3. Discharge cut-off voltage				1.0V	
4.Capacity (mAh)	Minimum	Standar	d charge/discharge	950	
	Typical	Standar	d charge/discharge	1000	
5. Internal resistance		After fully charge,rest 1 hour, measured at 1000Hz		≤45mΩ	
6.Hight Rate Dicharge(0.5C)			d charge 1hour rest Before ge by 0.5C to 1.0V	≥112minutes	
7. Self-Discharge		The charged battery is stored for 12months at 20 °C. And the discharge time is measured at standard discharge		Capacity retention≥75%	
8. Overcharge		0.1C ch	arge 28 days	No leakage nor deformation	
9. High temperature test			t 40°C、50°C、60°C for 2 nen charge/discharge	No leakage	
10. Low temperature test			at 0℃ for 2 hours then discharge	No leakage	
11. Short circuit test		Short circuit after fully charge		No explode	
12. Drop test			all on the concerte from 1 after fully charged	No leakage No short-circuit	
13.Leakage test		standar	d charge stand for 14days	No leakage nor deformation	
14.Cycle life	Charge	Rest	Discharge	Capacity retention	
1	0.1C for 16h		0.25C for 2h20min	≥60% after	
2~48	0.25C for 3h10min		0.25C for 2h20min	500cycles	
49	0.25C for 3h10min		0.2C to 1.0V		
50	0.1C for 16h	1-4h	0.2C to 1.0V		

#### **Professional NI-MH Battery manufacturer**

## 6. Cautions in use

To ensure proper use of the battery please read the manual carefully before using it.

#### Handling

Do not expose to, dispose of the battery in fire.

Do not put the battery in a charger or equipment with wrong terminals connected.

Avoid shorting the battery.

Avoid excessive physical shock or vibration.

Do not disassemble or deform the battery.

Do not immerse in water.

Do not use the battery mixed with other different make, type, or model batteries.

Keep out of the reach of children

#### Storage

Cycle(charge and discharge)the battery every 6-9month to maintain cell/battery performance ,When being stored for an extended period of time

Store the battery in a cool, dry and well-ventilated area.

#### Disposal

Regulations vary for different countries.

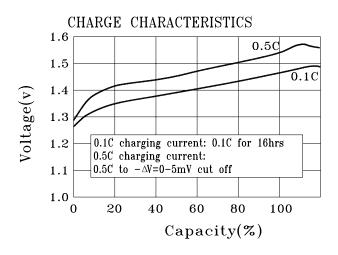
Dispose of in accordance with local regulations.

#### 7. Note

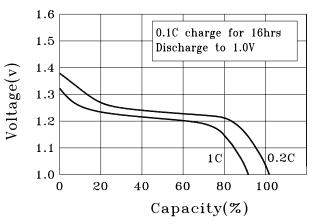
Any other items which are not covered in this specification shall be agreed by both parties.



# Appendix:Battery performace curve







# DISCHARGE CHARACTERISTICS AT DIFFERENT TEMPERATURE

