

3. Specification

NO.	Items	Standard	Remarks
1.	Typical capacity	20mAh	Discharge Current:0.2C Cut-off voltage:2.0V
2.	Nominal voltage	2.4V	
3.	Discharge cut-off voltage	2.0V	
4	Standard Charge	0.1C CC(constant current) charge 16 hours	
5	Charge Current	1~4mA	
	Charging voltage	1.45~1.65V/cell	
6	Rapid Charge	6.0 hours approx.(MAX 0.2C)	
7	Discharge current	Standard: 0.2C	2.0V/ cut off
		Max: 0.5C	
8	Energy	0.048Wh	
9	Weight	approx : /g	
10	Operating Temperature.	charge :0 ~ +45°C	Forbid to outrun provision scope a work.
		Discharge: -10 ~+45°C	
11	Storage Temperature	0 ~ +25°C	See the section 5 th

4. PERFORMANCE

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

Ambient Temperature Ta: 20±5°C

Relative Humidity: 65±20%RH

Notes: Standard Charge/Discharge Condition:

Charge: 2mA(0.1C)×16hrs

Discharge: 4mA(0.2C) to 2.0V/set

Description	Unit	Specification	Conditions	Remarks
Open circuit voltage	v	≥2.5	Standard Charge , 1hr rest	Unit set
Overcharge	N/A	No leakage, no explosion	Cell is discharged with 0.2C to2.0V,then 0.1C for 48 hours	
Charged Storage Characteristics	minute	≥150min	Standard charge Storage: 28 days Standard discharge (0.2C)	
IEC Cycles Test	Cycle	≥500	Capacity remaining 60%	(see note 1)

5. Storage and Shipment Requirement

Item.	Requirement.
Storage temperature	0~+25°C
Humidity	60±15%RH

Please activate the battery once every 3 months according to the following method:

Charge at 0.1C for 15 hrs, rest 15 min, then discharge with 0.2C to 2.0V/set, rest 15 min, then charge at 0.2C to 150min.

6. Scope:

All data involves voltage and weight to stack-up battery are equal to the value of unit cell time the number of unit cell which consisted in the stack-up batteries

Example: Stack-up batteries consisting E unit cells series

Nominal voltage of unit cell=1.2V

Nominal voltage of stack-up batteries =1.2V×2=2.4V

7. Warranty Time.

Warranty time is six (6) months from the date when the Nickel-Metal Hydride battery ship out from ENIX ENERGIES factory. But If the Nickel-Metal Hydride battery is found to have a problem due to use outside of ENIX ENERGIES recommended specification, ENIX ENERGIES will have no responsibility for the battery.

8. Others.

Any matters that this specification does not cover should be conferred between both parties.

Notes:

1. Approximate charge time from discharged rate, for reference only IEC 61951-2 (2003)

IEC Cycle Life Test:

Cycle No.	Charge	Rest	Discharge
1	0.1 C, 16h	none	0.25C, 2h 20min
2—48	0.25C, 3h 10min	none	0.25C, 2h 20min
49	0.25C, 3h 10min	none	0.25C to 2.0V
50	0.1C, 16h	1h-4h	0.20C to 2.0V

Cycles 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3hrs. The number of cycles obtained when the test is completed shall be not less than 500 times.

2. EXTERNAL APPEARANCE

The cell / battery shall be free from cracks, scars, breakage, rust, discoloration, leakage and deformation

3. ELECTRICITY RETAINS:

Normal conditions with electricity retain 50%, if have special demands, confirm after negotiate

4. WARRANTY

One year limited warranty against workmanship and material defects.

5. WARRANTY

5.1 Do not reverse charge batteries

5.2 Do not short circuit batteries, permanent damage to batteries may result

5.3 Do not subject batteries to adverse condition such as extreme temperature, deep cycling and excessive

5.4 Store batteries in a cool dry place, Always discharge batteries before bulk storage or shipment.

5.5 Do not solder directly to cells or batteries.

5.6 If find any noise, excessive temperature or leakage from a battery, please stop its use.

5.7 Do not incinerate or mutilates batteries, may burst or release toxic material.

5.8 Do not mix new batteries in use with semi-used batteries, over-discharge may occur.

5.9 Do not remove the outer sleeve from a battery pack nor cut into its housing.

5.10 Never put a battery into water or seawater

6. CAUTION

6.1 Batteries should be charged prior to use

6.2 For charging methods please referred to our technical handbook

6.3 Use the correct charger for Ni-MH batteries

6.4 Avoid batteries being used in an airtight compartment. Ventilation should be provided inside the battery compartment, otherwise batteries may generate hydrogen gas, which could cause an explosion if exposed to an ignition source

6.5 Do not attempt to take batteries apart or subject them to pressure or impact. Heat may be generated or fire may result. The alkaline electrolyte is harmful to eyes and skin, and it may damage clothing upon contact

6.6 Keep away from children. If swallowed, contact a physician at once.

6.7 When using a new battery for the first time or after long term storage, please fully charge the battery before use

6.8 When using a new battery in use with semi-used batteries, over-discharge may occur.

6.9 When the battery is hot, please do not touch it and handle it, until it has cooled down.

6.10 When find battery power down during use, please switch off the device to avoid over discharge.

6.11 Unplug a battery by holding the connector itself and not by pulling at its cord.

6.12 After use, if the battery is hot. Before recharging it, allow it to cool in a well-ventilated place out of direct sunlight.

7、STORAGE

7.1 In order to ensure the battery to maintain the capacity level, We suggest Ni-MH battery and battery pack should be stored under the condition of 0 ~ 25 °C, low humidity, no corrosive gases .

7.2 Ni-MH battery to avoid the high temperature or high humidity storage, otherwise it would lead to the battery leakage, rust, and the lower capacity

7.3 The long-term storage may lead to NIMH batteries and battery packs to reduce the capacity and need 1-3 charge / discharge cycles to reach the maximum discharge capacity.

7.4 Three months after placing the battery need to be charge/discharge for one cycles.

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