

POWER-XTRA

Model : Power-Xtra 1.2V Ni-Mh A Size 2700 Mah Rechargeable Battery
 Stock Code: 900.600.503.011

Image



General Performance

Item	Specification	Conditions
Standard charge	270 mA (0.1C)	ambient temperature of 20±5°C, Relative Humidity: 65±20%
	16 hrs	
Standard discharge	540 mA (0.2C)	standard charge, the final voltage is 1.0V
Rapid Charge	1350mA (0.5C)	ambient temperature of 20±5°C, Relative Humidity: 65±20%
Rapid discharge	1350mA (0.5C)	standard charge, the final voltage is 1.0V
high rate discharge	8.1A (3C)	standard charge, the final voltage is 1.0V
Maximum discharge current (2S)	13.5A (5C)	standard charge, the final voltage is 0.75V
Trickle Charge	54~135 mA (0.02C~0.05C)	Ta=-10~45 °C
Nominal Voltage	1.2 V	
Open circuit voltage	≥ 1.25V	Within 1 hr after standard charge
Nominal Capacity	2700 mAh	
Minimum Capacity	≥2700 mAh(0.2C)	Standard charge and Standard discharge
	≥2430 mAh(0.5C)	Standard charge and Rapid discharge
Internal Impedance	≤30mΩ	Within 1 hr after standard charge
Charge-retention Rate	≥ 60%(1620mAh) Charge retention rate ≥Nominal capacity 60%(1620mAh)	Storage a period of 28 days after standard charge, then Standard discharge (0.2C) to 1.0V
Cycles Test	≥ 500 Cycles	IEC61951-2:2003 (see note 2)

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Environment Performance

Storage Temperature	Within 1 year	-20~25°C
	Within 6 months	-20~35°C
	Within 1 months	-20~45°C
	Within 1 week	-20~55°C
Operation Temperature	Standard charge	15~25°C
	Fast Charge	0~45°C
	Discharge	0~45°C
Constant humidity and hot performance	No damage	Full charge the battery at current 0.1C, 33±3°C, 80±5%R.H., storage 14 days.

Safe Characteristic

Over-charge	No leakage nor explosion apacity≥100%	0.2C discharge to <u>1.0V</u> , 0.1C charge for 48 hrs, then test the Capacity with Standard discharge Conditions
Over-discharge	No leakage nor explosion Capacity≥2160mAh	0.2C discharge to <u>1.2V</u> ,Combine the battery with a 2.2Ω electric resistance, after stored for a period of 24 hrs, then test the Capacity with Standard discharge Conditions
Vibration Test	Voltage variety: ≤0.03V/cell Internal impedance: ≤5 mΩ/cell	Charge at current 0.1C for 15hrs; place for 24 hrs, check the battery before and after vibration. Vibration condition: Swing: 1.5mm, Frequency: 3000CPM, Vibrate for 1hr to any direction.
Drop Test	Voltage variety: ≤0.03V/cell Internal impedance: ≤5 mΩ/cell	Charge at current 0.1C for 15hrs, place for 24 hrs, check the battery before and after fall down test; Impact condition: Fall down from height 1.2m to any direction on the hard-wood board(Thickness:10mm), test for 3 times
Safety	No disrupt or burst, explosion, but leakage of electrolyte and deformation are acceptable	The battery shall undergo a forced discharge in an ambient temperature of 20±5°C,at a constant current of 0.2I _A ,to a final voltage of 0V.the current shall then bi increased to 1.0I _A and the forced discharge continued in the same ambient temperature of 20±5°C,for 60 min.
External Short Circuit	No fire and no explosion	After standard charge, short-circuit the cell at 20°C±5°C until the cell temperature returns to ambient temperature.(cross section of the wire or connector should be more than 0.75mm ²)

Cycle Life

Life test method of IEC61951-2:2003

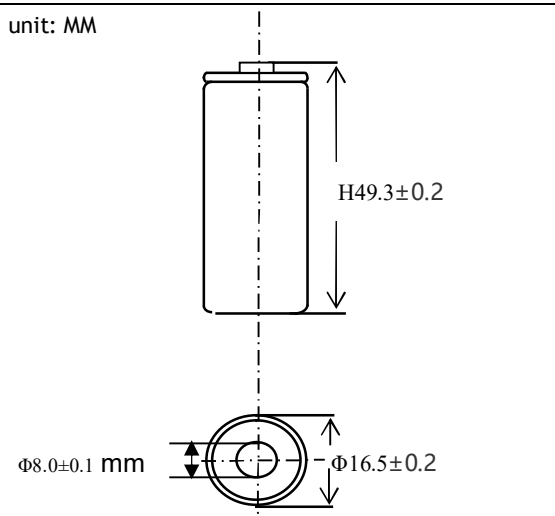
Cycle Number	Charge	Stand in charged condition	Discharge
1	0.1C×16hrs	None	0.25C×2hrs 20min
2-48	0.25C×3hrs 10min	None	0.25C×2hrs 20min
49	0.25C×3hrs 10min	None	0.25C to <u>1.0V</u> / cell
50	0.1C×16hrs	1~4hrs	0.20C to <u>1.0V</u> /cell

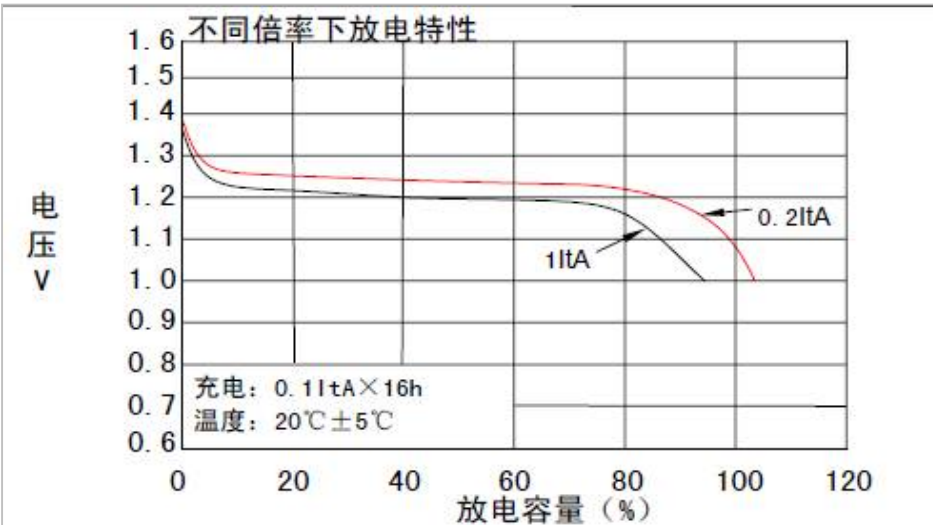
Cycles 1 to 50 shall be repeated until the discharge duration on any 50th cycle become less than 3h.At this stage, a repeat capacity measurement as specified for 50 shall be carried out

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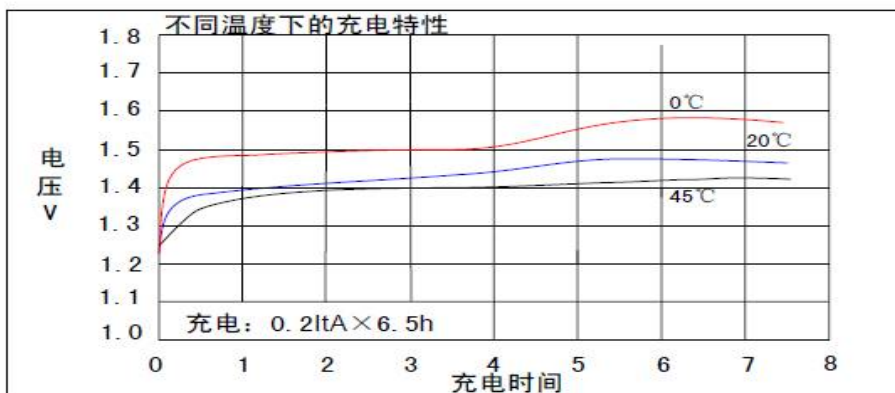
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Specifications of single cell

TYPE	Nickel-Metal Hydride cylindrical single cell		unit: MM 
MODEL	1.2V Ni-Mh A Size 2700 Mah		
Dimensions	diameter	16.5±0.2mm	
	Height	49.3±0.2mm	

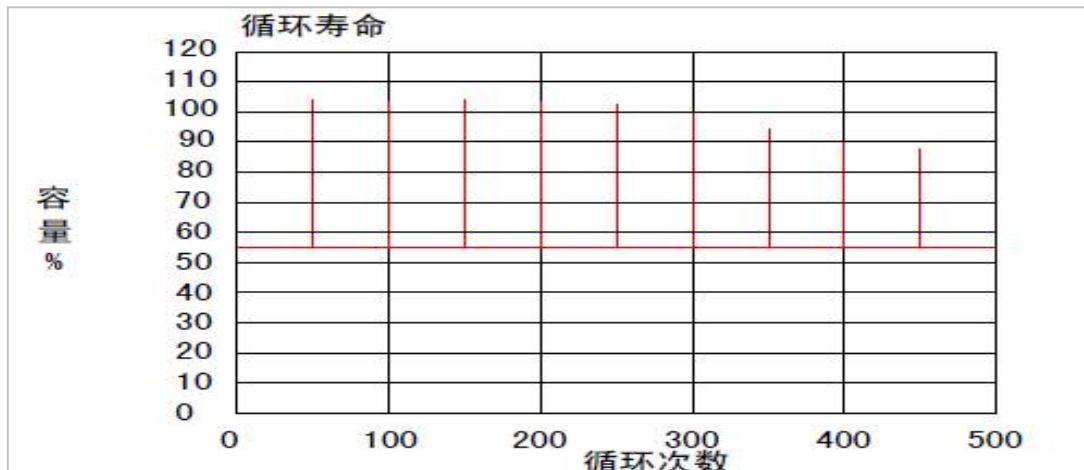
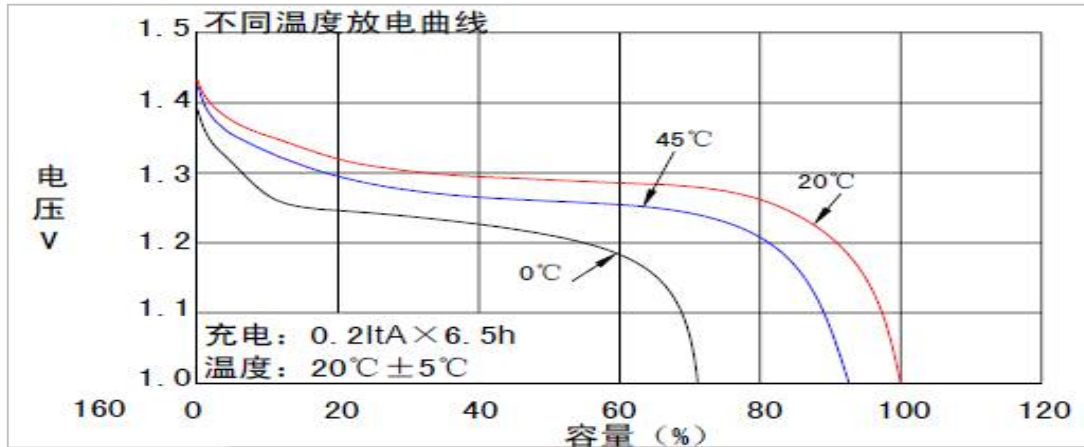


特征曲线



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Quality / guarantee period

Guarantee time for one year due to the processing and raw material defectiveness.

Suggestion: The products before delivery would be charged 20-80% capacity according to the transportation distance and packing condition. While checking the capacity, please discharge the battery at 0.2C to 1.0V/cell; then charge and discharge the battery at by standard current. If the storage time over 3 months or above, please discharge the battery at the current 0.2C to 1.0V/cell, then charge the battery at 0.1C for 15 hours, after that place for 20mins, discharge the battery at 0.2C to 1.0V/cell. After this activation, check the capacity by the standard current charge and discharge the battery. The first time use suggested to take standard charge method to charge the battery to prevent from damage to battery.