8NH-AA2000SK2

1、SCOPE

This specification governs the performance of the following Camelion Nickel-Metal Hydride Cylindrical 15mins stack-up battery。

Camelion Model： RC908E

Configuration and Description: 8NH-AA2000SK2 (with KET620006-2P)

Cell Size： AA($\phi 14.1^{\pm 0.2} \times 50.5^{-0.5}$)mm

2 、DATA OF STACK UP BATTERIES

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 battery consisting eight unit cells

Nominal voltage of stack-up batteries=1.2V×8=9.6V

3、 RATINGS

Description	Unit	Specification	Conditions
Nominal Voltage	V/Pack	9.6	Pack
Nominal Capacity	mAh	2000	Standard Charge/Discharge
Standard Charge	mA	200(0.1C)	T_1= 0~50℃
	Hour	14~16	
Fast Charge	mA	8000(1C)	-ΔV=0-10mV/Cell or Timer Cut off=120 % nominal capacity or Temp.Cut off=55℃, T_1= 10~50℃
	Minute	15 approx	
Trickle Charge	mA	(0.05C)~(0.1C)	T_1= 0~50℃
Standard discharge	mA	400(0.2C)	T_1= -30~60℃ Humidity：Max.85%
Discharge Cut-off Voltage	V/Pack	8.0	
Storage Temperature	℃	-30~65	Discharged state、Humidity、Max.85%
Typical Weight	Gram	224	

4、 PERFORMANCE

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

Ambient Temperature, T_1：20±5℃

Relative Humidity： 65±20%

Notes： Standard Charge/Discharge Conditions：

Charge： 200mA(0.1C)×14 hours

Discharge： 400mA(0.2C) to 8.0V/Pack

Test	Unit	Specification	Conditions	Remarks
Capacity	mAh	⩾2000	Standard Charge /Discharge	Up to 3 cycles are allowed
Open Circuit Voltage(OCV)	V/ Pack	⩾10.0	Within I hour after standard Charge	
Internal Impedance	mΩ/ Cell	⩽25	Upon fully charge(IKHz)	
High Rate Discharge(1C)	minute	⩾54	Standard Charge, I hour rest Before discharge by 2000mA (1C)to 8.0V/pack	Up to 3 cycles are allowed
High Rate Discharge(5C)		⩾11	Standard Charge, I hour rest Before discharge by 10000mA (5C)to 5.6V/pack	
Overcharge	/	No leakage nor explosion	200mA(0.1C)Charge 28 days	
Charge Retention	mAh	⩾1400(70%)	Standard Charge, Storage：28 days, Standard Discharge	
IEC Cycle Life	Cycle	⩾500	IEC285(1993)4.4.1	
Leakage		No leakage nor deformation	Fully charged at 2000mA(1C) for 1.2hour Stand for 14 days	
Vibration Resistance		Change of voltage should be under 0.02V/cell, Change of impedance should be under 5 milli-ohm/cell	Charge the battery at 0.1C for 14hrs. Leave for 24hrs. Check battery before/after vibration, amplitude 1.5mm Vibration 3000 CPM in any direction for 60mins.	
Impact Resistance		Change of voltage should be under 0.02V/cell Change of impedance should be under 5 milli-ohm/cell	Charge the battery at 0.1C for 15hrs. Leave for 24hrs. Check battery before/after drop from 50cm height, onto wooden board(30mm thickness)3 times.	

5、CONFIGURATION, DIMENSIONS AND MARKINGS

Please refer to the attached drawing.

6、EXTERNAL APPEARANCE

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

7、WARRANTY

One year limited warranty against workmanship and material defects.

8、CAUTION

(1)Reverse charging is not acceptable.

(2)Charge before use. The cells/batteries are delivered in an uncharged state.

(3)Do not charge/discharge with more than our specified current.

(4)Do not short circuit the cell/battery Permanent damage to the cell/battery may result.

(5)Do not incinerate or mutilate the cell/battery.

(6)Do not solder directly to the cell/battery.

(7)the life expectancy may be reduced if the cell/battery is subjected adverse conditions like: extreme temperature, deep cycling, excessive overcharge/ over-discharge.

(8)store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment.

Notes：

(1) T_1: Ambient Temperature.

(2) Approximate charge time from discharged state, for reference only.

(3) IEC285(1993)4.4.1 Cycle Life:

Cycle No.	Charge	Rest	Discharge
1	0.1C×16h	None	0.25C×2h20min
2-48	0.25C×3h10min	None	0.25C×2h20min
49	0.25C×3h10min	None	0.25C to 1.0V/ cell
50	0.1C×16h	1-4h	0.2C to 1.0V/ cell
Cycles I to so shall be repeated until the discharge duration on any 50th Cycle becomes less than 3 h.			

(4) Environmental elements: in compliance with RoHS requirements.