AA Portable Power Corp
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1. SCOPE

This specification descripts the performance of the following Nickel-Metal Hydride cylindrical cell and its stack-up battery.

MH-1/3AA280 Cell Size: 1/3AA (13.9±0.1×16.3±0.5) mm

2. DATA OF STACK UP BATTERIES

All data involve voltage and weight of stack-up batteries are equal to the value of unit cell multiplied by the number of unit cell which consisted in the stack-up batteries

Example : Stack-up batteries consisting three unit cells

Nominal voltage of unit cell=1.2V

Nominal voltage of stack-up batteries =1.2V×3=3.6V

3. RATINGS

Description	Unit	Specification	Condition	
Nominal Voltage	V/cell	1.2	Unit cell or stack-up batteries	
Minimum Capacity	mAh	280	Standard Charge/Discharge	
Nominal Capacity	mAh	280	Standard Charge/Discharge	
Standard Charge	mA	28 (0.1C)	T_1=20±5℃(See Note 1)	
	hour	16		
Fast Charge	mA	280 (1C)	-ΔV=0~5mV/cell , Timer Cutoff=120% nominal capacity , Temp.Cutoff=55℃, dT/dt=0.8℃/min, T_1=20±5℃	
	hour	1.2 approx (See Note 2)		
Trickle Charge	mA	(0.03C)~(0.05C)	T_1=20±5℃	
Standard discharge	mA	56 (0.2C)	T_1= 20±5℃Humidity： Max.85%	
Discharge Cut-off Voltage	V/cell	1.0		
Storage Temperature	℃	-20~25	Within 1 year*	State: 30% charge Max Humidity： 85%
		-20~35	Within 6 months	
		-20~45	Within 1 month	
		-20~55	Within 1 week	
Typical Weight	Gram	8.0	unit cell	

*If you have no plan to use above cell for a longer time, we recommend to charge the cells/batteries at least 30% after discharge entirely in every 6 months.

4. PERFORMANCE

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

Ambient Temperature : 20±5℃
Relative Humidity : 65±20%

Notes: Standard Charge/Discharge conditions: Charge: 28 mA(0.1C)× 16 hours Discharge: 56mA(0.2C) to 1.0V/cell

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 or 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 cells/batteries may result.

[5]Do not incinerate or mutilate the cells/batteries.

[6]Do not solder directly to the cells/batteries.

[7]The expected life may be reduced if the cells/batteries are subjected to adverse conditions as:

extreme temperature, deep cycling, excessive overcharge/ over-discharge.

[8]Store the cells/batteries in a cool dry place. Always discharge batteries before packing.

Notes：

[1] T_1: Ambient Temperature.

[2] Approximate charge time from discharged state, for reference only. [3] IEC61951-2(2003)7.4.1.1 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
Cycle l to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3 h.			

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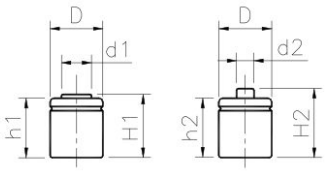

Dimensions(without Tube) (mm)

D	13.90±0.10		
d_1	8.10±0.08	d_2	4.75±0.08
H_1	16.30±0.50	H_2	17.80±0.50
h_1	15.80±0.50	h_2	15.80±0.50

Nominal Capacity			280 mAh
Nominal Voltage			1.2 V
Charge current		Standard	28 mA
		Fast	280 mA
Charge time		Standard	16 Hrs
		Fast	1.2 Hrs
Ambient Temperature	Charge	Standard	0℃~45℃
		Fast	10℃~45℃
	Discharge		-20℃~60℃
	Storage		-20℃~55℃
Internal Impedance(mΩ)			≤47
Weight			8.0 g