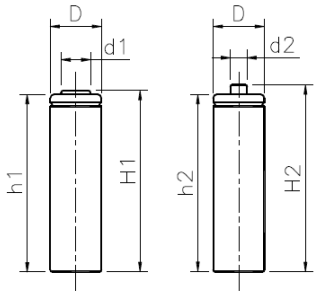
EVERGREEN (C.P.) USA INC.
338 North Canal Street, Suite #8 South San Francisco, CA 94080
TEL: (650) 952-8091 FAX: (650) 952-3629 E-MAIL: sales@evergreencpusa.com

SPECIFICATIONS
Sealed Rechargeable Nickel Cadmium
NCAA800-3B WITH AMP 643813-02 CONNECTOR

MODEL No: NCAA800-3B **Description:** 800mAh AA SIZE Ni-Cd

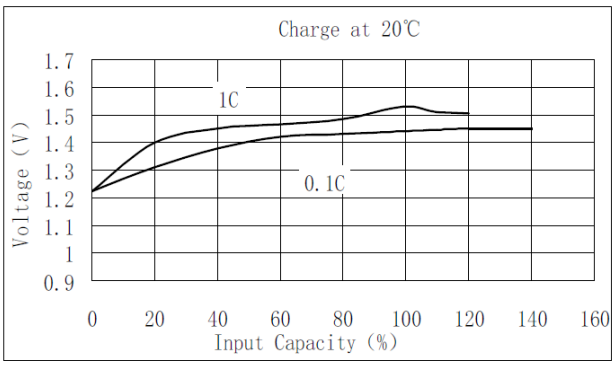


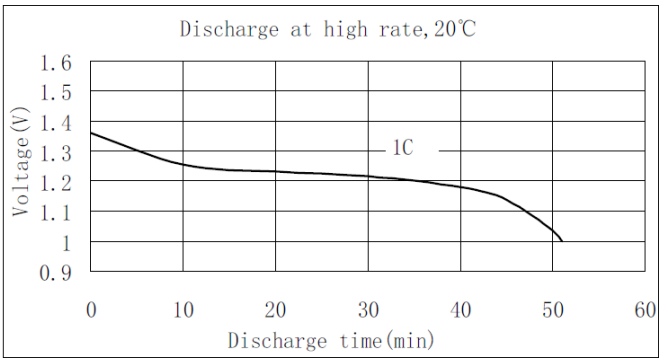
Drawing for single cell only

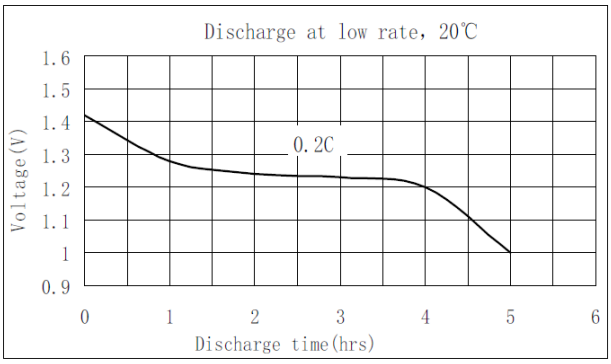
Dimensions(without Tube) (mm)			
D	13.90±0.10		
d_1	8.10±0.08	d_2	4.75±0.08
H_1	48.00±0.50	H_2	49.50±0.50
h_1	47.50±0.50	h_2	47.50±0.50

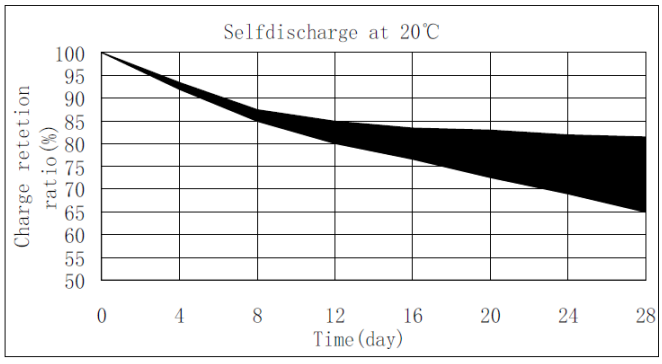
Specification

Nominal Capacity			800 mAh
Nominal Voltage			3.6 V
Charge current		Standard	80mA
		Fast	800mA
		/	/
Charge time		Standard	14~16 Hrs
		Fast	1.2 Hrs
		/	/
Ambient Temperature	Charge	Standard	0℃~45℃
		Fast	7℃~45℃
		/	/
	Discharge		-30℃~60℃
	Storage		-20℃~60℃
Internal Impedance(mΩ) (After charge)			≤190
Weight			68 g









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1、SCOPE

This specification governs the performance of the following Nickel-Cadmium cylindrical cell and its stack-up battery.

Model: NCAA800-3X

Cell Size: AAcrew cut (13.9±0.1×48.0±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	3.6	Packed cell or stack-up batteries
Nominal Capacity	mAh	800	Standard Charge/Discharge
Standard Charge	mA hour	80 (0.1C) 14~16	T_1=20±5℃ (See Note 1)
Fast Charge	mA Hour	800 (1C) 1.2 approx. (See Note 2)	-ΔV=0~60mV/cell , Timer Cutoff = 120% nominal capacity, Temp. Cutoff = 55℃, dT/dt = 0.8℃/min, T_1=20±5℃
Trickle Charge	mA	(0.03C)~(0.05C)	T_1=20±5℃
Standard discharge	mA	160 (0.2C)	T_1=20±5℃ Humidity: Max 85%
Discharge Cut-off Voltage	V/cell	3.0	
Storage Temperature	℃	-20~30 (Within 1 year)* -20~40 (Within 6 months) -20~50 (Within 1 month) -20~60 (Within 1 week)	Discharged state Humidity: Max85%
Typical Weight	Gram	68	Packed cell or stack-up batteries

*To keep the best performance for those not used for a long time, we recommend to charge and discharge the cells/batteries at least once every 6 months.

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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: 80 mA (0.1C) × 14 hours
Discharge: 160 mA (0.2C) to 3.0V/pack

Test	Unit	Specification	Condition	Remarks
Capacity	mAh	≥800	Standard Charge / discharge	up to 3 cycles are allowed
Open Circuit Voltage (OCV)	V	≥3.75	Within 1 hour after standard charge	
Internal Impedance	mΩ	≥190	Upon fully charged (lKHz)	
High Rate Discharge (1C)	min	≥51	Standard Charge, 1 hour rest before discharge by 1C to 3.0V	up to 3 cycles are allowed
Charge Retention	mAh	≥520 (65%)	Standard Charge, Storage：28 days, Standard Discharge	T1=20±5℃
IEC Cycle Life	Cycle	≥500	IEC61951-1(2003)7.4.1.1	see Note 3
Leakage		No leakage nor deformation	Fully charged at : 80mA for 28 days	
Vibration Resistance		Change of voltage should be less than 0.06V, change of impedance should be less than 15 milliohm	Charge the battery at 0.1C for 14hrs, then leave for 24hrs, check battery before/after vibration, amplitude 1.5mm, vibration 3000 CPM, any direction for 60mins.	
Impact Resistance		Change of voltage should be less than 0.06V, change of impedance should be less than 15 milliohm	Charge the battery at 0.1C for 14hrs, then leave for 24hrs, check battery before/after dropped, height 50 cm wooden board (thickness 30mm) direction not specified, 3 times.	

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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) T1: Ambient Temperature.
(2) Approximate charge time from discharged state, for reference only.
(3) IEC61951-1(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 3.0V
50	0.1C×16h	1-4h	0.2C to 3.0V
Cycle 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3 h.			

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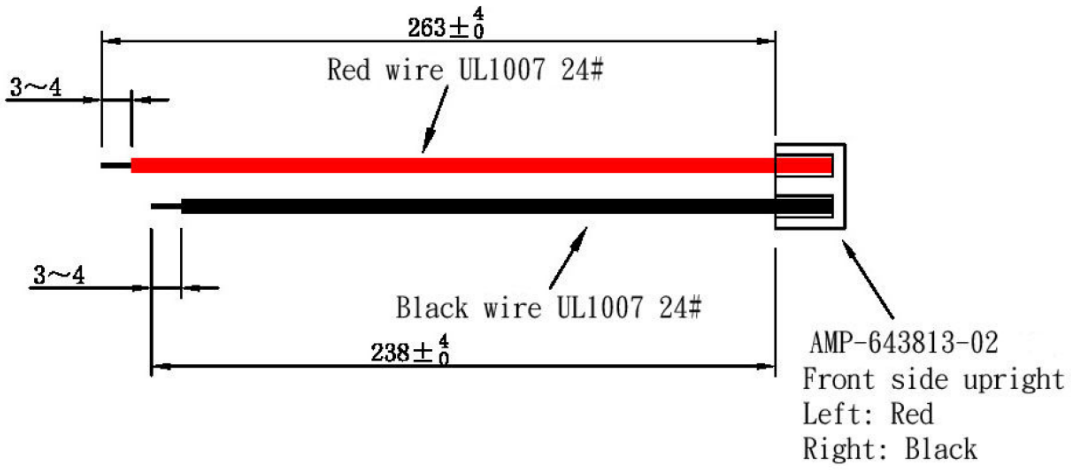
The Drawing



Unit: mm

Specification Requirement:

1. The wire, plug and socket should be of good appearance, clean surface, and no grease or damage be found.
2. Should the skin of the wire be required to peel off, it should not be cut-off, damaged or scratched. Cutting edge must be smooth. No sign of clips and scratch be found on the surface of the wire.
3. The metal-core inside the wire and the metal part of the plug concerned should be of natural color without being oxidized (turned black from oxidation).
4. The wire, plug and socket should be equivalent to the part no. designated. The length and arrangement should be equivalent to the content shown in the specification sheet concerned.
5. The wire and the metal part of the socket should be well connected. No short-circuit be found.
6. The tensile force of wire/socket is ≧ 3.7kg, and plug/socket is ≧ 1.5kg
7. The connection-sockets of the correspondent parts should be well fitted and in good order and condition.