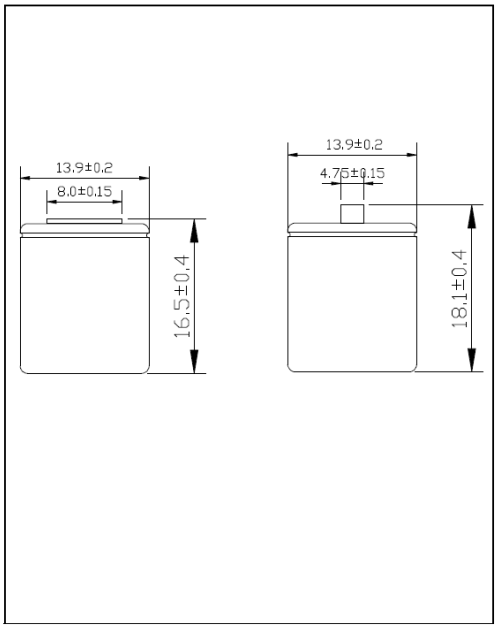
EVERGREEN (C.P.) USA INC.
TEL: (650) 952-8091 FAX: (650) 952-3629 E-MAIL: sales@evergreencpusa.com

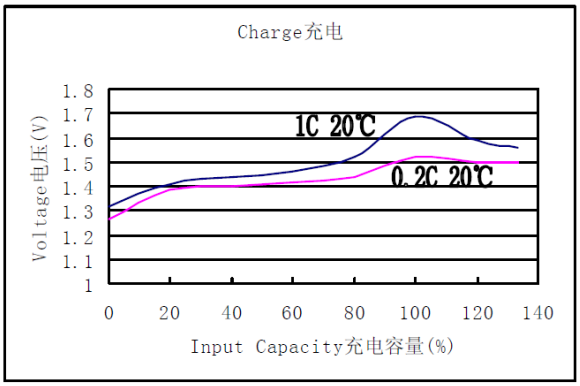
SPECIFICATIONS
Sealed Rechargeable Nickel Cadmium
Ni-CD 170mAh 1/3AA

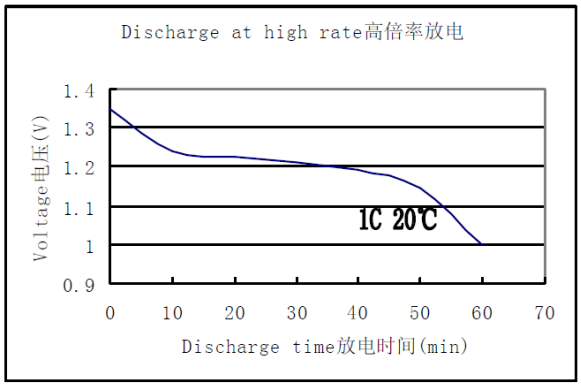
MODEL No: NC13AA170 **Description: 170mAh** 1/3AA SIZE Ni-Cd

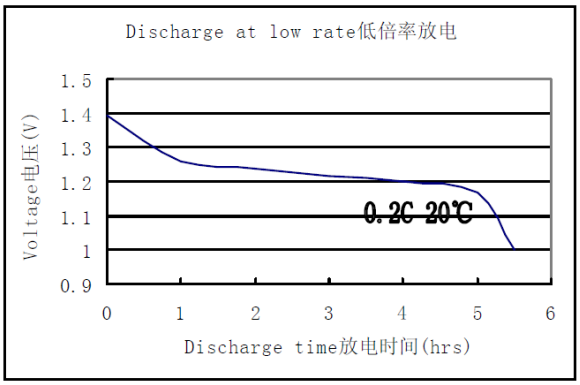


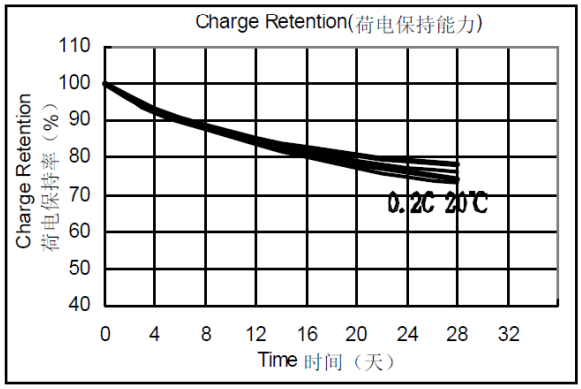
Specification

Nominal Capacity		170 mAh
Nominal Voltage		1.2 V
Charge current	Standard	17mA
	Quick	51mA
	Fast	170mA
Charge time	Standard	14~16 Hrs
	Quick	4.0 Hrs
	Fast	1.3Hrs
Ambient Temperature — Charge	Standard	0℃~35℃
	Quick	10℃~35℃
	Fast	10℃~35℃
Ambient Temperature — Discharge		-30℃~60℃
Ambient Temperature — Storage		-30℃~35℃
Internal Impedance(mΩ) (Upon fully charge)		Max≤70
Weight		6g









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2. PERFORMANCE

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

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

Test Item	Test Conditions	Requirements
(1) **Standard Charge**	Charge is conducted continuously for 16 hours at the constant current of 17mA (0.1C) after pre-discharge at the constant current of 34mA (0.2C) up to a cut-off voltage of 1.0V/cell	
(2) **Open-circuit Voltage**	Voltage between terminals of the charged battery specified in item (1) is measured after rest for 1 hour	≥1.25V
(3) **Capacity (0.2C)**	Capacity of the charged battery specified in item (1) is measured at 34mA (0.2C) up to a cut-off voltage of 1.0V after rest for 15 minutes. If the discharge time doesn't reach the specified value, the test may be carried out further twice, up to three times in total.	≥170mAh
(4) **High rate discharge(1C)**	Discharge time of the charged battery specified in item (1) is measured at 170mA (1C) up to a cut-off voltage of 1.0V after lest for 15 minutes. If the discharge time doesn't reach the specified value, the test may be carried out further twice, up to three times in total.	≥54minutes
(5) **Fast charge (1C)**	Charge: 170mA(1C) ×1.3 hours (charging Cut off =- △V=5~10mV/cell or Temp.Cut off=50℃)	
(6) **Trickle charge current**	5.6mA(0.033C)~8.5 mA (0.05C)	
(6) **Charge retention**	Capacity of the charged battery specified in item (1) is measured at 34mA(0.2C) up to a cut-off voltage of 1.0V after rest for 28 days at 20℃.	≥70%
(7) IEC Cycle life (IEC61951-1 (2003) 7.4.1.1)	Cycle No / Charge / Rest / Discharge 1 / 0.1C×16h / None / 0.25C×140min 2-48 / 0.25C×190min / None / 0.25C×140min 49 / 0.25C×190min / None / 0.25C to 1.0v 50 / 0.1C×16h / 1-4h / 0.2C to 1.0v Cycles 1 to so shall be repeated until the discharge duration on any 50th cycle becomes less than 3h	≥500
(9) **Accelerated cycle life**	Charge: 170mA (1C) ×1.3 hours (charging Cut off =- △V=5~10mV/cell or Temp.Cut off=50℃) ;Discharge: 170mA(1C) to 1.0V/cell,end-of:70% nominal capacity .	≥400
(10) **Safety valve operation**	Forced discharge is conducted for 60 minutes at a constant current of 170mA(1C) after pre-discharge at a constant current of 34mA (0.2C) up to 0V	Leakage, No explode or disrupt

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(11)**Leakage**	Fully charged at 85mA (0.5C) for2.4hour stand for 14 days	No leakage nor deformation
(12) **Vibration Resistance**	Charge the battery 0.1C 16hrs,then leave for 24hrs,check Battery before/after vibration, Amplitude 1.5mm Vibration 3000 CPM Any direction for 60mins.	Change of voltage should be under 0.02V/cell,Change of impedance should be under 5 milli-ohm/cell
(13) **Impact Resistance**	Charge the battery 0.1C 16hrs Then leave for 24hrs,check bat-before/after dropped, Height 50cm Wooden board (thickness 30mm) Direction not specified, 3 times.	Change of voltage should be under 0.02V/cell Change of impedance should be under 5 milli-ohm/cell

3. EXTERNAL APPEARANCE

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

4. 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.