

**POWER  SONIC**



**Nickel Cadmium and Nickel-Metal Hydride  
Rechargeable Batteries**



## Features - Nickel Cadmium & Nickel-Metal Hydride Batteries

### Large Array of Sizes and Types

Power-Sonic offers a broad range of cell sizes and types to meet a wide range of configurations and applications. Capacities range from 110 – 8000 mA. The batteries listed are our standard range. Other sizes and/or terminal configurations are available, subject to minimum order quantities and delivery times.

### Exceptional Performance

State of the art design and meticulously controlled manufacturing ensure the highest performance levels in terms of energy density and voltage stability.

### Rugged, Durable and Safe

The cylindrical steel case coupled with state-of -the art manufacturing result in extremely impact and vibration resistant batteries.

### Long Shelf Life

The cells have a long storage life with few limiting conditions. Ideally they should be stored in a discharged state.

### Uniformity of Cells

This is achieved through a quality control system which electronically screens cells as to capacity and impedance. This virtually eliminates the need for cell matching and enhances long term performance in cell assemblies.

### Excellent Discharge Characteristics

Power-Sonic batteries have low internal resistance and high flat voltage characteristics during high current discharge. This allows the batteries to be used in a wide range of applications.

### Long Service Life

500-1000 charge/discharge cycles can be obtained depending on the average depth of discharge. In standby (trickle charge) mode up to five years of trouble free operation can be expected when the battery is operated at room temperature.

### Self Sealing Safety Vent

All cells are equipped with a safety valve that will vent to release any excess gases generated in an overcharge, short circuit or reverse charge situation. The valve automatically resets when the cell returns to normal operating conditions.

### Wide Temperature Range

An operating discharge temperature range of -4 °F to 140 °F (-20 °C to 60 °C) for regular cells and -40 °F to 158 °F (-40 °C to 70 °C) for high temperature cells provides design flexibility for a wide spectrum of environmental extremes. The allowable temperature range for charging is 32 °F to 122 °F (0 °C to 50 °C).

## Typical Applications

- Power tools
- Cell phones
- Hand tools
- Laptop computers
- Walkie Talkies
- Radio controlled models & toys
- Flashlights
- PDA's
- GPS systems
- Emergency lighting
- Calculators
- Cordless phones
- Portable recorders
- Photographic & video equipment
- Portable printers
- Garden lights
- Cordless mouse
- Cordless keyboard



## Specifications - Nickel Cadmium Batteries (NiCd)

### Nickel Cadmium - Standard Cells

Model Number	Cell Size	Top Type	Voltage (V)	Capacity mA	Standard Charge		Quick Charge		Diameter		Height		Weight (grams)
					mA	hrs.	mA	hrs.	in.	mm	in.	mm	
PS-AAA	AAA	Button	1.2	300	30	14	300	1.2*	0.40	10.1	1.72	43.6	10
PS-2/3AA	2/3AA	Flat	1.2	300	30	14	300	1.2*	0.56	14.1	1.10	28.0	12
PS-AA	AA	Flat	1.2	600	60	15	600	1.2*	0.56	14.1	1.89	48.0	21
PS-AAL	AA	Button	1.2	600	60	14	600	1.2*	0.56	14.1	1.95	49.5	18
PS-AAX	AA	Flat	1.2	700	70	15	700	1.2*	0.56	14.1	1.89	48.0	22
PS-850AA	AA	Flat	1.2	850	85	16	425	2.4*	0.56	14.1	1.89	48.0	23
PS-850AAL	AA	Button	1.2	850	85	16	425	2.4*	0.56	14.1	1.95	49.5	23
PS-2/3A	2/3A	Flat	1.2	600	60	14	600	1.2*	0.64	16.3	1.08	27.4	15.5
PS-4/5A	4/5A	Flat	1.2	1000	100	15	1000	1.2*	0.66	16.8	1.66	42.1	30
PS-A	A	Flat	1.2	1400	140	15	700	2.4*	0.66	16.8	1.93	49.0	33
PS-SC	SC	Flat	1.2	1500	150	15	1500	1.2*	0.87	22.1	1.65	42.0	44
PS-C	C	Flat	1.2	2000	200	15	2000	1.2*	1.00	25.3	1.93	49.0	68
PS-CX	C	Flat	1.2	2500	250	14	1250	2.4*	1.00	25.3	1.93	49.0	64
PS-1/2D	1/2D	Flat	1.2	2400	250	14	1250	2.4*	1.26	32.1	1.38	35.0	71
PS-D	D	Flat	1.2	4000	400	15	1200	4.0*	1.26	32.1	2.32	59.0	123
PS-DL	D	Button	1.2	4000	400	14	2000	2.4*	1.26	32.1	2.38	60.5	120
PS-DX	D	Flat	1.2	5000	500	15	2500	2.4*	1.27	32.2	2.32	59.0	138
PS-F	F	Flat	1.2	7000	700	14	3500	2.4*	1.27	32.2	3.50	89.0	179

\* Quick or rapid charge only with negative delta voltage cutoff. Refer to individual specification sheets for details

### Nickel Cadmium - High Temperature Cells (H-Type)


PS-1/3AAH	1/3AA	Flat	1.2	110	11	16	n/a		0.56	14.1	0.67	17.0	7
PS-AAH	AA	Flat	1.2	700	70	14	n/a		0.56	14.1	1.89	48.0	22
PS-SCH	SC	Flat	1.2	1500	150	15	n/a		0.87	22.1	1.65	42.0	41
PS-CH	C	Flat	1.2	2200	220	16	n/a		1.00	25.3	1.93	49.0	68
PS-DH	D	Flat	1.2	4000	400	14	n/a		1.27	32.2	2.32	59.0	138

### Nickel Cadmium - High Capacity Rapid Charge Cells

PS-AAXF	AA	Flat	1.2	700	70	15	700	1.2*	0.56	14.1	1.93	49.0	22
PS-SCXF	SC	Flat	1.2	1800	180	15	1800	1.2*	0.87	22.1	1.65	42.0	46
PS-CXF	C	Flat	1.2	2500	250	15	1150	2.4*	1.00	25.3	1.93	49.0	68
PS-DF	D	Flat	1.2	4500	450	15	2100	2.4*	1.27	32.2	2.32	59.0	135
PS-DXF	D	Flat	1.2	5000	500	16	2300	2.4*	1.27	32.2	2.32	59.0	138

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### Nickel Cadmium - PCBM (Printed Circuit Board Mount) Memory Save Cells

PCBM-2.4	1/3AA/3	P.C. PINS	2.4	110	4	48		0.57	14.5	1.35	34.5	15
PCBM-3.6	1/3AA/3	P.C. PINS	3.6	110	11	16		0.57	14.5	2.05	52	21

## Specifications - Nickel-Metal Hydride Batteries (NiMH)

### Nickel-Metal Hydride - Cylindrical Cells

NH-600AAA	AAA	Flat	1.2	600	60	14	600	1.2*	0.40	10.1	1.72	43.6	12
NH-1250AA	AA	Flat	1.2	1250	125	16	1250	1.2*	0.56	14.1	1.89	48.0	23
NH-1250AAL	AA	Button	1.2	1250	125	16	1250	1.2*	0.56	14.1	1.95	49.5	23
NH-1500AA	AA	Flat	1.2	1500	150	16	1500	1.2*	0.56	14.1	1.89	48.0	25
NH-1500AAL	AA	Button	1.2	1500	150	16	1500	1.2*	0.56	14.1	1.95	49.5	23
NH-2000AA	AA	Flat	1.2	2000	200	16	1000	2.4*	0.56	14.1	1.89	48.0	29
NH-1600A	4/5A	Flat	1.2	1600	160	16	800	2.4*	0.66	16.8	1.66	42.1	33
NH-2200A	4/5A	Flat	1.2	2200	220	16	1100	2.4*	0.66	16.8	1.66	42.1	38
NH-3500A	4/3A	Flat	1.2	3500	350	14	1750	2.4*	0.65	16.6	2.60	66	51
NH-3000SC	SC	Flat	1.2	3000	300	16	1500	2.4*	0.87	22.1	1.65	42.0	59
NH-7000D	D	Flat	1.2	7000	700	14	3500	2.4*	1.27	32.2	2.32	59.0	153
NH-8000D	D	Flat	1.2	8000	800	15	4000	2.4*	1.27	32.2	2.32	59.0	160

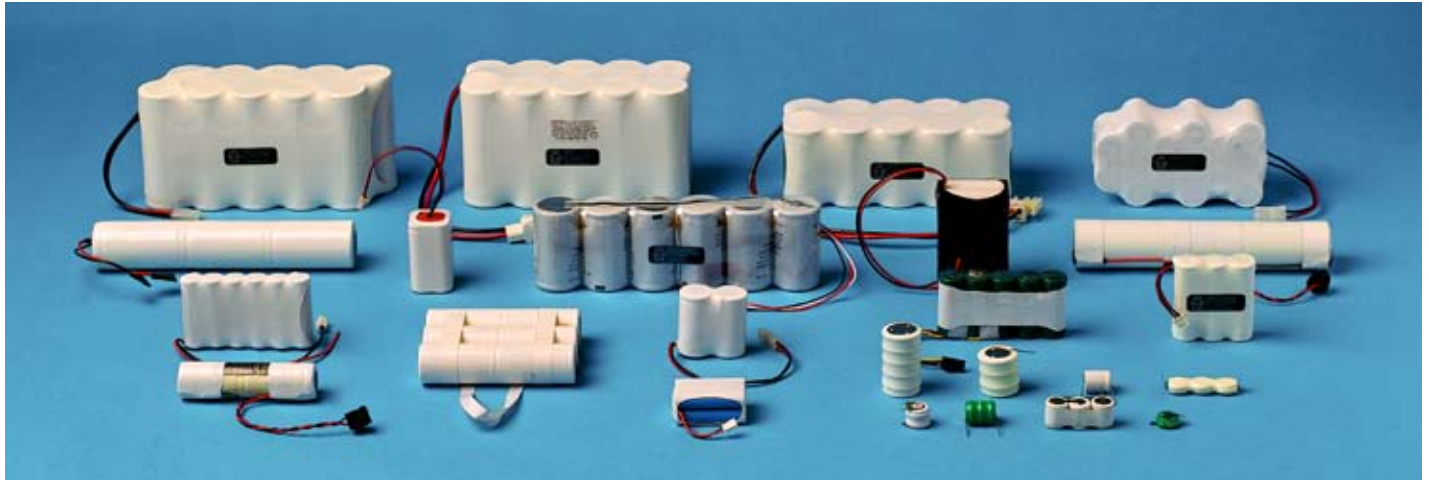
\* Quick or rapid charge only with negative delta voltage cutoff. Refer to individual specification sheets for details

### Nickel-Metal Hydride - Button Cells

NH-B80		Button	1.2	80	8	15	n/a		0.67	15.4	0.25	6.3	3.5
NH-B320		Button	1.2	320	32	15	n/a		0.98	25.0	0.30	7.6	14.5
NH-TR7	9V Size	Snap On	8.4	150	15	15	n/a		n/a		0.61	15.5	42

Other sizes and/or terminal configurations are available, subject to minimum order quantities and delivery times.

## Nickel Cadmium and Nickel-Metal Hydride Cell Assemblies



Power-Sonic NiCd & NiMH batteries are also available as cell assemblies and packs. Both cylindrical and button cells may be packaged in any linear or tubular configuration to meet electrical and dimensional requirements.

The basic building block of any nickel cadmium or nickel-metal hydride battery pack is the 1.2V cell, either button or cylindrical and they can be assembled together in a variety of ways, either in series or parallel. For example, 10 cells configured as a pack and connected in series will form a 12 volt battery.

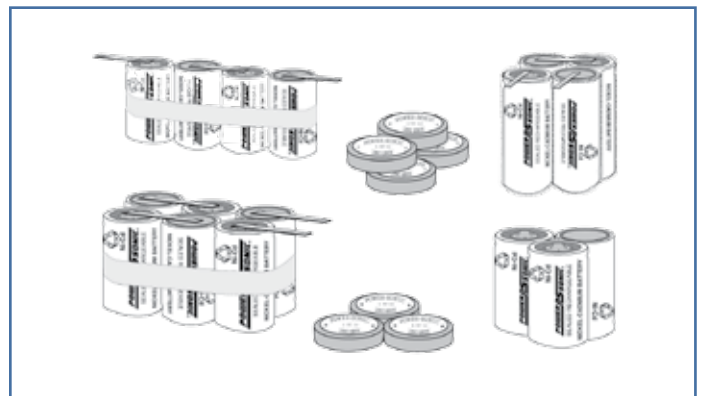
When specifying battery assemblies, the following information should be given:

- Size and type of cell
- Voltage or number of cells
- Configuration of cells: e.g., 1 x 4, 2 x 5, stick, etc.
- Operating temperatures for the battery
- Packaging method: taped or glued with hot melt; with or without shrink wrap
- Termination: button top, solder tabs (incl. direction), or wire leads with or without connectors

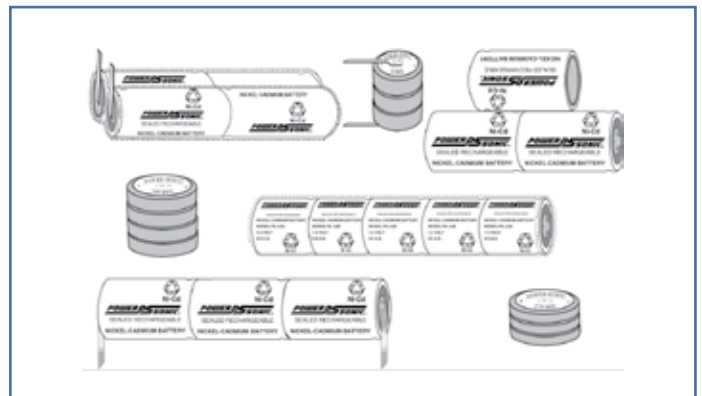
When ordering a replacement battery pack, please specify:

- Voltage or number of cells
- Ampere-hour capacity or cell size
- Dimensions of the pack

### Linear Configurations



### Tubular Configurations



### Contact Information

#### DOMESTIC SALES

Tel: +1-619-661-2020  
Fax: +1-619-661-3650  
national-sales@power-sonic.com

#### CUSTOMER SERVICE

Tel: +1-619-661-2030  
Fax: +1-619-661-3648  
customer-service@power-sonic.com

#### TECHNICAL SUPPORT

Tel: +1-619-661-2020  
Fax: +1-619-661-3648  
support@power-sonic.com

#### www.power-sonic.com

#### INTERNATIONAL SALES

Tel: +1-650-364-5001  
Fax: +1-650-366-3662  
battery@power-sonic.com