

Nickel Cadmium (NiCd) Battery Packs and Custom Designs



DMS technologies is a supplier of NiCd batteries, which provide superior performance within a wide range of applications. These cells have low internal resistance giving them a stable voltage profile during high rate discharge in cyclic and standby applications. These versatile batteries are available in an extensive range of capacities, sizes and configurations.

Our cells can be built into any configuration to best fit the available space, and if requested can incorporate safety devices such as diodes, fuses and temperature sensors. Our custom built packs are designed to meet all customer specific requirements regarding configuration, termination, connectors and packaging.

High temperature options are available in popular cell sizes.

MAIN BENEFITS

- High discharge current capability
- Excellent cycle life
- Long service life
- Install in any orientation
- Quick charge capability
- Sealed – no maintenance
- Excellent shock resistance
- Can be stored discharged

BATTERY POWER FOR:

- Medical
- Safety and Security
- Electronics
- Industry
- Emergency Lighting
- Power Tools
- Instrumentation
- Electrical

NICKEL CADMIUM (NiCd) – TECHNICAL DATA

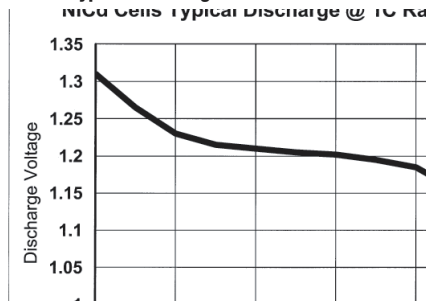
Can Size	Capacities Available (mAh) Nominal Voltage 1.2V
AAA	240-320
AAA 1/4	50
AAA 1/2	130
AAA 2/3	150-170
AA	600-1000
AA 1/3	150-170
AA 2/3	270-400
AA 4/5	600-650
AA 7/5	1000-1200
A	1200-1400
A 1/3	210-240
A 1/2	500-650
A 2/3	700-750
A 4/5	1000-1200
A 7/5	1800-2000

SC	1200-2000
SC 1/2	750-800
SC 4/5	1000-1200
SC 5/4	2000-2300
C	2200-2800
C 1/2	1300
C 1/3	700
D	1500-5000
D 1/2	2200-2500
F	7000-7500
N	180-220

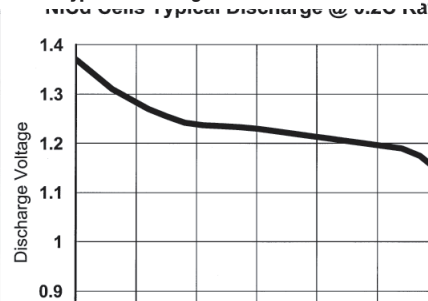
High Temperature Cells

AA	800
SC	1300-1500
C	2200-2500
D	4000-4400

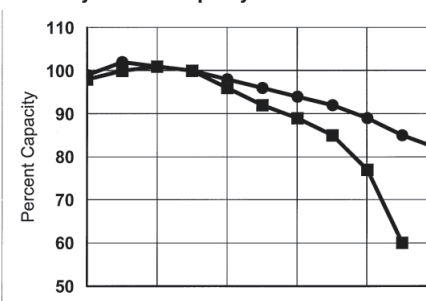
NiCd Cells Typical Discharge @ 1C Rate - 20°C



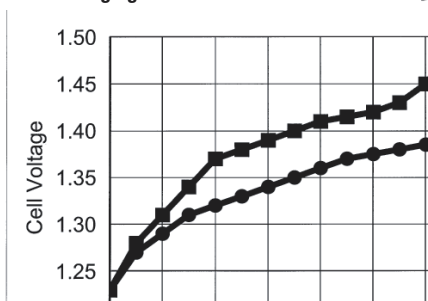
NiCd Cells Typical Discharge @ 0.2C Rate - 20°C



NiCd Cells Cycle Life & Capacity



NiCd Cells Charging Characteristics - 20°C



Charging (Constant current)

Trickle	0.05 CA	48 Hours - constant
Standard	0.1 CA	14-16 Hours
Quick	0.3 CA	4 Hours

- Maximum cell voltage should be considered to be 1.7 volts
- $-\Delta V$ termination should be set at 20-30 mV/cell
- DT/dt termination should be 0.5°C/minute

A wide range of chargers for your NiCd batteries are available from DMS technologies

Design, Development, Manufacture and Supply of Batteries and Power Systems

Note: Other capacities and cells may be available on request. Contact our Sales Department for further information.

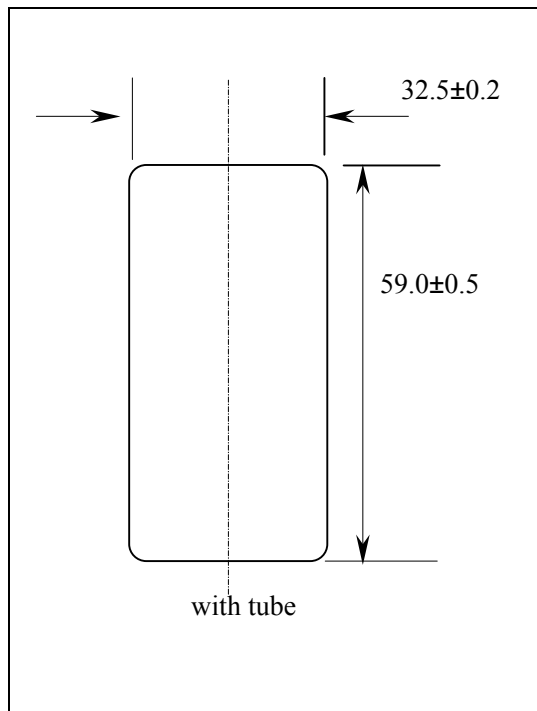


Yuasa Battery Sales (UK) Ltd

MODEL No: 1DH (GENERIC)

Description: D SIZE HIGH TEMP NI-CAD

Capacities Available : 4000, 4400 and 4500 mAh



Specification

Nominal Capacity			As Spec
Nominal Voltage			1.2 V
Charge current		Trickle	0.05 - 0.1 CA
		Standard	0.1 CA
		Quick	0.3 CA
Charge time		Standard	14~16 Hrs
		Quick	4~5 Hrs
Ambient Temperature	Charge	Standard	-20-70°C
		Quick	-20-70°C
	Discharge		-20~70°C
	Storage		-20~70°C
Max Humidity for Discharge			85%
Internal Impedance(AC) (After Charge using 1Khz)			Average≤7.5 Max≤9.0
Weight			126g

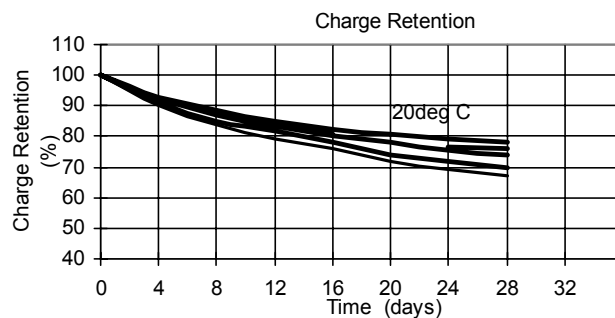
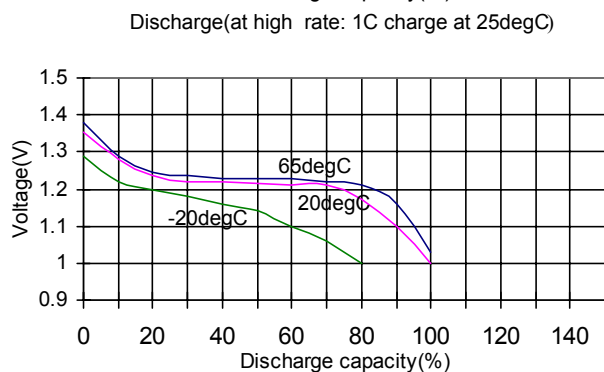
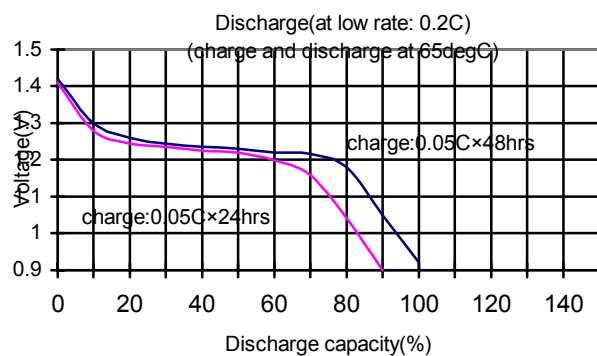
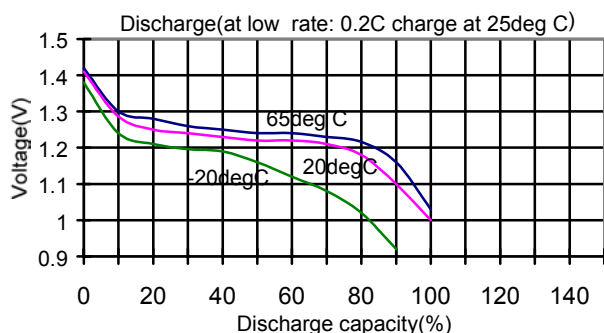
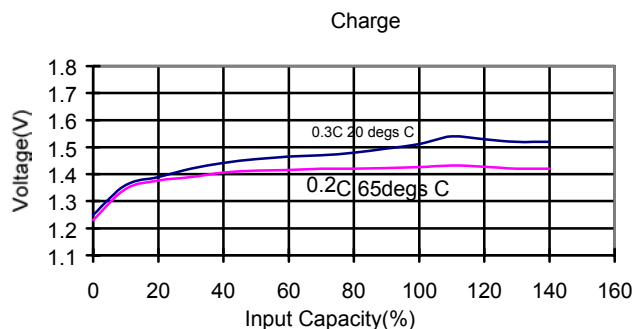
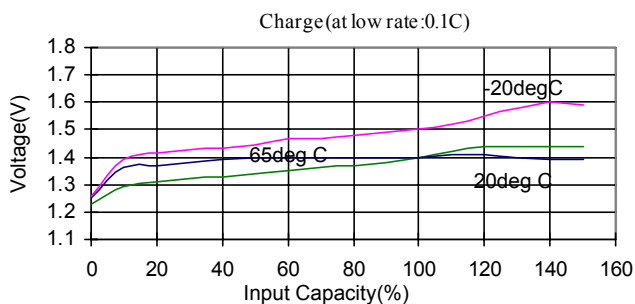
Performance

Test	Unit	Specification	Test Conditions
Capacity	mAh	≥Capacity as specified	Standard Charge and then Discharge (0.2CA for 5 Hours) Allowing up to 3 cycles to achieve full capacity
Open Circuit Voltage(OCV)	V/cell	≥1.25	Within 1 hour after standardCharge
High Rate Discharge(1C)	Minute	≥54	Standard Charge then 1 hour rest. Before discharge by 1CA)to 1.0V/cell. Allowing up to 3 cycles to achieve full capacity.
Overcharge	/	No leakage nor explosion	(0.1C) Charge 28 days
Charge Retention	mAh	≥ 0.7C (70%)	Standard Charge, Storage 28 days, Standard Discharge
IEC Cycle Life	Cycle	≥700	IEC285(1993)4.4.1
Leakage		No leakage nor deformation	Fully charged at : (0.3C) for 4.5hrs. Then stand for 14 days



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Characteristic Curves



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.

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