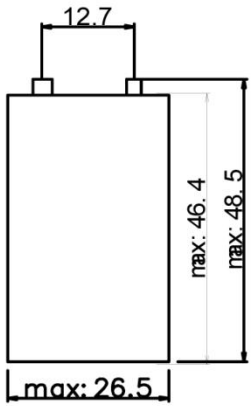
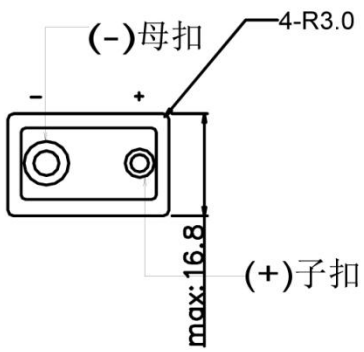
1. SPECIFICATIONS：

Type	Sealed Ni-MH Prismatic Battery pcak
Size	9V200(6F22)
Model	6F22 (for IEC60086 6F22 size)
Nominal Voltage	8.4V
Nominal Capacity (20℃, Standard Charge ,0.2I_tA discharge to 7.0V)	200mAh
Typical Capacity:	210mAh
Minimum Capacity	200mAh
Typical Internal Impedance(at 1 kHz)	
(fully charged at 20℃max)	Max：800mΩ
Average Weight	46.0g
Dimensions(no including PVC tube)	
Height(h)	Max：48.5mm
Width(W):	Max：26.5mm
Thickness(t):	Max：16.8mm
Charging Method:(20℃)	
Standard Charge:	Charge with 0.1I_tA(20mA) for 14-16hours
Quick Charge	Charge with 0.3I_tA(60mA) for4. 5 hours
Fast Charge:	Charge with 1.0I_tA (200mA) for 7.5 hours (Under -△V controlled 70mV)
Max Overcharge Current	0.1I_tA (20mA)(No longer than 100 hours)
Trickle Current	6~10mA
Operating Temperature(reference only):	
Storage	-20℃～+35℃
Discharge:	-20℃～+60℃
Standard Charge	0℃～+45℃
Fast Charge	+10℃～+45℃





2,Performance

Testing Item	Testing Conditions	Standard
Standard Testing Condition	If not specially described, Temperature 20℃à5℃ Relative Humidity: 65¡À20。 Parament measuring instruments： à1% for voltage/current/capacity； ¡À℃ for temperature； ¡À0.1% for tim。	
(1) Standard Charge	0.2I_t **A** discharge to 7.0V,then 0.1 I_t **A** charge for 14-16 hours(Constant Current)	
(2)Fast Charge	0.2I_t **A** discharge to 7.0V,then 1.0 I_t **A** charge for 72 minutes(Under -△V controlled 70mV)	
(3) Open Circuit Voltage	Test within 14 days after standard charge	≥Ý8 75
(4)Nominal Capacity	Have 1-4 hours of rest after standard charge, then 0.2 I_t **A** ischarge to 7.0V 3 cycles permitted	≥Ý300 minute
(5)High Rate Discharging Capacity	Have 1-4 hours of rest after fast charge, Then 1.0CA discharge to 7.0V,3 cycles permitted	≥Ý54 minute
(6)Cycle Life	※for IEC61951-2：2003(7.4.1.1)	≥Ý00 th cycle
(7)Overcharge	After(4) testing, The cell shall be charge ,in an ambient temperature of 20℃à5℃,at a constant current of 0.1 I_t **A** for 48h,After this charging operation ,the cell shall be stored , in an ambient temperature of 20℃à5℃,for not less then 1 h and not more then 4 h. The cell shall then be discharge ,at 20℃à5℃ at a constant current of 0.2 I_t **A** to a final votage of 7.0V.	≥Ý300 minutes
(8)Over-Discharge Safety device operation	The cell shall undergo aforced discharge in an ambient temperature 20℃à5℃,at a constant current of 0.2 I_t **A**, to a final volatge of 0V. The current shall then be increased to 7.0 I_t **A** and the forced discharge continued in the same ambient temperature of 20℃à5℃,for 60min.	The cell shall not disrupt or burst, Leakage of electrolyte and deformation of the cell are acceptable
(9)Temperature	Fast charged as (2) under 20à5℃,stored 3 hours, under followimg temperatures,then 1.0 I_t **A** discharge to 7.0V: a) Discharging Temperature: 0℃ b)Discharging Temperature: 20℃ c)Discharging Temperature: 40℃	Discharging Time 50 minutes 54 minutes 50 mimutes
(10)Charge(capacity) retention(Self-discharge)	After standard charge, stored for 28 days under 20à5℃,then 0.2 I_t **A** discharged to 7.0V	Discharging Time ≥Ý210 minute
(11)Storage	Standard Charged as (1) condition and stored for 12 months under 20℃à5℃,then tested as (4) condition	Discharging Time≥Ý240 minute

Testing Item	Testing Conditions	Standard
(12)Mechanical test：bump test	1)The battery shall be subjcted to drop from the height of 1 m to an oak board more than 1 cm thick,the test should be carried for 3 times at each direction of the battery axis.	Battery maintain electrical performance, allowing a mechanical deformation or injury
	2) The ability of the cell to withstand mechanical Shock shall be checjed by means of bump test carried out in accordance with IEC 60068-2-29. After standard charge，The bump test shall be chenged carried out in an ambient temperature of 20à5℃, under the following conditions： -peak acceleration(A) 98m/s^2 (10gn) -corresponding duration to pulse(D) 16ms -corresponding velocity charge 1,00ms -number of bumps 1000à 10 When the bump test has been completed,each cell shall be stored for not less then 1 h and mot more then 4 h in an ambient temperature of 20℃æ5℃,It shall then be discharge in the same ambient temperature with a constant current of 0.2 I_t A to a final volatge of 7.0V	≥300 minutes.

3. Note:

1).Do not dispose of cell into fire or be dismantled under any condition.

2).Do not mix different cell types and capacities in the same battery assembly.

3).Charge and discharge under specified ambient temperature recommended to specification.

4).Short circuit leading to cell venting must be avoided .

5).Never solder onto cell directly.

6).Cell reversal should be avoided.

7).Use batteries in extreme condition may affect the service life, such as:extreme temperature, deep cycle,extreme overhcarge and over discharge.

8).Batteries should be stored in a cool dry place.

9).Once problems be found,stop using,send batteries to local dealer.

4. Storage

1).It is strongly recommended to store Ni-MH batteries and cells in the temperature range from -20 to 25℃ ,and in low humidity and no corrosive gas environment,to maintain a reasonably high capacity recovery level.

2). Avoid storage higher (e.g.35℃),lower temperature than –20℃ ,or higher humidity which would result in deterioration or damage to the cells and batteries such as follows:

5, Permanent capacity loss

Electrolyte leakage resulted from the expansion or shrinkage of organic material inside the cells

6, Rust of metal parts.

7, Up to three full cycles of charge /discharge after long-termed storage may need to obtain highest capacity.

8.Quality assurance period:12 months。

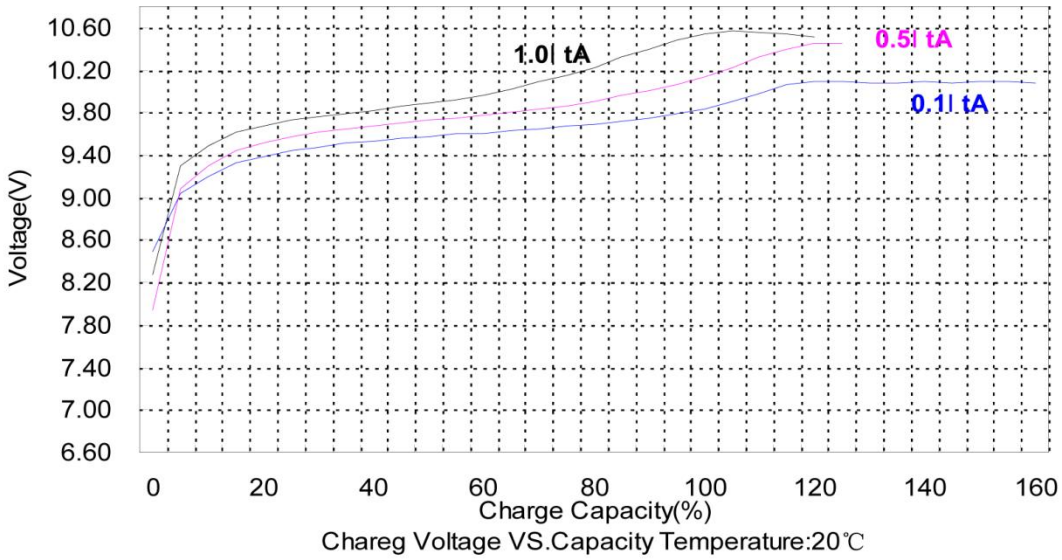
※IEC61951-2：2003(7.4.1.1) Endurance in cycles

Cycle number	Charge	Stand in charged condition	Discharge
1	0.1 I_t A (20mA) for 16h	none	0.25 I_t A (50mA) for 2h 20 min
2-48	0.25 I_t A (50mA) for 3h 10 min	none	0.25 I_t A (50mA) for 2h 20 min
49	0.25 I_t A (50mA) for 3h 10 min	none	0.25 I_t A (50mA) to 7.0 V
50	0.1 I_t A (20 mA) for 16h	1 h to 4 h	0.2 I_t A (40mA) to 7.0 V

Cycle 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes Less than
Cycles 1 to 50 shall be repeated until the discharge duration on any 50th cycle becomes less than 3 h. At this stage, a repeat capacity measurement as specified for cycle 50 shall be carried out.

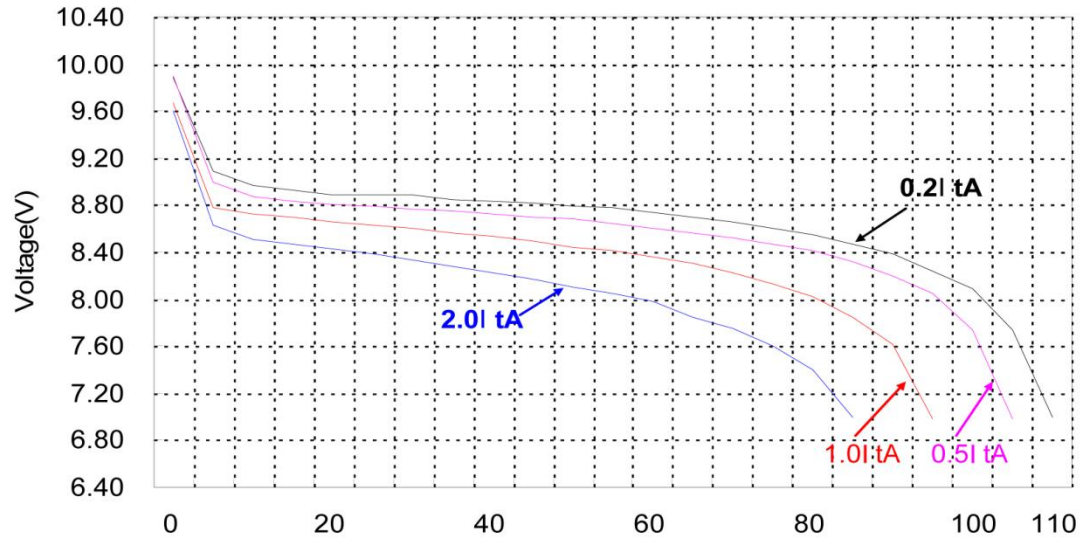
The endurance test is considered complete when two such successive capacity cycles give a discharge duration of less than 3 h. The total number of cycles obtained when the test is completed shall be not less than 500

Effect Different Current On Ni-MH 9V(6F22) battery Cell Charge Curve



Chareg Voltage VS.Capacity Temperature:20℃

Effect Different Current On Ni-MH 9V(6F22) battery Cell Discharge Curve



Dischareg Voltage VS.Capacity Temperature:20℃