

Note: This Approval Sheet (Version Number: SP/20071218-200FA) prepared by Union Suppo Battery (Liaoning) Co., Ltd., is subject to be modified without prior notice.

SPECIFICATIONS:

Type Sealed Ni-MH Prismatic Battery pack

Size Ni-MH 9V

Mode 6F22
Nominal Voltage 8.4V
Nominal Capacity 200mAh

Typical Internal Impedance(at 1 kHz)

Average Weight 50.5g

Dimensions(including PVC tube)

Height(h) Max: 48.5mm
Width(W): Max: 26.5mm
Thickness(t): Max: 17.0mm

Capacity (20°C 0.2C discharge to 7.0V) (Reference only)

Typical Capacity: 200mAh Minimum Capacity 180mAh

Charging Method: (20°C)

Standard Charge: Charge with 20mA for 14-16hours

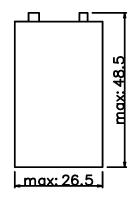
Quick Charge
Charge with 60mA for 4 hours
Charge with 200mA for 1.05 hours
(Under -△V controlled 35mV)

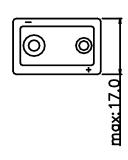
Max Overcharge Current 20mA(No longer than 28 hours)

Trickle Current 6~10mA

Operating Temperature(reference only):

Storage $-20\,^{\circ}\text{C} \sim +35\,^{\circ}\text{C}$ Discharge: $-10\,^{\circ}\text{C} \sim +45\,^{\circ}\text{C}$ Standard Charge $0\,^{\circ}\text{C} \sim +45\,^{\circ}\text{C}$ Fast Charge $+10\,^{\circ}\text{C} \sim +35\,^{\circ}\text{C}$





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Performance

Tankina II	T 0 0 00	Standard
Testing Item	Testing Conditions	Standard
Standard Testing Condition	If not specially described, Temperature 20±5℃ Relative Humidity: 65±20%。	
(1)Standard Charge	0.2C discharge to 7.0V, then 0.1C charge for 16 hours(Constant Current)	
(2)Fast Charge	0.2C discharge to7.0V, then 1C charge for 63 minutes (Under -△V controlled 35mV)	
(3)Open Circuit Voltage	Test within 14 days after standard charge	≥8.05V
(4)Nominal Capacity	Have 1hours of rest after standard Charge then 0.2C discharge to 7.0V 3 cycles permitted	≥264minutes
(5)High Rate Discharging Capacity	Have 1hours of rest after standard charge, Then 1.0C discharge to 7.0V, 3 cycles permitted	≥48 minutes
(6)Cycle Life	 0.2C Charge for 6 hours, 30 minutes rest, then 0.2C discharge to 7.0V, for 3 cycles, then cycle life test as following condition: a.)1.0C charge for 1.05 hours and -△V=35mV,30 minutes rest; b.)1.0C discharge to 7.0V, 30 minutes rest. c. repeat form a.) to b.) d.) When cycle No.=200, 0.2CA discharge to 7.0V. 	>=60% nominal capacity can be attained at the 200th cycle
	2) for GB/T 15100.2-2003/IEC61951-2: 2003(7.4.1.1)	≥400th cycle
(7)Over-charge	After (4) testing, 0.1C charge for 48 hours, check pack surface, 0.2C discharge to 7.0V.	No deformation or leakage can be found, and ≥240 minutes.
(8)Over-Discharge	After (4) testing, 0.2C discharge to 0V, 0.3C discharge for 60mins.	NE, but deformation and leakage allowed
(9)Temperature	Standard charged as (1) under 20±5°C, then stored 2 hours under following temperatures, 1.0C discharge to 7.0V, a)Discharging Temperature: 0°C b)Discharging Temperature: 20°C c)Discharging Temperature: 40°C	Discharging Time 38.5 minutes 48 minutes 38.5 minutes
	Standard charged as (1) under following temperature, then stored 2 hours under $20\pm5^{\circ}\!$	Discharging Time 48 minutes 48 minutes 38.5 minutes
(10)Self-discharge	After standard charge, stored for 28 days under 20+/-5℃,then discharged to 7.0V	Discharging Time ≥200 minutes
(11)Storage	Charged as (1) condition and stored for 180 days under 20±5°C, then tested as(4) condition	Discharging Time ≥180 minutes

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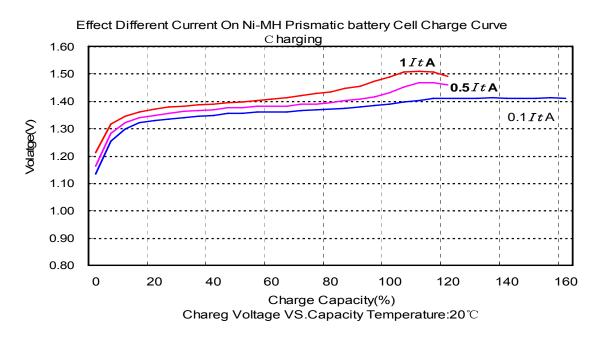


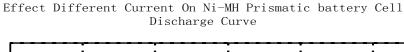
(12)Humidity	Standard charged and stored under RH of 60%.	No deformation or No leakage
(13)Vibration	Vibration in any direction at amplitude of 4 mm and A frequency of 1000 cycles per minute and continue for 60 minutes.	The battery shall conform electrical spec, mechanical
(14)Drop	The battery shall be subjected to drop from the height of 100cm to an oak board more than 10mm thick the test should be carried for 3 times at each direction of the battery axis.	deformation or damage is acceptable
(15)Safety	(1)External short: standard Charged and then short-circuited between terminals of the battery by the lead wire with the cross section area of 0.75 square millimeter.	The battery shall not explode, but leakage or deformation of
	(2)Over charge: Charge for 2 hours at the constant current of 1.0C.	the battery is acceptable.

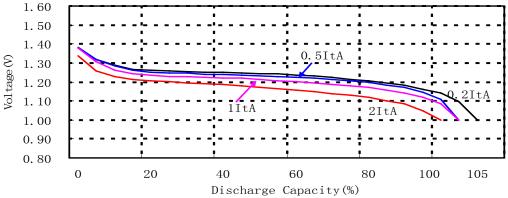
Cautions

- 1. We recommend to use SUPPO specified NI-MH battery charger equipped with rapid charge control. Do not overcharge batteries by exceeding the predetermined charging period specified. Prolonged charging may cause over heating and damage the battery.
- 2. Please recharge the battery before using.
- 3. Charge/discharge current should not exceed the current stipulated by SUPPO.
- 4. The end voltage of the battery pack is 7.0V, do not over-discharge the battery pack, or it will damage the performance of battery pack.
- 5. If battery will be stored for more than 3 months, we suggest charging the battery once every 3 months. The battery should charge 30-50% before storage.
- 6. Do not reverse-charge the battery pack.
- 7. Do not immerse the battery into water.
- 8. Do not disassemble batteries or throw the batteries into fire.
- 9. Do not solder any lead wires directly to the batteries.
- 10. Make sure terminals are correctly positioned when charging.
- 11. Trickle charge brand new batteries or batteries being stored for a long time before using.
- 12. Keep the batteries out of the reach of children; see a doctor when any accidents happen.
- 13. Do not touch overheated batteries, recharge the battery when temperature returns to normal.
- 14. Battery will heat after using, please put the battery on a ventilated place to make it cool before charge it again. Avoid direct sunshine.
- 15. Do not mix deferent size of batteries; do not mix SUPPO battery with other brand batteries.
- 16. When use the battery at too high or too low temperature, deeply charge/discharge, over-charge and over-discharge will decrease the cycle life of batteries
- 17. It will cause internal air pressure increase when over-charge, short circuit or over-discharge, when such accidents happen, safety vent will action and release the air to ensure safety. Therefore, the battery pack should avoid airtight structure. The housing of battery pack should be ventilated, or other fire-source may ignite the Oxygen and Hydrogen released from the batteries.
- 18. The battery pack should have short-circuit protection device to prevent short-circuit. Do not short-circuit batteries, or it will cause permanent damage.
- 19. Store with load is forbidden, it will cause capacity of battery pack irreversible loose if store battery pack with loaded for a long time.
- 20. Please stop using if abnormal phenomenon happens.









Dischareg Voltage VS. Capacity Temperature: $20\,^{\circ}\mathrm{C}$

The above are single battery charging and discharging curves.