Product Specification

Model number	Date of issue: Apr. 17, 2025
BP03A-H16/2.5L	Issued by: Research and development group, Nipron technical center

General specifications

(Unless otherwise noted, specifications apply at ambient temperature/humidity of 20℃±5℃, 65%±20%RH)

	Item	Specifications	Conditions
Electrical Specifications	Nominal voltage	16.8 V	
	Rated capacity	2500 mAh	
	Standard charge (current and time)	250 mA × 16 hrs	
	Supplemental charge	250 mA, pulse charge	Charging to compensate for self-discharge
	Maximum continuous discharge current	20 A (at 20℃ to 60℃, for each battery cell)	
Environmental specifications	Ambient temperature	Standard charge: –10℃ to +60℃, 65%±20%RH Supplemental charge: –10℃ to +60℃, 65%±20%RH Discharge: –10℃ to +60℃, 65%±20%RH (At a low temperature, battery operation time may be shortened by the temperature dependence of battery discharge characteristic. For details, refer to the specifications of power supply used with the battery.)	At no condensation
	Storage Temp. / Humidity	1 year or less: less than –20 to 35°C / 65%±20% 6 months or less: less than –20 to 45°C / 65%±20% 1 month or less: less than –20 to 55°C / 65%±20% 1 week or less: –20 to 65°C or less / 65%±20%	At no condensation
	Vibration	Withstands for 45 minutes for each of orthogonal X, Y and Z directions at amplitude of 0.15 mm, frequency of 10 Hz to 55 Hz and 10 repetitive sweep cycles.	According to JIS-C-0040-1995
	Mechanical shock	No failure is detected by the test that one side of bottom is lifted up (to slant the battery) and, for each of 4 sides, let it fall down 3 times from the height of 50 mm.	According to JIS-C-0043-1995
Other specifications	Dimensions	159.5 mm L × 92.5 mm W × 23.7 mm H	
	Weight	820 g typ.	
	Storage conditions	For a long-term storage over 6 months, recharge battery (by 250 mA×16 hrs) at least once a year. Recommended charge cycle is every 6 months. (If not recharged within the aforementioned term, as a characteristic of the Nickel Metal-Hydrate battery, its charge capacity may not be thoroughly recovered by recharging.)	
	Warranty	One year after delivery. However, if any faults belong to us, the defective unit shall be repaired or replaced at our cost except the defect caused by over discharge.	Except wrong operation out of the specification.
	Documents	Any technical-related documents except the specification including General specification and Outline drawing are not submitted in principle.	

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Battery life

1. Charge/discharge cycle life
   More than 500 repetitive charge/discharge cycles by the use under appropriate charge and discharge conditions. It is assumed that battery life ends when battery operation time (after the battery is charged) is too short despite the charge is made correctly. The end of battery life results in a failure such as abnormal increase in internal resistance or short-circuitry inside battery.
2. Long-term storage/operation life
   Long-term storage will make battery deteriorated. When charge, discharge and temperature are not controlled at appropriate conditions, it may cause a charge/discharge cycle life shortage, performance deterioration or damage to instrument due to a leakage of electrolyte. Since battery life is affected by these conditions, careful considerations should be taken for the use of battery.

Cautions

Nipron does not take any responsibility for possible problems due to the following irregular handlings.

1. Disassembly
   Do not disassemble battery. If disassembled, toxic alkali electrolyte will harm your skin or clothes.
2. Shorting
   Do not short battery. Shorting battery will cause a high current to flow (because of low internal resistance of battery). As a result, it may cause damage to instrument or user's burn by a generation of heat in the battery.
3. Burning and water-soaking
   Do not burn or water-soak the battery. Burning will explode the battery. Soaking battery in water will cause serious damage to the battery.
4. Soldering
   Do not solder directly to the battery electrodes. Soldering may affect battery safety by causing damage to internal safety valve.
5. Reverse insertion
   Do not reverse the insertion of battery. Connecting battery in reverse polarities may cause dangerous expansion or explosion of battery.
6. Over-charge with high current and reverse-polarity charge
   Do not make charge in reverse polarities or over-charge with a high current in excess of maximum allowable limit. Such improper charge will cause a generation of gas from electrolyte, resulting in dangerous expansion or explosion of the battery.
7. Precautions for installation
   1) Avoid installing battery in a closed box or capsule because possible generation of gas from battery may cause explosion by ignition.
   2) Ensure appropriate cooling to dissipate the heat generated in the battery.
   3) Be careful not to tighten the battery too much when installing it in a power supply unit.
8. Use for another application
   Avoid using battery for purposes other than specified applications.

Other instruction

1. Be sure to charge battery correctly before use.
2. The method of battery collection shall be discussed and decided upon with mutual sincerity.
3. About harmful substances 
   - If the gas discharge valve of the battery pack is activated, the electrolyte may leak out of the case.
   - If the liquid gets on your skin, it may cause skin damage. Rinse it out immediately with clean water.
   - Battery packs are built-in devices. Please use them properly built into the device.
     If liquid is leaking, be careful not to touch it, turn off the power and unplug the power cord from the outlet.
4. CE(EU Battery Regulation) compliant

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