

BGN1800-4DWP-A800EC

(4.8V 1800mAh)

Rechargeable Sealed Nickel Cadmium Battery Pack



Technical Specification Sheet



This specification governs the performance of the following Nickel-Cadmium Cylindrical cell and its stack-up battery. All data involves voltage and weight to stack-up battery are equal to the value of unit cell times the number of unit cell which consisted in the stack-up batteries.

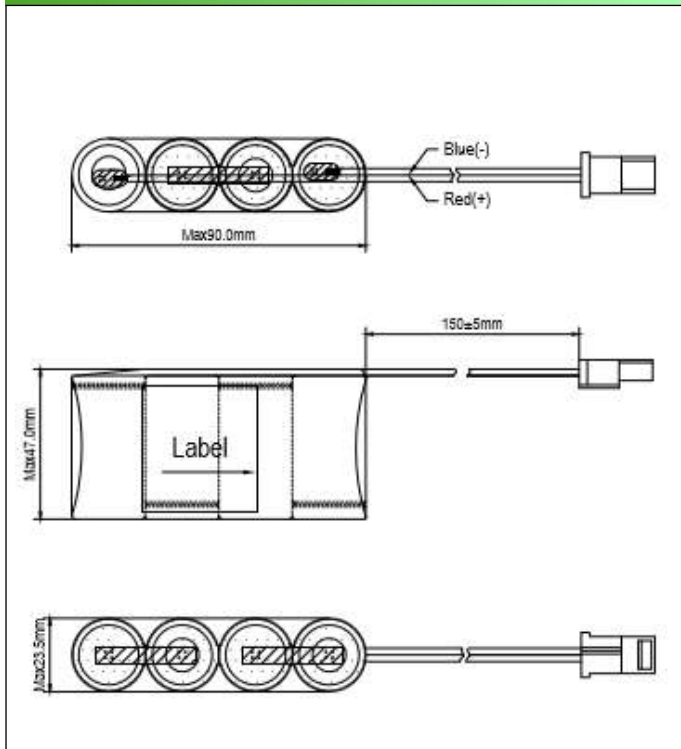
RATINGS

| Description | Unit | Specification | Conditions | |
|-----------------------------|--------|---------------|----------------------------------------------------------|---------------------------------------|
| Nominal Voltage | V/Cell | 1.2V | Unit cell | |
| Nominal Voltage | mAh | 1800 | Standard Charge/Discharge | |
| Standard Charge | mA | 180 (0.1C) | Ambient Temperature: Ta = 20 ± 5°C | |
| | Hour | 16 | | |
| Trickle Charge | | 0.03C ~ 0.05C | Ta = 0 ~ 45°C | |
| Standard Discharge | mA | 360(0.2C) | Ambient Temperature: Ta = 20 ± 5°C Humidity: Max. 85% | |
| Discharge Cut-off Voltage | V/Cell | 1.0 | | |
| Operating Temperature Range | °C | 0 ~ 45°C | Humidity: Max. 85% | |
| Storage Temperature | °C | -20 ~ 35°C | 1 Year | Fully charged state, Humidity Max.60% |
| | | 0 ~ 60°C | 1 Week | Fully charged state, Humidity Max.80% |
| Typical Weight | g | Approx. 45.0 | | |

PERFORMANCE

| Test | Unit | Specification | Other Condition | Remarks |
|----------------------------|---------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Capacity | mAh | 1800 | Standard Charge Discharge | Up to 3 cycles are allowed |
| Open Circuit Voltage (OCV) | V/Cell | ≥1.25 | Within 1 hour after standard Charge | |
| Internal Impedance | mΩ/Cell | ≤25 | Upon fully charge (1 KHz) | |
| High Rate Discharge (1.0C) | minute | ≥48 | Standard Charge, 1 hour rest Before Discharge by 1.0C to 1.0 V/cell | Up to 3 cycles are allowed |
| Overcharge | | No leakage nor explosion | 0.1C Charge 14 days | |
| Charge Retention/ | mAh | ≥1170(65%) | Standard Charge, Storage: 45°C Ambient Temperature, Standard Discharge | |
| IEC Cycle Life/ | Cycle | ≥500 | IEC61951-1(2003)7.4.1.1 | (See Note) |
| Leakage Test | | No leakage nor deformation | Fully charged at 0.5C for 2.5 hour stand for 14 days. | |
| Security Test | | No explosion, but leakage or deformation is allowed | Charge the cell 0.1C 16hrs, Then ≤100mΩ Impedance short circuit for 1hour | Ambient Temperature: T=20±5°C |
| Impact Resistance | | Change of voltage should be under 0.02V/Cell; change of impedance should be under 5mΩ | Charge the cell 0.1C 16hrs, then leave for 1~4hrs, check battery before/after dropped Height 50cm Wooden board (thickness 30mm) Direction not specified, 3 times. | Ambient Temperature: T=20±5°C |
| Vibration Resistance | | Change of voltage should be under 0.02V/cell; change of impedance should be under 5mΩ | Charge the battery 0.1C 16hrs, then leave for 24hrs, check Battery before/after vibration, Amplitude 1.5mm Vibration 3000CPM, Any direction for 60mins. | Ambient Temperature: T=20±5°C |

CONFIGURATION & DIMENSIONS



EXTERNAL APPEARANCE

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

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.
- 8) Store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment.

Notes:

Ambient Temperature.

- Approximate charge time from discharged state is for reference only.
- We recommend cells or batteries are charged and discharged at least once every 6 months.
- IEC61951-1(2003)7.4.1.1 Cycle Life:

| Cycle No. | Charge | Rest | Discharge |
|-----------|---------------|------|---------------------|
| 1 | 0.1C×16h | None | 0.25C×2h20min |
| 2-48 | 0.25C×3h10min | None | 0.25C×2h20min |
| 49 | 0.25C×3h10min | None | 0.25C to 1.0V/ cell |
| 50 | 0.1C×16h | 1-4h | 0.2C to 1.0V/ cell |

Cycles 1 to 50 shall be repeated until the discharge duration on any 50th Cycle becomes less than 3 h

OTHER

- 1) The information (subject to change without prior notice) contained in this document is for reference only and should not be used as a basis for product guarantee or warranty. For applications other than those described here, please consult your nearest Battery Guy sales and Marketing office or Distributors.
- 2) Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.