

PRODUCT DATA SHEET**for****Low Self Discharge battery block "E-POWER"**
9V Ni-MH Battery 2038-1**9,6V; 200 mAh**Cadmium-free
Mercury-free
Lead-free

Specifications and data Sheets are subject to be changed without prior notice due to product/technology development

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1. GENERAL:

Electrochemical System:	Nickel-Metal-Hydride
Nominal voltage:	9,6 V
Capacity: (20°C; 0,2C discharge current down to 8.0V)	nominal: 200mAh minimum: 200mAh typical: 210mAh
Average weight	ca.46 g
Heavy metal content:	Mercury free, Cadmium free, Lead free
Dimension (maximum):	Length* x Width x Height: 47,0mm x 27,0 mm x 18,0mm *Length is defined as shoulder length, without pole contacts. Including pole contacts the maximum length is 48.5mm
Internal resistance: (1kHz, fully charged)	≤ 1200mOhm
Discharge current: Recommended (continuous)	20mA - 600mA
Discharge Cut-Off voltage:	8.0V
Charge conditions: (*dT/dt (1°C/min) -deltaU (≤40mV) TCO: 45-50°C Timer: 110% nominal input)	Standard: 20mA (15h) Fast Charge*: 200mA (6h) Trickle charge: 6.0mA - 10mA
Operation temperature: (r. h.: 65%±20%)	Storage: -20°C - +35°C (30%-50% charged) Discharge: -20°C - +60°C Standard Charge: 0°C - +45°C Fast Charge: +10°C - +45°C Trickle Charge: +10°C - +45°C
★ Self Discharge: (stored below 20°C)	≤ 15% after 6 month ≤ 20% after 12 month
Cycle life:	≥ 500 cycles (IEC Standard)

If battery shall be used at conditions other than specified and recommended herein, please contact BE-POWER GmbH for service.

2. LOOK

Batteries should be without discoloration, leakage or deformation

3. CAUTION

- Do not waste the battery.
- Return the used battery to an official battery collection point to make sure that the battery will be recycled in accordance to national regulations.
- To charge the battery, use only the charger specified by the manufacturer.
- Do not dispose battery into fire or dismantle.
- Do not mix different batteries or cells and capacities in the same application.
- Charge and discharge the battery under specified conditions.
- Short circuit of the battery must be avoided.
- Do not solder onto the battery directly.
- Reversal of battery should be avoided.
- Battery use in extreme conditions like extreme temperature, deep discharge or overcharge may decrease battery performance; for instance cycle life.
- Battery shall be stored dry and cool.
- Avoid storage higher than 35°C and lower than -20°C or high humidity. This could create deterioration or damage of the cells such as:
 - -irreversible capacity loss.
 - -loss of electrolyte due to expansion or shrinkage of battery components.
 - rust on metal components.

4. REMARK

Up to three full cycles (discharge/charge) may be needed after long term storage to recover the full electrical performance of the battery.

