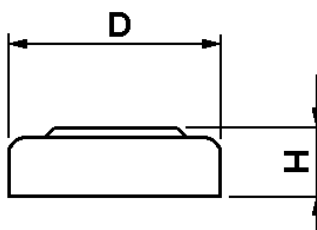


Specification of ML614

Coin Type Rechargeable Lithium Battery (ML-Series)

| | | |
|--|--|---|
| Nominal Voltage | 3 V | |
| Nominal Capacity | 2.3 mAh | Nominal capacity is determined to an end voltage of 2.0V when the battery is allowed to discharge at a standard current level at 23°C |
| Standard Charge/ Discharge Current | 0.015 mA | |
| Max. Discharge Current | 0.3 mA | Current value is determined so that 50% of the nominal capacity is obtained with an end voltage of 2.0V at 23°C |
| End Voltage | 2.0 V | |
| Charge/Discharge Cycle Characteristics | 3000 cycles (discharge depth of 5%) 300 cycles (discharge depth of 20%) | |
| Charging Method (Constant Voltage Charge) | 3.1±0.15V | Charge at high temperature or continuously |
| | 2.95±0.15V | |
| Weight | 0.16 g | |
| Dimensions | Height | 1.4 mm |
| | Diameter | 6.8 mm |

Dimensions



Size without shrinktube:

D = 6.8 max

H = 1.4 max

(unit: mm)

Can material:

Negative cap: stainless steel

Positive can: stainless steel

Battery material:

Cathode: Manganese dioxide

Anode: Li-Al alloy

Electrolyte: Organic electrolyte

Chemical reaction:

Anode reaction: $(\text{Li-Al}) \rightleftharpoons \text{Al} + \text{Li}^+ + \text{e}^-$

Cathode reaction: $\text{Mn}^{\text{IV}}\text{O}_2 + \text{Li}^+ + \text{e}^- \rightleftharpoons \text{Mn}^{\text{III}}\text{O}_2 (\text{Li}^+)$

Overall battery reaction: $\text{Mn}^{\text{IV}}\text{O}_2 + (\text{Li-Al}) \rightleftharpoons \text{Mn}^{\text{III}}\text{O}_2 (\text{Li}^+) + \text{Al}$