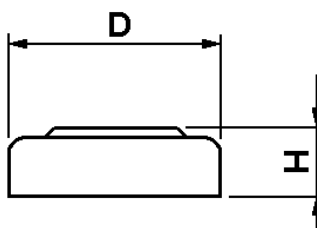


Specification of ML614

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