

Rechargeable Lithium Coin Batteries: Overview

Panasonic offers a wide range of rechargeable lithium coin battery chemistries to meet a variety of application requirements and voltage levels. These component sized batteries provide a highly reliable and durable power source for applications that use low voltage ICs and require space saving designs.

■ Features

- Excellent overdischarge (0V) and overcharge withstand capabilities
- Wide operating temperature range (-20 to +60 C)
- Low self discharge rate (approximately 2% per year)
- Environmentally friendly chemistries

■ Applications

- Memory back-up in RTC circuits for products such as:
 - Notebook and desktop computers
 - Mobile phones, handheld devices and PDAs
 - Office equipment (fax machines and appliances)
- Main power for watches (MT series)

■ Selecting the right chemistry for your application

VL Series: Ideal for applications where voltage stability is more important than capacity.

ML Series: When capacity is needed more than voltage (longer back-up times).

NBL Series: Maintains a higher capacity at lower voltages than the VL or ML.

MT Series: Ideal for use as the main power supply for rechargeable watches and other applications.

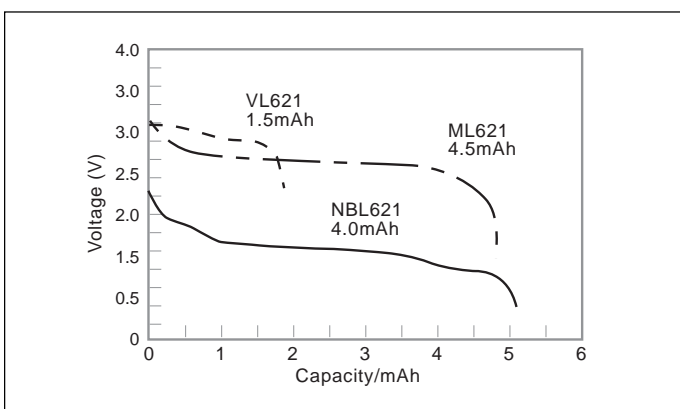
Item	VL	ML	NBL	MT
Nominal Voltage	3.0V	3.0V	2.0V	1.5V
Average Discharge Voltage	2.85V	2.5V	1.5V	1.2V
Charge Voltage	3.25V~3.55V	2.8V~3.2V	2.0V~2.6V	1.5V~2.5V
Cut-off Voltage	2.5V	2.0V	1.0V	1.0V
Discharge as low as	0V	0V	0V	0V
Charge/discharge cycle	About 1,000 times at 10% discharge depth to normal capacity.			
Operating Temperature (C)	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C	-20°C~+60°C
Operating Temperature (F)	-4°F~+140°F	-4°F~+140°F	-4°F~+140°F	-4°F~+140°F

Note:

Pay special attention to the charge voltage when selecting these rechargeable lithium coin cells. Charge voltage mis-matches can severely damage the battery and have a detrimental impact on performance and reliability.

■ Comparison Data For Batteries Used in Memory Back-Up Applications

■ Comparison of Discharge Curves



■ Comparison of Charge Voltage and Discharge Capacity

