

Comparison Table of Lithium Battery Types

Item	Type	Non-rechargeable battery		Rechargeable battery			
	Model	BR	CR	VL	ML	NBL	MT
Material	(+)electrode	(CF)n	MnO ₂	V ₂ O ₅	LixMnOy	Nb ₂ O ₅	LixMnOy
	(-)electrode	Li	Li	LiAl	LiAl	LiAl	LixTiOy
Nominal voltage		3	3	3	3	2.0	1.5
Operating temperature range (°C)		cylindrical : -40 ~ +85 coin : -30 ~ +80 high operating temperature coin : -40 ~ +125 pin : -20 ~ +60	cylindrical : -40 ~ +70 coin : -30 ~ +60	-20~+60	-20~+60	-20~+60	-20~+60
Self-discharge (per year) under *standard conditions	Cylindrical type	0.5%	1.0%	2.0%	2.0%	2.0%	5.0%
	Coin type	1.0%	1.0%				
Average discharge voltage (V)				2.85	2.5	1.5	1.2
Charge voltage (V)				3.25~3.55	2.8~3.2	1.8~2.5	1.6~2.6
Cut-off voltage (V)		2.0	2.0	2.5	2.0	1.0	1.0
Charge-discharge cycles				1000 at 10% depth of discharge from nominal capacity	1000 at 10% depth of discharge from nominal capacity	1000 at 10% depth of discharge from nominal capacity	500 charge/discharge down to 1V or discharge limit voltage

* Standard conditions: 20°C, 60% relative humidity

Comparison Between BR and CR

		B	R	C	R
Electrolyte		Organic electrolyte			
Performance	Discharge capacity	BR = CR			
	Voltage during discharging	BR < CR (Higher)			
	Flatness of discharge voltage	(Flatter) BR > CR			
	Load characteristics	BR < CR (Superior)			
	Storage properties (self-discharge) <60°C >60°C	(Less self-discharge) BR ≥ CR (Less self-discharge & stable) BR > CR			

Notes: In terms of their characteristics, the CR series provides a slightly higher voltage during discharge than the BR series. BR batteries, compared with CR batteries, show more stable characteristics with less discharge voltage variations. These characteristics should be taken into consideration when selecting a battery for each application.