

Lithium Battery Selection Guide

With our extensive lineup of primary and rechargeable lithium batteries, we support everyday life across a wide range of fields and applications, from home appliances to water and gas meters.



Primary Lithium Battery Comparison(BR & CR)

		BR series	CR series
Material	Cathode	Poly-carbon monofluoride (CF)n	Manganese Dioxide MnO ₂
	Anode	Lithium	
	Electrolyte	Organic solvent	
Performance	Discharge capacity	BR ≐ CR	
	Sustained voltage during discharge	BR < CR (~50% DOD:High)	
	Load characteristics	BR < CR (~50% DOD:High)	
	Long-term use	(Stability) BR > CR	
	Storage characteristics (capacity fade during storage) <60℃ >60℃	(Stability) BR ≧ CR (Stability) BR > CR	
Feature		Excellent storage characteristics under long-term use and high-temperature conditions	Maintains high voltage during discharge, delivering excellent discharge performance

Coin type Primary Lithium Batteries Product Lineup(Size/Capacity)

		Diameter / mm						
		φ10	φ12	φ16	φ20	φ23	φ24	φ30
Height / mm	1.2				CR2012(55mAh)		CR2412(100mAh)	
	1.6		CR1216(25mAh)	CR1616(55mAh)	CR2016(25mAh)			
	2.0		CR1220(35mAh) BR1220(35mAh)	CR1620(75mAh)				
	2.5	CR1025(30mAh)	BR1225(48mAh) BR1225A(48mAh)		CR2025(165mAh)	BR2325(165mAh)		
	3.0					CR2330(265mAh) BR2330(255mAh) BR2330A(255mAh)		
	3.2			CR1632(140mAh) BR1632(120mAh) BR1632A(120mAh)	CR2032(225mAh) CR2032A(210mAh) CR2032B(210mAh) BR2032(200mAh)			CR3032(500mAh) BR3032(500mAh)
	5.0	Udage temperature range ● CR Standard(-30~+85℃) ● CR High temperature resistant (A type: -40~+125℃) (B type: -40~+105/120℃) ● BR Standard(-40~+85℃) ● BR High temperature resistant (-40~+125℃)			CR2050A(345mAh) CR2050B2(345mAh)		CR2450(620mAh) CR2450A(550mAh) CR2450B(560mAh)	
	5.4					CR2354(560mAh)		
	7.7						CR2477(1000mAh) BR2477A(1000mAh)	

※Capacity: Nominal capacity

Coin type Primary Lithium Batteries Product Lineup(Product type)

		Product type	Operation temperature	Features	Applications
Coin type Primary Lithium Batteries	CR series	Standard	-30~+85℃	•Pulse discharge up to 20 mA / continuous discharge of a few mA •Long-term reliability	•RKE(Remote Keyless Entry) •Card remote control •Various memory backups •Price tags •Small transmission tags, etc.
		High temp. resistance type(A)	-40~+125℃	•Pulse discharge up to 20 mA / continuous discharge of a few mA •Excellent high-temperature characteristics •High output performance at low temperatures	•TPMS(Tire Pressure Monitoring System) •ETC (Electronic Toll Collection) •Various meters (hot water, electricity), etc.
		High temp. resistance type(B)	-40~+120℃	•Pulse discharge up to 20 mA / continuous discharge of a few mA •High-temperature resistance •High output performance at low temperatures	
	BR series	Standard	-30~+85℃	•Pulse discharge up to 10 mA / continuous discharge of a few mA •Excellent long-term reliability	•Communication devices, Measurement instruments •Electric meters •Various memory backups •ETC (Electronic Toll Collection)
		High temp. resistance type(A)	-40~+125℃	•Pulse discharge up to 10 mA / continuous discharge of a few mA •Excellent high-temperature resistance •Excellent long-term reliability	•TPMS(Tire Pressure Monitoring System) •ETC(Electric Toll Collection) •Various meters (hot water, electricity), etc. •Various memory backups

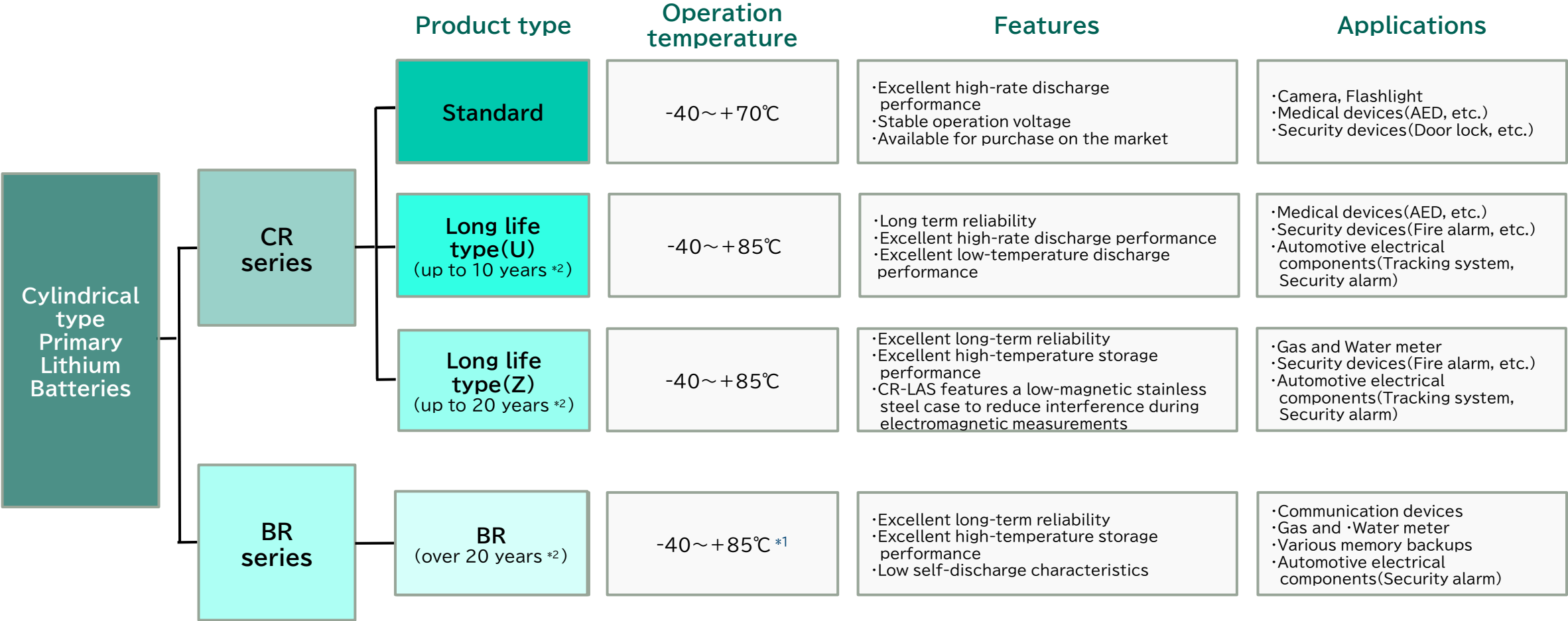
Cylindrical type Primary Lithium Batteries Product Lineup(Size/Capacity)

Size		1/2AA	2	2/3A	123A	AA	A(17450)	LA17500	C
Diameter		14.5mm	15.6mm	17.0mm	17.0mm	14.5mm	17.0mm	17.0/17.5mm	26.0mm
Height		25.5mm	27.0mm	33.5mm	34.5mm	50.5mm	45.5mm	50.0/50.5mm	50.5mm
CR Standard			 CR-2 (850mAh)		 CR123A (1550mAh)				
CR Long Life	U series (up to 10 years *1)		 CR-2U (1000mAh)	 CR-2/3AU (1600mAh)		 CR-AAU (1800mAh)			
	Z series (up to 20 years *1)		 CR-2Z (1000mAh)	 CR-2/3AZ (1600mAh)			 CR-AG (2400mAh)  CR-AGZ (2700mAh)	 CR-LAZ (3000mAh)  CR-LAS (3500mAh)	
BR (over 20 years *1)		 BR-1/2AA (1000mAh)		 BR-2/3A (1200mAh)  BR-2/3AG (1450mAh)			 BR-A (1800mAh)  BR-AG (2200mAh)		 BR-C (5000mAh)

※Capacity: Nominal capacity

*1 : Expected service life under our evaluation conditions

Cylindrical type Primary Lithium Batteries Product Lineup(Product type)



*1 : 1/2AA size: up to 100℃ *2 : Expected service life under our evaluation conditions

Coin type Rechargeable Lithium Batteries Product Lineup(Size/Capacity)

		Diameter / mm							
		φ5.8	φ6.8	φ9.5	φ12.5	φ16	φ20	φ23	φ30
Height / mm	1.6	MT516F(1.8mAh)				CTL1616F(13mAh)			
	2.0			CTL920F(7.7mAh) MT920(5.0mAh)	VL1220(7.0mAh)		VL2020(20mAh) ML2020(45mAh)		
	2.1		CTL621F(3.6mAh) MT621(2.5mAh)						
	3.0	Nominal voltage ● VL : 3.0 V ● ML : 3.0 V ● CTL : 2.3 V ● MT : 1.5 V						VL2330(50mAh)	
	3.2								VL3032(100mAh)

※Capacity: Nominal capacity

Coin type Rechargeable Lithium Batteries Product Lineup(Product type)

Coin type Rechargeable Lithium Batteries		Product series	Nominal voltage	Operation temperature	Features	Applications
		VL series (Vanadium Lithium)	3V	-20~60℃	•High discharge voltage •Supports 1,000 charge/discharge cycles at 10% depth of discharge •Excellent long-term reliability	•Various memory backup applications(printers, multifunction devices, medical equipment, FA equipment) •Fire alarms, etc.
		ML series (Manganese Lithium)	3V	-20~60℃	•High capacity enables long-term backup •Supports 1,000 charge/discharge cycles at 10% depth of discharge •Excellent long-term reliability	•Various memory backup applications(dash cameras, PCs, communication devices, radios, medical equipment, FA equipment) •Fire alarms, etc.
		CTL series (Cobalt Titanium Lithium)	2.3V	-20~60℃	•Maintains high voltage and delivers excellent charge/discharge cycle performance •Outstanding long-term reliability proven through extensive use in solar-powered watches	•Digital watch
		MT series (Manganese Titanium Lithium)	1.5V	-10~60℃	•1.5 V system capable of withstanding deep discharge cycles •Supports 500 charge/discharge cycles at 100% depth of discharge (DOD), down to 1 V or the discharge cutoff voltage •Excellent long-term reliability	•Analog watch