PRODUCTS

INDUSTRIAL SOLUTIONS

LITHIUM - Coin Type

Coin type lithium batteries are high energy, high reliability batteries for a variety of applications. The full 3 volts in these high energy density batteries is about twice that of conventional dry batteries.

Panasonic coin type lithium batteries are available in two types: poly-carbonmonofluoride lithium batteries (BR series) for uses that require extended reliability and safety, and manganese dioxide lithium batteries (CR series) for uses that require high voltage and strong load pulse characteristics.

The CR Lithium primary coin cells contain Perchlorate over the limit specified by the state legislature of California and are therefore subject to requirements in the California Code of Regulations, title 22, division 4.5: Chapter 33 – Best Management Practices for Perchlorate Materials.



Features:

- High voltage of 3 volts twice that of conventional dry batteries
- Extremely small self-discharge for long service and shelf life
- A wide operational temperature range
- Compact and lightweight; extremely high energy density per unit weight
- Very safe (poly-carbonmonofluoride lithium)
- Extremely strong load pulse characteristics (manganese dioxide lithium)
- Operating temperature range:

BR Coin Cells: -30°C ~ +80°C CR Coin Cells: -30°C ~ +60°C

Applications:

Calculators

Technical Data - Table 2 - Mn0₂/LI:Manganese Dioxide (CR)

Standard Load

Continuous Drain

(mA)

0.10

0.10

Electrical Characteristics

(20°C)

*Nominal

Capacity

(mAh)

30

25

Nominal

Voltage

(V)

3

Model

No.

CR1025

CR1216

- Cameras
- Compact, low power consuming cordless applications
- Electronic translators
- Electronic watches (digital and analog)
- Memory back-up in all types of devices (with tab terminals)

Technical Data - Table 1 - (CF)n/Ll: Poly-Carbon Monofluoride (BR)								
Model (2 No. Nomina	Electrical Characteristics (20°C)		Standard Load	Dimensions				Tab Configurations
	Voltage	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter (mm)	Height (mm)	Weight (g)		1 ao Comigurations
<u>BR1220</u>	3	35	0.03	12.5	2.00	0.7		
<u>BR1225</u>	3	48	0.03	12.5	2.50	0.8		
<u>BR1632</u>	3	120	0.03	16.0	3.20	1.5		
BR2032	3	190	0.03	20.0	3.20	2.5		
BR2325	3	165	0.03	23.0	2.50	3.2		
BR2330	3	255	0.03	23.0	3.00	3.2		
BR3032	3	500	0.03	30.0	3.20	5.5		
* Nominal ca	* Nominal capacity shown is based on standard drain and cut off voltage down to 2.0V at 20°C.							

Dimensions

Height

(mm)

2.50

1.60

Weight

(g)

0.7

0.7

Diameter

(mm)

10.0

12.5

Tab Configurations

<u>CR1220</u>	3	35	0.10	12.5	2.00	1.2		
<u>CR1612</u>	3	40	0.10	16.0	1.20	0.8		7
<u>CR1616</u>	3	55	0.10	16.0	1.60	1.2		7
<u>CR1620</u>	3	75	0.10	16.0	2.00	1.3		
<u>CR1632</u>	3	140	0.10	16.0	3.20	1.8		1
CR2016	3	90	0.10	20.0	1.60	1.6		7
CR2025	3	165	0.20	20.0	2.50	2.3		
CR2032	3	225	0.20	20.0	3.20	2.9		
CR2330	3	265	0.20	23.0	3.00	3.8		7
<u>CR2354</u>	3	560	0.20	23.0	5.40	5.8		7
<u>CR2412</u>	3	100	0.20	24.5	1.20	2.0		
CR2450	3	620	0.20	24.5	5.00	6.3		
<u>CR2477</u>	3	1000	0.20	24.5	7.70	10.5		7
CR3032	3	500	0.20	30.0	3.20	6.8		7
Note: Cells	are avail	lable in assor	ed on standard drain ted tab configuration e for additional info	ns.	ii voltage	down to 2	.0V at 20°C.	
Note: Cells Consult you	are avail ur local r	lable in assor	ted tab configuratio	ns. rmation.				
Note: Cells Consult you	are availur local r	lable in assor	ted tab configuration for additional info	ns. rmation.	figuratio	ons (BF		T
Note: Cells Consult you Technic Model	are availur local real Data	lable in assor egional office a - Table	ted tab configuration of the for additional information of the formation o	ons. ormation. ab Conf	figuration Drawing	ons (BF		
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2 pin, vertical mount, through hole, (with insulation wrap)

3 pin, vertical mount, through hole, (with insulation wrap)

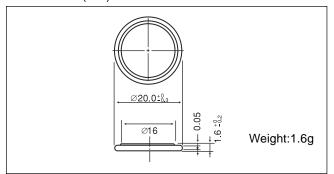
BR2330/1VC

BR2330/1GVF

Manganese Dioxide Lithium Coin Batteries: Individual Specifications

CR2016

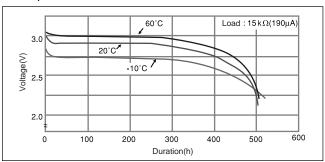
■ Dimensions(mm)



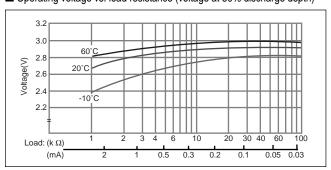
■ Specification

Nominal voltage (V)	3
Nominal capacity (mAh)	90
Continuous standard load (mA)	0.1
Operating temperature (C)	-30 ~ +60

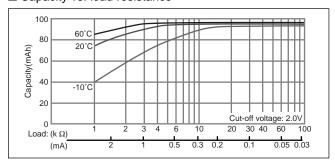
■ Temperature Characteristics



■ Operating voltage vs. load resistance (voltage at 50% discharge depth)

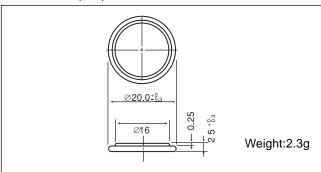


■ Capacity vs. load resistance



CR2025

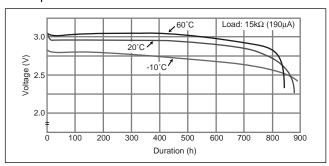
■ Dimensions(mm)



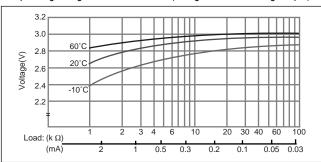
■ Specification

Nominal voltage (V)	3
Nominal capacity (mAh)	165
Continuous standard load (mA)	0.2
Operating temperature (C)	-30 ~ +60

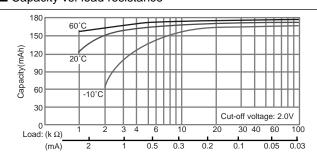
■ Temperature Characteristics



■ Operating voltage vs. load resistance (voltage at 50% discharge depth)



■ Capacity vs. load resistance



Coin Type Lithium Batteries

Manganese Dioxide Lithium Batteries (CR Series)



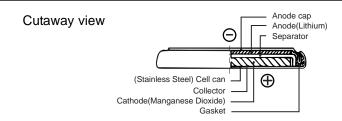




<u>Features</u>

As with the BR series of coin-type lithium batteries, these batteries feature a high energy density, and they were developed and commercialized via Panasonic's extensive experience and battery technology. These batteries have proven to be especially useful in equipment requiring relatively high currents.

Construction



Applications

Calculators Electronic watches (digital and analog)

Cameras Memory backup

Compact, low power consuming cordless appliances IC card

Note: Always confirm that the battery to be used is suitable for the intended application before purchase and/or use.



General Specifications

Model No.	Electrical Characteristics (20°C)			Dimensions (mm)		Weight (g)	JIS	IEC
Model No.	Nominal Voltage (V)	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter	Height	weight (g)	313	IEC
CR1025	3	30	0.1	10.0	2.5	0.7	CR1025	CR1025
CR1216	3	25	0.1	12.5	1.6	0.7	CR1216	CR1216
CR1220	3	35	0.1	12.5	2.0	1.2	CR1220	CR1220
CR1612	3	41	0.1	16.0	1.2	0.8	CR1620	-
CR1616	3	55	0.1	16.0	1.6	1.2	CR1616	CR1616
CR1620	3	75	0.1	16.0	2.0	1.3	-	CR1620
CR1632	3	140	0.1	16.0	3.2	1.8	-	-
CR2012	3	55	0.1	20.0	1.2	1.4	CR2012	CR2012
CR2016	3	90	0.1	20.0	1.6	1.6	CR2016	CR2016
CR2025	3	165	0.2	20.0	2.5	2.3	CR2025	CR2025
CR2032	3	225	0.2	20.0	3.2	2.9	CR2032	CR2032
CR2330	3	265	0.2	23.0	3.0	3.8	CR2330	CR2330
CR2354	3	560	0.2	23.0	5.4	5.8	CR2354	CR2354
CR2412	3	100	0.2	24.5	1.2	2.0	-	-
CR2450	3	620	0.2	24.5	5.0	6.3	CR2450	CR2450
CR2477	3	1000	0.2	24.5	7.7	10.5	-	-
CR3032	3	500	0.2	30.0	3.2	6.8	-	CR3032

^{*} Nominal capacity shown above is based on standard drain and cut off voltage down to 2.0V at 20°C

