### **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
- Cameras
- Compact, low power consuming cordless applications
- Electronic translators

Technical Data - Table 1 - (CF)n/LI: Poly-Carbon Monofluoride (BR)

- Electronic watches (digital and analog)
- Memory back-up in all types of devices (with tab terminals)

Model	Electrical Characteristics (20°C)		Standard Load	Dimensions				Tab Configurations
No.	Nominal Voltage (V)	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter (mm)	Height (mm)	Weight (g)		Tab Configurations
<u>BR1220</u>	3	35	0.03	12.5	2.00	0.7		
BR1225	3	48	0.03	12.5	2.50	0.8		
BR1632	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 capacity shown is based on standard drain and cut off voltage down to 2.0V at 20°C.								

	Technical Data - Table 2 - Mn0₂/Ll:Manganese Dioxide (CR)								
	Model No.	Electrical Characteristics (20°C)		Standard Load	Dimensions		TILO C.	Tab Configurations	
		Nominal Voltage (V)	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter (mm)	Height (mm)	Weight (g)		Tab Configurations
	<u>CR1025</u>	3	30	0.10	10.0	2.50	0.7		
	<u>CR1216</u>	3	25	0.10	12.5	1.60	0.7		

<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.	
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2 pin, vertical mount, through hole, (with insulation wrap)

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

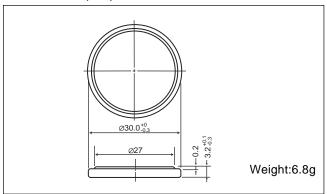
BR2330/1VC

BR2330/1GVF

# Manganese Dioxide Lithium Coin Batteries: Individual Specifications

### **CR3032**

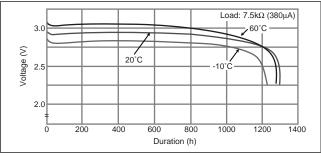
### Dimensions(mm)



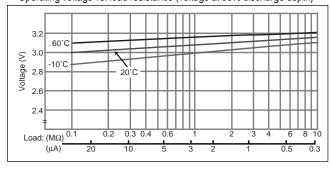
#### Specification

Nominal voltage (V)	3
Nominal capacity (mAh)	500
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

