#### **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)

Technical Data - Table 2 - Mn0<sub>2</sub>/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

3

Model

No.

CR1025

**CR1216** 

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

(,								
Model	Electrical Characteristics (20°C)		Standard Load	Dimensions				
No.	Nominal Voltage (V)	*Nominal Capacity (mAh)	Continuous Drain (mA)	Diameter (mm)	Height (mm)	Weight (g)	Tab Configuration	1 ao Configurations
BR1220	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.								

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		
Note: Cells Consult you Technic Model I BR1225/	are availur local real Data	lable in assor egional office a - Table : 2 pin, horizon	ted tab configuration of the for additional information of the format of	ab Conf Description	figuration Drawing	ons (BF		
Note: Cells Consult you Technic Model I BR1225/	are availur local real Data No.  (1HC)	lable in assoregional office  a - Table 3  2 pin, horizor  2 pin, vertica	ted tab configuration of the for additional information of the formation o	ab Confine Description hole, (with in	figuration Drawing	ons (BF		
Note: Cells Consult you Technic Model I BR1225/	are availur local ral Data  No.  //HC //UC	lable in assoregional office  a - Table :  2 pin, horizor  2 pin, vertica  2 pin, horizor	ted tab configuration of the for additional information of the formation o	ab Continue Description hole, (with in hole, (with hol	figuration Drawing in insulation valuation val	ons (BF g n wrap) vrap) n wrap)	R Series)	
Note: Cells Consult you Technic Model 1 BR1225/ BR1632/	are availur local ral Data  No.  (1HC) (1VC) (1HF) (1GU)	a - Table :  2 pin, horizon 2 pin, horizon 2 pin, horizon 3 pin, horizon	ted tab configuration of the for additional information of the formation o	ab Confidence of the confidenc	figuration Drawing in insulation valuation valuation whout insulation to the control of the cont	ons (BF g n wrap) vrap) n wrap)	R Series)	
Note: Cells Consult you Technic Model 1 BR1225/ BR1632/ BR2032/	are availur local real Data  No.  (1HC) (1VC) (1HF) (1GU) (1HE)	a - Table 3  2 pin, horizon 2 pin, horizon 3 pin, horizon 2 pin, horizon	ted tab configuration of the for additional information of the formation o	ab Continue Description hole, (with in hole, (with hol	figuration Drawing in insulation who insulation whout insulation thout insulation thout insulation thou insulation thou insulation i	ons (BF  g  n wrap)  wrap)  n wrap)  ation wrap	R Series)	
Note: Cells Consult you  Technic  Model 1  BR1225/ BR1225/ BR1632/ BR2032/	are availur local rall Data  No.  'IHC 'IVC 'IHF 'IGU 'IHE 'IVB	a - Table :  2 pin, horizon 2 pin, horizon 3 pin, horizon 2 pin, horizon	ted tab configuration of the for additional information of the format of	ab Continued to Description hole, (with in hole, (with	figuration Drawing in insulation who insulation whout insulation thout insulation thout insulation thou insulation thou insulation i	ons (BF  g  n wrap)  wrap)  n wrap)  ation wrap	R Series)	
Note: Cells Consult you  Technic  Model 1  BR1225/ BR1632/ BR2032/ BR2032/ BR2032/	are availur local rall Data  No.  (1HC) (1HC) (1HF) (1HE) (1HE) (1VB) (1F2)	a - Table :  2 pin, horizon 2 pin, horizon 3 pin, horizon 2 pin, horizon	ted tab configuration of the for additional information of the formation o	ab Continue of Description hole, (with in hole, (with hole, (without n wrap))	figuration Drawing the insulation who insulation who insulation thout insulation to the insulation out insulation the insulation of the in	ons (BF  g n wrap) vrap) n wrap) ation wrap ation wrap on wrap)	R Series)	
Note: Cells Consult you  Technic  Model 1  BR1225/ BR1632/ BR2032/ BR2032/ BR2032/ BR2032/	are availur local real part lo	a - Table 3  2 pin, horizon 2 pin, horizon 3 pin, horizon 2 pin, thorizon 2 pin, thorizon 2 pin, thorizon 2 pin, thorizon	ted tab configuration of the for additional information of the format of	hole, (with hole,	figuration Drawing in insulation who insulation whout insulation to the insulation insul	ons (BF  g  n wrap)  wrap)  n wrap)  ation wrap  on wrap)  n wrap)	R Series)	
Note: Cells Consult you  Technic  Model 1  BR1225/ BR1225/ BR1632/ BR2032/ BR2032/ BR2032/ BR2032/ BR2032/ BR2032/	are availur local real part and part an	a - Table 3  2 pin, horizon 2 pin, horizon 3 pin, horizon 2 pin, flat mo 2 pin, horizon 2 pin, horizon 2 pin, horizon	ted tab configuration of the for additional information of the formation o	ab Continue of Description of Descri	figuration Drawing in insulation valuation valuation valuation to insulation to insulation insulati	ons (BF  g  n wrap)  wrap)  n wrap)  ation wrap  on wrap)  n wrap)	R Series)	
Note: Cells Consult you  Technic  Model 1  BR1225/ BR1225/ BR1632/ BR2032/ BR2032/ BR2032/ BR2032/ BR2325/	are availur local rall pata al Data No.	lable in assoregional office  a - Table ;  2 pin, horizor  2 pin, horizor  3 pin, horizor  2 pin, horizor  2 pin, vertica  2 pin, horizor  2 pin, horizor  2 pin, flat mo  2 pin, horizor  2 pin, vertica	ted tab configuration of the for additional information of the format of	ab Continue of Description of Descri	figuration Drawing in insulation who insulation who insulation ins	ons (BF  g  n wrap)  vrap)  ntion wrap  on wrap)  n wrap)  n wrap)  n wrap)	R Series)	
Note: Cells Consult you  Technic  Model 1  BR1225/ BR1225/ BR1632/ BR2032/ BR2032/ BR2032/ BR2032/ BR2325/ BR2325/	are availur local real part lo	a - Table 3  2 pin, horizon 2 pin, horizon 3 pin, horizon 2 pin, horizon	ted tab configuration of the for additional information of the format of	ab Continue Description hole, (with in hole, (with hol	figuration Drawing in insulation who insulation who insulation ins	ons (BF  g  n wrap)  wrap)  ntion wrap  ation wrap  on wrap)  ntion wrap  on wrap)	R Series)	

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

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

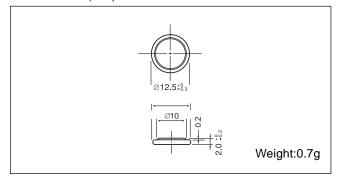
BR2330/1VC

BR2330/1GVF

# Poly-carbonmonofluoride Lithium Coin Batteries: Individual Specifications

### **BR1220**

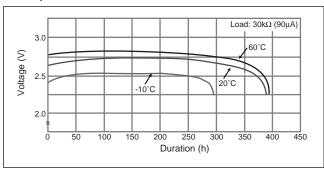
#### ■ Dimensions(mm)



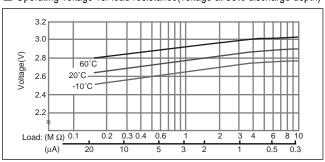
#### ■ Specification

Nominal voltage (V)	3
Nominal capacity (mAh)	35
Continuous standard load (mA)	0.03
Operating temperature (C)	-30 ~ +80

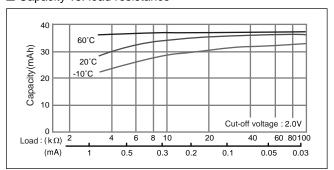
#### ■ Temperature Characteristics



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

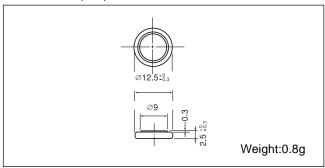


#### ■ Capacity vs. load resistance



### BR1225

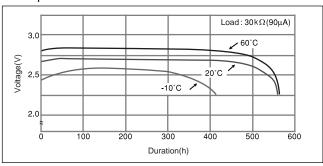
#### ■ Dimensions(mm)



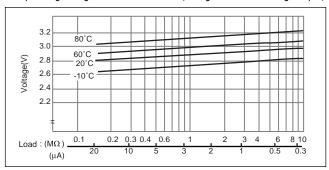
#### ■ Specification

Nominal voltage (V)	3
Nominal capacity (mAh)	48
Continuous standard load (mA)	0.03
Operating temperature (C)	-30 ~ +80

#### ■ Temperature Characteristics



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



#### ■ Capacity vs. load resistance

