Manganese Dioxide Lithium Coin Batteries: Individual Specifications

CR1025

- Dimensions (mm)
- Weight: 0.7g

- Specification
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 30
  - 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

CR1216

- Dimensions (mm)
- Weight: 0.7g

- Specification
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 25
  - 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
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

CR1025

■ Dimensions (mm)

[Diagram of CR1025 dimensions]

Weight: 0.7g

■ Specification

<table>
<thead>
<tr>
<th>Nominal voltage (V)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (mAh)</td>
<td>30</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

■ Temperature Characteristics

[Graph of Voltage vs. Duration for CR1025]

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

[Graph of Voltage vs. Load for CR1025]

■ Capacity vs. load resistance

[Graph of Capacity vs. Load for CR1025]

CR1216

■ Dimensions (mm)

[Diagram of CR1216 dimensions]

Weight: 0.7g

■ Specification

<table>
<thead>
<tr>
<th>Nominal voltage (V)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (mAh)</td>
<td>25</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

■ Temperature Characteristics

[Graph of Voltage vs. Duration for CR1216]

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

[Graph of Voltage vs. Load for CR1216]

■ Capacity vs. load resistance

[Graph of Capacity vs. Load for CR1216]
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR1220**

- **Dimensions (mm)**

  - Weight: 1.2g

- **Specification**
  | Nominal voltage (V) | 3 |
  | Nominal capacity (mAh) | 35 |
  | 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**

**CR1612**

- **Dimensions (mm)**

  - Weight: 0.8g

- **Specification**
  | Nominal voltage (V) | 3 |
  | Nominal capacity (mAh) | 40 |
  | 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**
### CR1220

**Dimensions (mm)**

![Dimensions diagram](image)

- Weight: 1.2g

**Specification**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage (V)</td>
<td>3</td>
</tr>
<tr>
<td>Nominal capacity (mAh)</td>
<td>35</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

**Temperature Characteristics**

![Temperature graph](image)

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

![Operating voltage graph](image)

**Capacity vs. load resistance**

![Capacity graph](image)

### CR1612

**Dimensions (mm)**

![Dimensions diagram](image)

- Weight: 0.8g

**Specification**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage (V)</td>
<td>3</td>
</tr>
<tr>
<td>Nominal capacity (mAh)</td>
<td>40</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

**Temperature Characteristics**

![Temperature graph](image)

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

![Operating voltage graph](image)

**Capacity vs. load resistance**

![Capacity graph](image)
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR1616**

- Dimensions(mm)
  - Dimensions: [Diagram]
  - Weight: 1.2g

- Specification
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 55
  - Continuous standard load (mA): 0.1
  - Operating temperature (C): -30 ~ +60

- Temperature Characteristics
  - Operating voltage vs. load resistance (voltage at 50% discharge depth)
    - [Graph]

- Capacity vs. load resistance
  - [Graph]

**CR1620**

- Dimensions(mm)
  - Dimensions: [Diagram]
  - Weight: 1.3g

- Specification
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 75
  - Continuous standard load (mA): 0.1
  - Operating temperature (C): -30 ~ +60

- Temperature Characteristics
  - Operating voltage vs. load resistance (voltage at 50% discharge depth)
    - [Graph]

- Capacity vs. load resistance
  - [Graph]
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

### CR1616
- **Dimensions (mm)**

![CR1616 Dimensions](image)

- **Weight**: 1.2g

- **Specification**

<table>
<thead>
<tr>
<th>Nominal voltage (V)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (mAh)</td>
<td>55</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

- **Temperature Characteristics**

![CR1616 Temperature Characteristics](image)

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

![CR1616 Operating Voltage vs. Load Resistance](image)

- **Capacity vs. load resistance**

![CR1616 Capacity vs. Load Resistance](image)

### CR1620
- **Dimensions (mm)**

![CR1620 Dimensions](image)

- **Weight**: 1.3g

- **Specification**

<table>
<thead>
<tr>
<th>Nominal voltage (V)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (mAh)</td>
<td>75</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

- **Temperature Characteristics**

![CR1620 Temperature Characteristics](image)

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

![CR1620 Operating Voltage vs. Load Resistance](image)

- **Capacity vs. load resistance**

![CR1620 Capacity vs. Load Resistance](image)
CR1632

- **Dimensions (mm)**

   - Weight: 1.8g

- **Specification**

   | Nominal voltage (V) | 3 |
   | Nominal capacity (mAh) | 140 |
   | 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**

CR2012

- **Dimensions (mm)**

   - Weight: 1.4g

- **Specification**

   | Nominal voltage (V) | 3 |
   | Nominal capacity (mAh) | 55 |
   | 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**
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR2016**

- **Dimensions (mm)**
  - Weight: 1.6g

- **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)**
  - Weight: 2.3g

- **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
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR2016**

- **Dimensions (mm):**
  - Ø20.05 x 0.55
  - Weight: 1.6g

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

- **Temperature Characteristics**

<table>
<thead>
<tr>
<th>Duration (h)</th>
<th>Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3.2</td>
</tr>
<tr>
<td>100</td>
<td>3.0</td>
</tr>
<tr>
<td>200</td>
<td>2.8</td>
</tr>
<tr>
<td>300</td>
<td>2.6</td>
</tr>
<tr>
<td>400</td>
<td>2.4</td>
</tr>
<tr>
<td>500</td>
<td>2.2</td>
</tr>
<tr>
<td>600</td>
<td>2.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load (kΩ)</th>
<th>Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>3.2</td>
</tr>
<tr>
<td>0.1</td>
<td>3.0</td>
</tr>
<tr>
<td>0.2</td>
<td>2.8</td>
</tr>
<tr>
<td>0.3</td>
<td>2.6</td>
</tr>
<tr>
<td>0.4</td>
<td>2.4</td>
</tr>
<tr>
<td>0.5</td>
<td>2.2</td>
</tr>
<tr>
<td>1.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

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

- **Capacity vs. load resistance**

**CR2025**

- **Dimensions (mm):**
  - Ø20.05 x 0.55
  - Weight: 2.3g

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

- **Temperature Characteristics**

<table>
<thead>
<tr>
<th>Duration (h)</th>
<th>Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3.2</td>
</tr>
<tr>
<td>100</td>
<td>3.0</td>
</tr>
<tr>
<td>200</td>
<td>2.8</td>
</tr>
<tr>
<td>300</td>
<td>2.6</td>
</tr>
<tr>
<td>400</td>
<td>2.4</td>
</tr>
<tr>
<td>500</td>
<td>2.2</td>
</tr>
<tr>
<td>600</td>
<td>2.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load (kΩ)</th>
<th>Voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05</td>
<td>3.2</td>
</tr>
<tr>
<td>0.1</td>
<td>3.0</td>
</tr>
<tr>
<td>0.2</td>
<td>2.8</td>
</tr>
<tr>
<td>0.3</td>
<td>2.6</td>
</tr>
<tr>
<td>0.4</td>
<td>2.4</td>
</tr>
<tr>
<td>0.5</td>
<td>2.2</td>
</tr>
<tr>
<td>1.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

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

- **Capacity vs. load resistance**
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR2032**

- **Dimensions (mm)**
  - \( \varnothing 20.0 \times 1.8 \)
  - \( \varnothing 16 \times 0.3 \)
  - \( 2.1 \times 0.8 \)
  - Weight: 2.9g

- **Specification**
  - **Nominal voltage (V)** 3
  - **Nominal capacity (mAh)** 225
  - **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**

**CR2330**

- **Dimensions (mm)**
  - \( \varnothing 23.0 \times 2.5 \)
  - \( \varnothing 19 \times 0.3 \)
  - \( 3.0 \times 1.2 \)
  - Weight: 3.8g

- **Specification**
  - **Nominal voltage (V)** 3
  - **Nominal capacity (mAh)** 265
  - **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**

---

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Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR2032**

- **Dimensions (mm)**
  - Diameter: 20.0
  - Thickness: 1.3
  - Weight: 2.9g

- **Specification**
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 225
  - 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**

**CR2330**

- **Dimensions (mm)**
  - Diameter: 23.0
  - Thickness: 1.3
  - Weight: 3.8g

- **Specification**
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 265
  - 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**

---

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Manganese Dioxide Lithium Coin Batteries: Individual Specifications

### CR2354

**Dimensions (mm)**

- Weight: 5.8g

**Specification**

<table>
<thead>
<tr>
<th>Nominal voltage (V)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (mAh)</td>
<td>560</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.2</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

**Temperature Characteristics**

- Load: 7.6kΩ (380μA)

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

**Capacity vs. load resistance**

- Cut-off voltage: 2.0V

### CR2412

**Dimensions (mm)**

- Weight: 2.0g

**Specification**

<table>
<thead>
<tr>
<th>Nominal voltage (V)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal capacity (mAh)</td>
<td>100</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.2</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

**Temperature Characteristics**

- Load: 15kΩ (190μA)

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

**Capacity vs. load resistance**

- Cut-off voltage: 2.0V

---

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Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR2354**

- **Dimensions (mm):**
  - Ø23.0 x 1.2
  - Weight: 5.8g

- **Nominal voltage (V):** 3
- **Nominal capacity (mAh):** 560
- **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**

**CR2412**

- **Dimensions (mm):**
  - Ø24.5 x 1.4
  - Weight: 2.0g

- **Nominal voltage (V):** 3
- **Nominal capacity (mAh):** 100
- **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**

---

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## Manganese Dioxide Lithium Coin Batteries: Individual Specifications

### CR2450

<table>
<thead>
<tr>
<th>Dimensions(mm)</th>
<th>Weight: 6.3g</th>
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</thead>
<tbody>
<tr>
<td>□ Specification</td>
<td></td>
</tr>
<tr>
<td>Nominal voltage (V)</td>
<td>3</td>
</tr>
<tr>
<td>Nominal capacity (mAh)</td>
<td>620</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.2</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Graph of Temperature Characteristics" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating voltage vs. load resistance (voltage at 50% discharge depth)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image2" alt="Graph of Operating Voltage vs. Load Resistance" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity vs. load resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Graph of Capacity vs. Load Resistance" /></td>
</tr>
</tbody>
</table>

### CR2477

<table>
<thead>
<tr>
<th>Dimensions(mm)</th>
<th>Weight: 10.5g</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Specification</td>
<td></td>
</tr>
<tr>
<td>Nominal voltage (V)</td>
<td>3</td>
</tr>
<tr>
<td>Nominal capacity (mAh)</td>
<td>1,000</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.2</td>
</tr>
<tr>
<td>Operating temperature (C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Graph of Temperature Characteristics" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating voltage vs. load resistance (voltage at 50% discharge depth)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Graph of Operating Voltage vs. Load Resistance" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity vs. load resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6" alt="Graph of Capacity vs. Load Resistance" /></td>
</tr>
</tbody>
</table>

---

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Manganese Dioxide Lithium Coin Batteries: Individual Specifications

**CR2450**

- **Dimensions (mm)**
  - Weight: 6.3g

- **Specification**
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 620
  - 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**

**CR2477**

- **Dimensions (mm)**
  - Weight: 10.5g

- **Specification**
  - Nominal voltage (V): 3
  - Nominal capacity (mAh): 1,000
  - 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**
Manganese Dioxide Lithium Coin Batteries: Individual Specifications

CR3032

- Dimensions (mm)

Weight: 6.8g

- Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage (V)</td>
<td>3</td>
</tr>
<tr>
<td>Nominal capacity (mAh)</td>
<td>500</td>
</tr>
<tr>
<td>Continuous standard load (mA)</td>
<td>0.2</td>
</tr>
<tr>
<td>Operating temperature (°C)</td>
<td>-30 ~ +60</td>
</tr>
</tbody>
</table>

- Temperature Characteristics

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

- Capacity vs. load resistance

Cut-off voltage: 2.0V