## RECHARGEABLE LITHIUM COIN CELLS

<table>
<thead>
<tr>
<th>STANDARD SPECIFICATIONS</th>
<th>ICR</th>
<th>IFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage / Chemical system</td>
<td>3.7V / LiCoO₂</td>
<td>3.2V / LiFePO₄</td>
</tr>
<tr>
<td>Nominal capacity range</td>
<td>21 ... 87 mAh</td>
<td>16 ... 67 mAh</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20°C / +45°C temporary</td>
<td>-20°C / +45°C temporary</td>
</tr>
</tbody>
</table>

### CHARGING CHARACTERISTICS

- **Voltage**: 4.2 V (Voltage) ±0.05 V
- **Current normal**: 0.5 C (Constant current)
- **Max. charging current**: 1.0 C (Constant current)
- **Temperature at charging**: 0°C / +45°C

### DISCHARGE CHARACTERISTICS

- **Max. discharge current**: 2.0 C (Non-Continuous current)
- **Temperature at discharging**: -20°C / +60°C
- **Cycle life at room temperature**: > 80% of min. capacity after 500 cycles

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![IFR2032 Charge Characteristics](chart.png)

IFR2032 Charge Characteristics
(0.5C CC, 3.6V CV, cut off 0.02C or 3 hrs)

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- **Preliminary Data**: Information and contents in this sheet are for reference purpose only and are subject to change without notice.

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**Energy harvesting**

**Customized tabbing**

**Smart patches**

**Fitness applications**
# RECHARGEABLE LITHIUM COIN CELLS

<table>
<thead>
<tr>
<th>Cell Model</th>
<th>Dimensions (mm)</th>
<th>Nominal Capacity (mAh)</th>
<th>Standard Discharge Current (mA)</th>
<th>Max. Continuous Discharge Current (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFR2016*</td>
<td>20.00</td>
<td>1.60</td>
<td>16</td>
<td>3.20</td>
</tr>
<tr>
<td>IFR2025*</td>
<td>20.00</td>
<td>2.50</td>
<td>33</td>
<td>6.60</td>
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<tr>
<td>IFR2032</td>
<td>20.00</td>
<td>3.20</td>
<td>40</td>
<td>9.00</td>
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<tr>
<td>IFR2045</td>
<td>20.00</td>
<td>4.50</td>
<td>67</td>
<td>13.40</td>
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<tr>
<td>ICR2016</td>
<td>20.00</td>
<td>1.60</td>
<td>21</td>
<td>4.20</td>
</tr>
<tr>
<td>ICR2025*</td>
<td>20.00</td>
<td>2.50</td>
<td>44</td>
<td>8.80</td>
</tr>
<tr>
<td>ICR2032*</td>
<td>20.00</td>
<td>3.20</td>
<td>60</td>
<td>12.00</td>
</tr>
<tr>
<td>ICR2045</td>
<td>20.00</td>
<td>4.50</td>
<td>87</td>
<td>17.40</td>
</tr>
</tbody>
</table>

*Under development

**Dimensions of a cell model**

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**IFR2032 Discharge at Various Temperatures**

- **Charge:** 0.5C CC, 3.6V CV, 0.02C cut-off, 20°C.
- Store cells at various temperatures for 16-20 hrs, discharge: 0.2C CC, 2.5V cut-off.

**IFR2032 Discharge at Various C-rates**

- **Charge:** 0.5C CC, 3.6V CV, 0.02C cut-off, 20°C.
- Discharge: at various C-rates CC, 2.5V cut-off, 20°C.

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[www.renata.com](http://www.renata.com)
3.7 V RECHARGEABLE LITHIUM-ION BUTTON CELL

**STANDARD SPECIFICATIONS**
- **Nominal voltage**: 3.7V
- **Capacity**: 40 mAh
- **Storage temperature**: -20°C / +45°C temporary, 0°C / +30°C for storage > 3 month

**CHARGING CHARACTERISTICS**
- **Voltage**: 4.2 V (Voltage) ±0.05 V
- **Current normal**: 0.5 C (Constant current)
- **Max. charging current**: 1.0 C (Constant current)
- **Temperature at charging**: 0°C / +45°C

**DISCHARGE CHARACTERISTICS**
- **Max. discharge current**: 2.0 C (Non-Continuous current)
- **Temperature at discharging**: 0°C / +60°C
- **Cycle life at room temperature**: > 80% of min. capacity after 500 cycles
- **(0.5 C charge, 0.5 C discharge)**

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**Preliminary Data**

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- Ø 9.9 ±0.1 mm
- H 6.8 ±0.1 mm

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smart pens

positive contact

hearables

ICR 1069

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