CR2032 Coin Cell Battery 3V Lithium with Pins – Reliable Power for Embedded and Electronic Projects

The **CR2032 Coin Cell Battery 3V Lithium with Pins** is a compact, long-lasting, and stable **power source** designed specifically for embedded systems, RTC modules, and other low-power electronic circuits. This battery provides a **steady 3V output** and is equipped with **solderable pins**, making it ideal for direct PCB mounting in DIY electronics, prototyping, and industrial applications.

Its **lithium chemistry** ensures long shelf life, consistent performance, and dependable energy output, even under varying environmental conditions. The CR2032 with pins is widely used in **Arduino projects, microcontroller boards, digital clocks, memory backup systems, and small portable devices**.

[caption id="attachment_108560" align="aligncenter" width="324"]

CR2032 Coin Cell Battery 3V Lithium With Pins[/caption]

🔋 **Key Features and Specifications**

- **Model:** CR2032 with Pins
- **Battery Type:** Lithium Coin Cell

- **Nominal Voltage:** 3V DC
- **Capacity:** Typically around **200–240mAh**, depending on manufacturer
- **Mounting Type:** Through-hole (PCB Mount) with **solderable pins** for secure attachment
- **Diameter:** 20mm
- **Thickness:** 3.2mm
- **Polarity:** Clearly marked positive and negative terminals
- **Operating Temperature Range:** -20°C to +60°C
- **Shelf Life:** Up to **10 years**, thanks to low self-discharge lithium chemistry
- **RoHS Compliant** and environmentally safe

⚙️ Detailed Overview

The **CR2032 3V Lithium Coin Cell with Pins** is designed to deliver **consistent voltage output** over a long period of time, ensuring reliable operation for microcontrollers, sensors, and memory modules. Its **PCB-mountable pin configuration** simplifies integration in circuit designs and ensures a stable mechanical and electrical connection.

Unlike regular coin cells that require holders, this version can be **directly soldered** to the board, saving space and improving reliability in applications where vibrations or mechanical movement could dislodge traditional holders.

The lithium chemistry inside ensures **high energy density**, **stable discharge characteristics**, and **low internal resistance**, which are crucial for maintaining voltage stability in timekeeping and backup power applications.

💡 Typical Applications

The CR2032 with pins is widely used across many electronic applications, including:

- **Real-Time Clock (RTC) Backup Power** – maintains accurate timekeeping when the main power is off.
- **Microcontroller and Arduino Projects** – powers low-power systems or serves as a backup for SRAM or EEPROM.
- **Digital Meters and Sensors** – provides a stable voltage supply to precision instruments.

- **Computer Motherboards (BIOS Battery)** – retains CMOS memory data during power-off conditions.
- **Remote Controls and Small Devices** – ensures long-lasting, dependable performance in compact electronics.
- **Wearable Devices and IoT Nodes** – suitable for embedded, low-power applications requiring long battery life.

⚡ Performance and Reliability

The **CR2032 Coin Cell with Pins** is engineered for durability and reliability. It maintains its voltage for most of its discharge cycle, providing consistent performance in sensitive electronic circuits. The **solderable pin design** ensures a strong connection, eliminating the need for additional battery holders or connectors that might loosen over time.

With a **low self-discharge rate**, the battery retains most of its charge even after years of storage, making it an excellent choice for backup or standby applications. Its **wide operating temperature range** also allows use in both indoor and outdoor projects without performance degradation.

🧰 Advantages

- Direct PCB mounting – no need for separate holders
- Compact and lightweight design for small devices
- Long shelf life and excellent stability
- Ideal for backup, RTC, and embedded systems
- High energy density and consistent 3V output
- Environmentally friendly and safe to use

📦 Package Includes

- 1 × CR2032 3V Lithium Coin Cell Battery with Pins

🔍 Technical Summary

Parameter	Specification
Model	CR2032 with Pins
Type	Lithium Coin Cell
Nominal Voltage	3V
Capacity	200–240mAh
Mount Type	PCB Through-Hole
Diameter	20mm
Thickness	3.2mm
Operating Temp	-20°C to +60°C
Shelf Life	Up to 10 Years

💡 Why Choose This Version with Pins?

While standard CR2032 batteries are suitable for removable holders, the **pinned version** offers extra convenience for **fixed installations and embedded projects**. It ensures secure mounting on the circuit board, better electrical contact, and reduced risk of disconnection. This makes it especially suitable for **industrial and professional-grade electronics**, where stability and longevity are essential.