



## Architects and Engineers Specifications

### 1.0 General Battery Description

The local emergency wearable transmitter shall rely upon a replaceable, non-rechargeable primary 3-Volt Lithium Manganese Dioxide coin cell battery, model CR2450, to execute wireless radio-frequency alerts. The power cell must provide sustained operational capacity without voltage sag during active signal loading.

### 2.0 Electrochemical Performance

- The battery cell must feature standard continuous discharge matching a 7.5K ohm load down to an end-point voltage threshold of 2.0 Volts.
- The structural seal must be rated for long-term storage within facility supply rooms, preserving cell capacity over extended standby periods.
- The active materials must feature a lightweight form factor optimized to avoid adding unnecessary physical burden to wearable neck pendants.

## Product Specifications

- SKU / Model: CR2450
- UPC: 605939651929
- Chemical System: Lithium / Manganese Dioxide ( $\text{Li/MnO}_2$ )
- Nominal Voltage: 3.0V
- Typical Capacity: 560 mAh – 620 mAh (to 2.0V cutoff)
- Dimensions: 24.5 mm Diameter × 5.0 mm Height
- Average Weight: 6.2 g to 6.8 g
- Container Material: Heavy-Duty Stainless Steel

## CR2450 3V Lithium Coin Cell Battery

The CR2450 3V Lithium Coin Cell Battery is a high-density, commercial-grade primary power cell engineered specifically for low-drain, high-reliability components within wireless healthcare communications. Acting as a critical operational pillar for facility safety, this high-energy-density coin cell delivers exceptional structural reliability and voltage stability under continuous deployment. Sourced through BEC Integrated Solutions, the CR2450 functions as the native, long-life power foundation required to keep emergency wearable transmitters operational, ensuring that patients and residents remain linked to caregivers without unexpected power interruptions.

## Equipment Options

The CR2450 cell operates as an indispensable decentralized energy source across unified nurse call configurations:

- System Infrastructure: Serves as a standard auxiliary hardware component across the Micro-Vision 200Plus, Micro-Vision 500, and PC-Based Wireless Nurse Call Systems.
- Device Compatibility: Seamlessly supplies primary power to the WNC-NP Wireless Nurse Call Neck Pendants alongside various compatible wireless mobile pull stations and emergency wrist-pendant signaling transmitters.
- Receiver Interfacing: Safely pairs with active endpoints tracked by the MV200Z, MV200Plus, MV400Z, and MV500Z centralized wireless console receivers.

### Standard & Advanced Features

- High-Voltage Stability: Features a 3.0V nominal voltage utilizing a Lithium Manganese Dioxide ( $\text{Li/MnO}_2$ ) chemical composition for consistent voltage outputs during standard transmission drains.
- Ultra-Low Self-Discharge: Engineered with low internal resistance characteristics that restrict self-discharge to approximately 1% per year, ensuring an extended shelf life of up to 10 years.
- Advanced Leakage Resistance: Structured with a premium stainless steel container and a high-integrity isolation gasket to prevent localized corrosion and protect internal device circuitry.
- Extended Thermal Operating Window: Delivers steady discharge performance through intense climate variations, operating reliably across a temperature range of  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ .

### Compliance and Certification

The CR2450 primary lithium battery satisfies structural safety and non-interference directives needed for institutional deployment:

- FCC Status: Inherently compliant as a passive chemical energy source that contains no radio components; it creates zero localized RF emissions, allowing full compliance with FCC Part 15 limits when placed inside host transmitters.
- UL Status: Component certified under UL 1642 (Standard for Safety for Lithium Batteries), ensuring strict compliance with mechanical, thermal, and electrical safety standards against deformation or ignition.
- RoHS Status: Thoroughly compliant with European RoHS environmental directives, manufactured with zero added mercury, cadmium, or hazardous substances to protect direct skin-contact devices.
- International Standards: Aligns with standard IEC 60086-4 safety definitions governing primary lithium batteries.