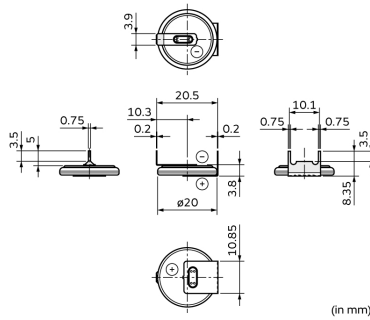


# CR2032X-HE1

The Extended Temperature lithium coin batteries support wider operating temperature -40 to +85 °C and are ideal for automotive devices and outdoor IoT systems. Also CR3677X can be used as an alternative solution to conventional cylindrical batteries.



## Appearance & Shape



## Features

- Lightweight, High Voltage and High Energy Density**  
 The battery voltage is 3V, almost double that of normal alkaline or manganese batteries. This means that the number of batteries required for equipment can be halved for maximum space saving and weight reduction.
- Excellent Discharge Characteristics**  
 Voltage characteristics remain stable even for a long period of discharge, greatly improving the reliability of equipment that uses the battery. Such equipment is also maintenance-free (battery replacement is seldom required).
- Wide Operating Temperature Range**  
 While the operating temperature range of the Standard is from -30°C to 70°C, the range of the Extended Temperature has been expanded from -40°C to 85°C. This type supports electronic components and IC of which operating temperature range is up to 85°C in many cases. Also, the excellent storage characteristics minimize the voltage drop compared with the Standard even when the Extended Temperature is stored for 100 days or more at 85°C.

## Applications

Other Usage	●Automotive · TPMS(Tire Pressure Monitoring System) · Toll Collection Device · Drive counter ●IoT/Others · Smart meters · Factory Automation Instruments · Tracking devices/Sensor node
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- Maximum capacity with coin lithium battery\*1**  
 The largest capacity "CR3677X"\*2 in the Extended Temperature has the largest capacity\*1 among coin lithium batteries. This model has a nominal capacity higher than the CR123A battery and CR2 battery, and contributes to downsizing and slimming of electronic devices.  
 \*1 Murata Research, September 28, 2018  
 \*2 Shipment of mass-produced CR3677X is scheduled to start at the end of 2019

- Excellent Leakage Resistance**  
 The newly developed battery construction and electrolyte ensure maximum leakage resistance over a long span of time.

- Excellent Long-Term Reliability**  
 Carefully selected active materials are used for the positive material as well as for the electrolyte. These materials are sealed by Murata's innovative technology to minimize battery self-discharge. The annual self-discharge rate at room temperature and normal humidity is less than 1% of the nominal capacity.

### Attention

- This datasheet is downloaded from the website of Murata Manufacturing Co., Ltd. Therefore, its specifications are subject to change of our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.
- This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please review our product specifications or consult the approval sheet for product specifications before ordering.

- UL Approved Parts**  
 Murata's Coin Manganese Dioxide Lithium Batteries are approved by UL. (UL1642 File No. MH12566)

# CR2032X-HE1

## Specifications

Battery type	Coin Manganese Dioxide Lithium Batteries
Nominal Voltage	3.0V
Nominal Capacity	220mAh
Recommended Continuous Discharge Current	1mA or less
Maximum Pulse Discharge Current(mA) *Assumption: Current to keep higher than 2V at 50% discharge with 23°C and pulse length 3sec.	30mA
Operating Temperature Range	-40°C to 85°C
Diameter (inch)	0.787inch
Diameter (mm)	20mm
Height (inch)	0.126inch
Height (mm)	3.2mm
IEC (JIS)	CR2032
Mass (oz)	0.12oz
Mass (g)	3.4g

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