

## SolarInnovate Energy Solutions

# 21700 Battery cell size



## Overview

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21700 batteries are cylindrical lithium-ion rechargeable cells measuring 21mm in diameter and 70mm in length. What is a 21700 battery?

The 21700 battery is a cylindrical lithium-ion battery with a diameter of 21mm and a length of 70mm. It offers a nominal voltage of 3.7V and a capacity of up to 5,000mAh, making it a powerful and efficient energy source. Its energy density ranges between 250 Wh/kg and 300 Wh/kg, depending on the chemistry.

How big is a 21700 cell?

The 21700 cell stands out due to its standardized dimensions of 21mm in diameter and 70mm in length. These measurements make it larger than the widely used 18650 cell, which measures 18mm by 65mm. This increase in size allows the 21700 to deliver higher energy storage and improved performance.

Are 21700 batteries based on lithium ion?

However, most 21700 cells are based on lithium-ion (Li-ion) technology, which is widely used across many types of rechargeable batteries due to its excellent energy density and long lifespan. There are several types of lithium-ion chemistries that could be used within the 21700 format:

What is the difference between a 21700 and 18650 battery?

The most significant difference between the 21700 and 18650 batteries is their size and capacity. The 21700 is larger (21mm x 70mm) compared to the 18650 (18mm x 65mm), and this size difference allows the 21700 to store more energy. Capacity: The 21700 typically holds 5000mAh or more, while the 18650 generally maxes out around 3500mAh.

Is a 21700 battery better than a smaller battery?

While the 21700 may seem just slightly bigger, its larger size provides

substantial benefits in terms of energy storage, power output, and overall performance. The increased size of the 21700 battery means that it can hold significantly more energy compared to its smaller cousins.

What is the energy density of a 21700 battery?

The 21700 battery utilizes advanced lithium-ion chemistry, which provides a balance between energy density, safety, and longevity. Depending on the specific chemistry, such as NMC or LCO, the energy density of the 21700 ranges from 250 Wh/kg to 300 Wh/kg.

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### **Heat generation quantification of high-specific-energy 21700 battery**

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