

Solid State Battery Market Size, Share & Trends Analysis Report By Battery Type (Thin Film, Portable), By Capacity, By Application (Consumer & Portable Electronics, EVs), By Region, And Segment Forecasts, 2025 - 2030

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Abstracts

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Solid State Battery Market Growth & Trends

The global solid state battery market size is expected to reach USD 15.07 billion by 2030, registering a CAGR of 56.6% from 2025 to 2030, according to a new report by Grand View Research, Inc. Growing demand for solid-state batteries across end-use markets along with rising R&D focused on developing advanced batteries is likely to drive the market growth over the forecast period.

The market is also driven by the rising deployment of Electric Vehicles (EVs), increasing utility of battery energy storage systems, and the growing adoption of electronic gadgets. Solid-state batteries offer higher electrochemical stability, higher energy density, and low flammability as compared to conventional batteries. These characteristics have widened the application base, thereby enhancing the commercial value of solid-state batteries.

Industry participants are following several strategic initiatives, such as partnerships, joint ventures, and mergers and acquisitions, to enhance their foothold in the market. For instance, in April 2019, Ford Motor Company entered into a partnership with Solid Power to design and develop a product for EVs segment of the automotive sector.

High costs associated with the initial-stage product development are anticipated to hamper the market growth over the forecast period. Moreover, the outbreak of the COVID-19 pandemic has severely impacted the market supply chain that includes electrode material producers, raw material suppliers, battery pack manufacturers, and others.

Solid State Battery Market Report Highlights

The thin film battery segment dominated the global solid-state battery industry and accounted for the largest revenue share of 89.8% in 2024, primarily driven by its compact size, lightweight nature, and high energy density.

The 20mAh-500mAh capacity segment led the market and held the largest revenue share of 62.6% in 2024. This growth is attributed to the increasing demand for compact energy solutions in consumer electronics and portable devices.

The consumer and portable electronics segment held the dominant position in the global solid-state battery industry with the highest revenue share of 32.9% in 2024, driven by the increasing demand for compact, efficient energy solutions in devices such as smartphones, wearables, and IoT gadgets.

The Asia Pacific solid state battery market dominated the global market and accounted for the largest revenue share of 54.0% in 2024, primarily driven by the robust demand for electric vehicles (EVs) and portable electronics in the region, as consumers increasingly seek advanced energy storage solutions that offer higher energy density and improved safety.

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