

Battery Testing, Inspection, and Certification Market by Battery Type (Lithium-ion, Lead-acid), Standard and Certification Type (Safety Testing, EMC Testing), Application (Electric Vehicles, Consumer Electronics) and Region - Global Forecast to 2029

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Abstracts

The battery TIC market is projected to reach USD 36.7 billion by 2029 from USD 14.9 billion in 2024 at a CAGR of 19.6% during the forecast period. The major factors driving the growth of battery TIC market are Increasing adoption of EVs and energy storage systems, rising enforcement of stringent standards to ensure battery safety, thriving portable electronics industry, and rapid advances in battery technology. Moreover, rising investment in clean energy initiatives, and increasing automation of testing and inspection processes using digital technologies to carve out new growth opportunities for market players.

“Electric Vehicles (EVs) to register the largest market share during the forecast period.”

Government incentives and a regulatory landscape conducive to sustainable transportation boost demand for electric vehicles, hence the boom in the EV market. Since EVs provide environmental benefits compared to traditional vehicles, there has been growing adoption of these vehicles, which improves the technology applied in batteries. With growth, demand for TIC services will rise to ensure that EV batteries are manufactured by rigorous standards to ensure safety and reliability. The market expansion is increasing demand for lithium-ion batteries, driven by supportive policies and technological advancements.

Accordingly, the demand of TIC services in industrial equipment applications that includes power tools, telecommunication systems, and energy storage systems, has

increased many folds. This is based on the increasing adoption of cordless equipment and ESS in industrial plants where reliable and long-life power sources are required. Rigorous TIC processes are put in place to guarantee that batteries used under difficult conditions are both safe and reliable.

“Lithium-ion battery to register the largest share during the forecast period.”

Important factor that will drive the growth of the battery TIC market is the rising demand for lithium-ion batteries in electric vehicles and energy storage systems. Lithium-ion batteries have an increased energy density with a longer lifespan, thus making them suitable for use in EVs and ESS. With their increasing adoption in EVs and ESS, comes a growing requirement for the testing and certification of these batteries to ultimately ensure conformance to the set standards of safety and performance. This demand is thus fueling growth in the TIC market because safety and reliability of batteries are paramount in these applications. Further accelerating the demand for TIC's comprehensive testing services is the improvement of battery technologies and new standards. Continued trends will point to huge growth in the battery TIC market.

“Europe to register the highest growth during the forecast period.”

The European battery TIC market is growing fast, due to its robust infrastructure, which is backed by top TIC service providers such as SGS SA, Intertek Group plc, T?V NORD GROUP, Bureau Veritas, DEKRA, DNV GL, and Eurofins Scientific. All these companies mentioned, provide a wide range of services and certifications to comply with stringent regulatory standards. Moreover, rapid transformation to clean energy and the industry boom of industrial equipment and consumer electronics further drive demand for TIC services for lithium-ion batteries. Further, a strong battery manufacturing industry, combined with a focus on clean energy and technological innovation, underpins regional growth of the battery testing, inspection, and certification market in Europe.

The break-up of profile of primary participants in the battery TIC market-

By Company Type: Tier 1 – 50%, Tier 2 – 30%, Tier 3 – 20%

By Designation Type: C Level – 35%, Director Level – 30%, Others – 35%

By Region Type: North America – 20%, Europe – 40%, Asia Pacific – 25%, Rest of the World – 15%

The major players in the battery TIC market with a significant global presence include UL LLC(US), SGS SA (Switzerland), Intertek Group plc (UK), Bureau Veritas (France), and DEKRA (Germany) and others.

Research Coverage

The report segments the battery TIC market and forecasts its size by standard and certification type, battery type, service type, application, and region. The report also provides a comprehensive review of drivers, restraints, opportunities, and challenges influencing market growth. The report also covers qualitative aspects in addition to the quantitative aspects of the market.

Reasons to buy the report:

The report will help the market leaders/new entrants in this market with information on the closest approximate revenues for the overall battery TIC market and related segments. This report will help stakeholders understand the competitive landscape and gain more insights to strengthen their position in the market and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, opportunities, and challenges.

The report provides insights on the following pointers:

Analysis of key drivers (increasing adoption of EVs and energy storage systems, rising enforcement of stringent standards to ensure battery safety, thriving portable electronics industry, and rapid advances are the major factors driving the market growth), restraints (high initial capital investments, high testing and certification costs, and lack of uniform and standardized testing protocols), opportunities (rising investment in clean energy initiatives, increasing automation of testing and inspection processes using digital technologies, and growing need for rigorous testing in electric aircraft and medical devices), and challenges (complexities associated with next-generation batteries, technical barriers to trade due to regulatory divergence, and rise in geopolitical tensions)

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new service launches in the battery TIC

market

Market Development: Comprehensive information about lucrative markets – the report analyses the battery TIC market across varied regions.

Market Diversification: Exhaustive information about new services, untapped geographies, recent developments, and investments in the battery TIC market.

Competitive Assessment: In-depth assessment of market shares, growth strategies and product offerings of leading players like UL LLC(US), SGS SA (Switzerland), Intertek Group plc (UK), Bureau Veritas (France), and DEKRA (Germany).

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