

GLOSSARY OF TECHNICAL TERMS

This glossary contains explanations of certain technical terms used in this Document in connection with our Group and its business. Such terminology and meanings may not correspond to standard industry meanings or usages of those terms.

"3-point crimping structure"	a patented sealing structure used in metal button batteries that creates a passive pressure-relief path. When internal pressure reaches $2 \text{ MPa} \pm 1 \text{ MPa}$, the three crimp slots deform to release gas instantly, preventing case rupture and explosion
"8D analysis"	a structured problem-solving approach used to identify root causes of quality issues, implement corrective actions and prevent recurrence
"Ah"	Amp-hour, a unit of electric charge representing battery capacity
"AI"	Artificial intelligence
"all-solid-state battery"	a solid-state battery that uses completely solid materials
"aluminum-plastic film"	a composite material used for pouch battery casings, consisting of multiple layers including aluminum foil, providing protection against electrolyte corrosion while maintaining flexibility
"battery cell" or "cell"	the basic electrochemical unit of a battery, consisting of positive and negative electrodes, separator, and electrolyte, which stores and releases electrical energy through chemical reactions
"battery module" or "module"	an assembly of multiple battery cells connected in series or parallel configurations, integrated with structural components and often including basic electrical connections and thermal management features
"battery pack" or "pack"	a complete battery system consisting of modules, battery management system (BMS), thermal management system, housing, and electrical connections
"bent battery"	an ultra-thin curved battery designed for irregular or curved form factors
"BMS"	Battery Management System, an electronic system that monitors and manages battery performance, including voltage, current, temperature, and state of charge, while providing protection against overcharge, over-discharge, and thermal issues
"button battery"	a small, flat, circular battery used in compact electronic devices

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"C" or "C-rate"	charge or discharge rate, which refers to the rate at which a battery is charged or discharged relative to its total capacity and is an industry term. A charging current of 2C, 3C, 4C, 6C, and 12C implies that the battery can be fully charged in 1/2, 1/3, 1/4, 1/6 and 1/12 of an hour, respectively
"calendar life"	the total lifespan of a battery measured in years from the date of manufacture, regardless of usage, before its capacity degrades to a specified percentage of its original capacity
"California Prop 65"	a California law that requires businesses to provide warnings if their products may expose consumers to chemicals known by the State of California to cause cancer, birth defects or other reproductive harm
"cylindrical battery"	a tubular-shaped battery commonly used in smart glasses, styluses, handheld medical devices and portable electronics
"electrode"	a conductive component in a battery, comprising active materials, binders, conductive agents, and current collectors, where electrochemical reactions occur
"electrolyte"	a chemical medium (liquid, gel, or solid) that enables the flow of ionic charge between the cathode and anode in a battery
"energy density" or "ED"	the amount of energy that can be stored in a battery relative to its volume (volumetric energy density, measured in Wh/L) or weight (gravimetric energy density, measured in Wh/kg)
"ERP system"	Enterprise Resource Planning system, an integrated software platform for managing business processes including procurement, production, inventory, and finance
"flame-retardant gel electrolyte"	a semi-solid electrolyte containing phosphorus-based additives that suppress combustion, designed to enhance battery safety by preventing thermal runaway
"GB"	Guobiao (National Standard), referring to standards issued by PRC authorities
"GB 31241"	PRC National Standard for safety requirements of lithium-ion cells and batteries for portable electronic equipment
"GB/T 2423.22"	PRC National Standard for environmental testing procedures, specifically temperature change tests

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"graphite"	a form of carbon used as the primary anode material in lithium-ion batteries due to its layered structure that allows lithium ion intercalation
"gravimetric energy density"	the amount of energy stored in a battery relative to its weight, typically expressed in watt-hours per kilogram (Wh/kg). Higher gravimetric energy density enables lighter battery designs for weight-sensitive applications
"GWh"	gigawatt-hour, a unit of electric energy equal to 1,000,000 kWh or 1 billion Wh
"high-precision winding"	an automated manufacturing process using laser edge detection and real-time feedback control to align electrode layers with accuracy within $\pm 0.1\text{mm}$
"IEC"	International Electrotechnical Commission, a global organization that prepares and publishes international standards for electrical, electronic, and related technologies
"IEC 62133"	International standard for secondary cells and batteries containing alkaline or other non-acid electrolytes, covering safety requirements for portable applications
"industry 4.0"	the digital transformation of manufacturing, integrating smart technologies like IoT, AI, cloud computing, and big data to create interconnected, self-optimizing factories
"in-situ polymeric electrolyte"	a solid electrolyte formed by polymerizing a liquid precursor inside the battery during manufacturing, creating a flexible solid matrix that eliminates leakage risks
"installation"	the volume of battery products installed in devices or systems, usually expressed in GWh, MWh, or kWh
"IoT"	Internet of Things, the network of interconnected devices, sensors and systems enabled by semiconductor components to collect, exchange and process data
"IQC"	Incoming Quality Control, the inspection and testing process for raw materials and components upon delivery to ensure they meet specified quality standards before production
"IPQC"	In-Process Quality Control, real-time monitoring and inspection during manufacturing to ensure process parameters and product quality meet specifications

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"ISO"	International Organization for Standardization, an independent, non-governmental international organization that develops voluntary international standards
"ISO 13485"	International standard specifying requirements for quality management systems for organizations involved in the design, production, installation, and servicing of medical devices
"ISO 14001"	International standard for environmental management systems, helping organizations minimize their environmental impact and comply with applicable laws and regulations
"ISO 14064-1:2018"	International standard specifying principles and requirements for quantifying and reporting greenhouse gas emissions and removals at the organization level
"ISO 27001"	International standard for information security management systems
"ISO 9001"	International standard for quality management systems, specifying requirements for organizations to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements
"J/R"	jelly roll, a spiral-wound electrode assembly inside a battery
"kWh"	kilowatt-hour, a unit of electric energy equal to 1,000 Wh
"laser edge detection"	a manufacturing method using laser sensing to detect electrode edges and support alignment control
"laser sealing"	a precision welding technique using laser beams to seal battery components, particularly metal caps to casings, with minimal heat-affected zones (typically 0.3mm) and high precision (weld width 0.2mm)
"LCO"	lithium cobalt oxide (LiCoO_2), a cathode material used in batteries
"LFP"	Lithium Iron Phosphate, a cathode material used in batteries
"lithium-ion battery"	a rechargeable battery technology where lithium ions move between the cathode and anode through an electrolyte during charge and discharge cycles
"mAh"	milliamp-hour, a unit of electric charge equal to one-thousandth of an Ah, commonly used to express capacity of small batteries

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"make-to-order"	a production strategy where products are manufactured only after receiving confirmed customer orders, allowing for customization
"make-to-stock"	a production strategy where standardized products are manufactured in advance and held in inventory to enable rapid order fulfillment
"MES system"	Manufacturing Execution System, a computerized system that tracks and documents the transformation of raw materials to finished goods, enabling real-time production monitoring and end-to-end traceability
"metal-cased prismatic battery"	a rectangular battery using a one-piece deep-drawn aluminum-alloy or stainless-steel casing that eliminates the seal areas required by pouch batteries
"Mini-size lithium-ion batteries"	lithium-ion batteries with a rated capacity of less than or equal to 1,000 mAh
"MWh"	megawatt-hour, a unit of electric energy equal to 1,000 kWh
"NCM"	nickel-cobalt-manganese ternary materials, cathode materials using different ratios of nickel, cobalt, and manganese
"nominal capacity"	the rated capacity of a battery as specified by the manufacturer, typically measured in mAh or Ah under standard test conditions
"OEM"	Original Equipment Manufacturer, a company that produces parts or equipment that are purchased by another company and retailed under the purchasing company's brand name
"OQC"	Outgoing Quality Control, final inspection and testing of finished products before shipment to ensure they meet all specifications and quality standards
"pouch battery"	a battery type using flexible aluminum-plastic film as the casing, typically lighter and more space-efficient than metal-cased batteries but with lower mechanical strength
"prismatic battery"	a rectangular battery design that maximizes space utilization, commonly used in smart glasses, smart watches, and smart toys, with metal-cased or pouch variants
"QC 080000"	an international technical standard for hazardous substance process management in electronics
"R&D"	research and development

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"REACH"	Registration, Evaluation, Authorization and Restriction of Chemicals, a regulation of the European Union adopted to improve the protection of human health and the environment from the risks posed by chemicals
"RoHS"	Restriction of Hazardous Substances, a directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment, adopted by the European Union
"semi-solid battery"	a battery type using electrolyte with both liquid and solid components, offering improved safety compared to fully liquid electrolytes while delivering enhanced energy density (550 Wh/L) for applications such as drones
"separator"	a porous membrane placed between the cathode and anode to prevent direct contact (which would cause short circuits) while allowing ionic transport through the electrolyte
"silicon-carbon composite anode"	an anode material combining silicon particles (10-15%) with graphite, offering higher capacity (450-480 mAh/g) compared to pure graphite (372 mAh/g) while managing silicon's volume expansion during charging
"solid-state battery"	a battery technology using solid electrolytes instead of liquid or gel electrolytes to regulate the lithium ions
"state of charge" or "SOC"	the current level of charge in a battery expressed as a percentage of its total capacity, where 100% indicates a fully charged battery
"TCFD"	Task Force on Climate-Related Financial Disclosures, an organization that develops recommendations for voluntary climate-related financial risk disclosures
"tCO ₂ e"	tonnes of carbon dioxide equivalent, a standard unit for measuring carbon footprint that expresses the impact of different greenhouse gases in terms of the amount of CO ₂ that would have the same global warming potential
"thermal abuse tests"	a safety test exposing batteries to extreme temperatures to verify they do not catch fire or explode under thermal stress
"thermal cycling test"	a test where batteries are cycled repeatedly between extreme temperatures to evaluate their ability to withstand temperature variations without performance degradation or safety issues

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"thermal runaway"	a chain reaction within a battery where increased temperature causes conditions that further increase temperature, potentially leading to fire or explosion if not controlled
"thermal sensitive gasket"	a patented safety component made of heat-sensitive resin that shrinks at $170^{\circ}\text{C} \pm 20^{\circ}\text{C}$, creating a secondary pressure-relief path in button batteries to prevent thermal runaway
"TWS"	True Wireless Stereo, referring to wireless earbuds or headphones with no cable connection between left and right units
"UL"	Underwriters Laboratories, a global safety certification organization that tests and certifies products for safety
"UL 1642"	safety standard for lithium batteries, covering testing requirements for cells used in various applications
"ultra-micro button battery"	an extremely small button battery with diameter less than 6mm
"volumetric energy density"	the amount of energy stored in a battery relative to its volume, expressed in watt-hours per liter (Wh/L), critical for space-constrained applications
"W"	watt, a unit of power
"Wh"	watt-hour, a unit of electric energy
"Wh/kg"	watt-hour per kilogram, a unit expressing gravimetric energy density
"Wh/L"	watt-hour per liter, a unit expressing volumetric energy density
"winding"	a manufacturing process where electrode sheets and separators are wound together in a spiral configuration to form a cylindrical or button battery core
"wound-type bent battery"	a proprietary battery design using integrated continuous winding of electrodes for curved form factors
"XRF"	X-ray fluorescence, an analytical method referenced for hazardous substance testing
"yield" or "yield rate"	the proportion of units produced that meet quality specifications