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NICHICON's SLB Series of Small Lithium-Ion Rechargeable Batteries Used in Samsung Electronics' Galaxy Note10 and Note10+

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NICHICON Corporation's SLB Series of small lithium-ion rechargeable batteries, featuring ultrafast charge/discharge rates, long life, and high stability, have been adopted for use on the stylus pens ("S Pens") of the Galaxy Note 10 and Note 10+, new smartphone models by Samsung Electronics Co., Ltd.

Overview and Development Background

The remote operation function of the S Pen used with the Galaxy Note10 and Note10+ has been upgraded substantially compared with conventional models. S Pen motions are recognized using Bluetooth Low Energy (BLE) technology, allowing the smartphones to be controlled remotely. To realize advanced functionality on the S Pen, Samsung Electronics adopted NICHICON's small lithium-ion rechargeable batteries, extending their operating time by up to 10 hours. The SLB series of lithium-ion rechargeable batteries offer high input/output compared with general lithium-ion rechargeable batteries, charging/discharging up to 10 times the rated current is possible, making the danger of fire or smoke extremely small and contributing to superior stability.

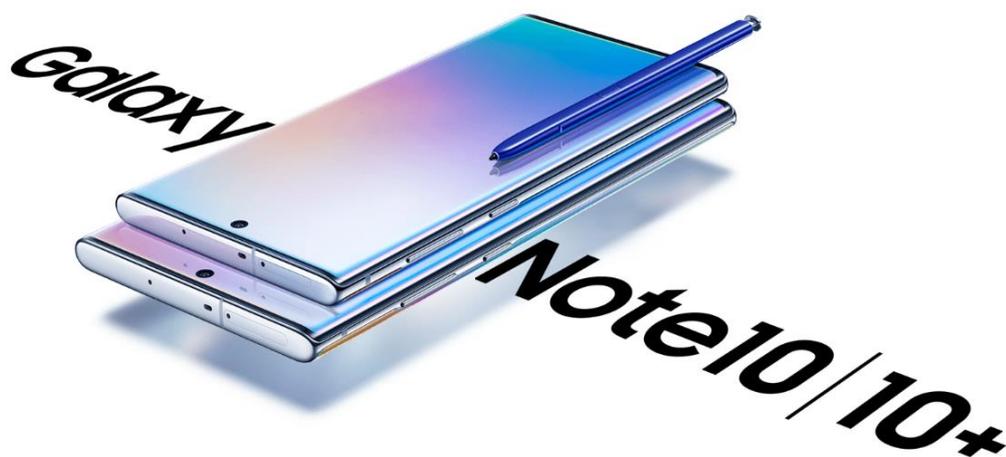
Features

The SLB uses LTO (lithium titanate) for its negative electrode, enabling ultrafast charge/discharge (up to 20C) and high input/output density that is close to an electric double-layer capacitor. The product is also highly durable, having a cycle life of 5,000 times or more at a charge/discharge rate of 10C. The product can also be used at temperatures as low as -30°C. The SLB is unlikely to experience lithium metal deposition, which can lead to short circuits and deterioration, making the SLB batteries safe, with an extremely low danger of fire or smoke.

Main Specifications

- Average operating voltage: 2.4V
- Maximum charging voltage: 2.8V
- Discharge cutoff voltage: 1.8V
- Rated capacity: 0.35mAh
- Category temperature range: -30 to +60°C
- Maximum current: 20C (continuous)
- Product dimensions: $\phi 3 \times 7L$ (mm)
- Life: Cycle life of 5,000 times ($\phi 3$)
- Terminal shape: Lead type
- Production plant: NICHICON (OHNO) CORPORATION, Site II Factory
4-24-5 Tsuchifugo, Ono, Fukui Prefecture
(ISO 9001, ISO 14001 certified)

Note: Battery life on the S Pen varies with conditions of use.



The Galaxy Note10 and Note10+



SLB Series of small lithium-ion rechargeable batteries