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## **NICHICON Expands the SLB Series of Small Li-Ion Rechargeable Batteries (High-Rate Charge/Discharge Performance, Long Life, Low-Temperature Capabilities, and Safety) to Include $\phi 8$ and $\phi 12.5$ Size Versions**

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NICHICON CORPORATION expanded its SLB series of small li-ion rechargeable batteries to include  $\phi 8$  and  $\phi 12.5$  size versions. The SLB series characteristics include rapid charge/ discharge and have long life.

The SLB series will be exhibited at CEATEC 2020 ONLINE from Tuesday, October 20, to Friday, October 23.

### **Overview and Development Background**

Small li-ion rechargeable batteries are an essential part of new products and services using big data, artificial intelligence and cloud computing. This includes the expansion of environmental power generation systems that convert natural energy such as light, heat, vibration and radio waves into electricity, as well as the development of car electronics used in autonomous vehicles.

### **Main Features**

This product utilizes lithium titanate for its cathodes giving them a high-rate\* (max. 20C) charge/discharge performance with densities similar to an electric double-layer capacitor. It is also durable, capable of tens of thousands of charge cycles at a high rate, and boasts low temperature characteristics enabling operation down to  $-30^{\circ}\text{C}$ . The SLB series is safe, it has an extremely low risk of igniting or smoking due to less lithium metal separation, which causes short circuits and deterioration.

Utilizing our winding manufacturing technologies that we have developed through our aluminum electrolytic capacitor production, we can supply ultra-small lead-type batteries with a diameter of 3 mm and a length of 7 mm for use in IoT edge terminals and smartphone styluses. In response to the market need for larger capacity products, we have added a version with a diameter of 8 mm and length of 11.5 mm, and one with a diameter of 12.5 mm, and a length of 40 mm. These additions make it possible to use the SLB series in a wider range of applications.

Going forward, we will be developing product lines for efficient energy use to contribute to the realization of a bright future for society and the prevention of global warming.

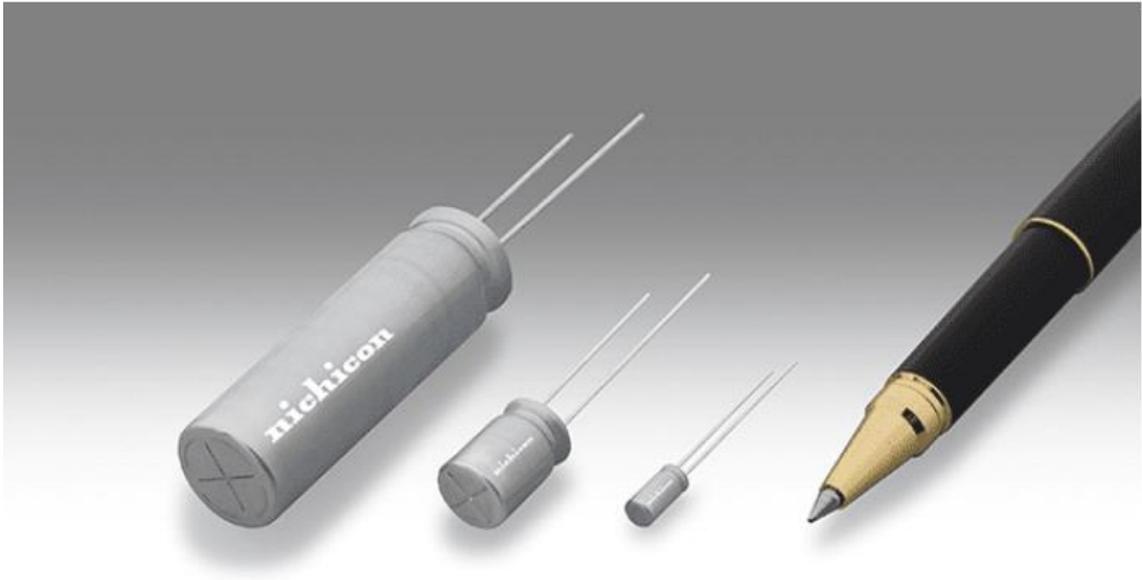
#### Terminology Explanation

\*High-rate rapid charge/discharge: The current rate when charging/discharging battery capacity in one hour is defined as 1C. The ability to charge at a rate greater than 1C indicates high-rate rapid charge/discharge performance.

#### Main Specifications

Note: Figures in parentheses indicate expanded ratings.

Average operating voltage:	2.4V
Maximum charging voltage:	2.8V
Discharge end voltage:	1.8V
Rating capacity:	0.35mAh, 14mAh, 150mAh (14mAh, 150mAh)
Maximum charge/discharge current:	20C (continuous)
Category temperature range:	-30°C to 60°C
Product dimensions:	φ3×7L, φ8×11.5L, φ12.5×40L (mm) (three sizes) (φ8×11.5L、φ12.5×40L (mm) (two sizes))
Terminal shape:	Lead type
Samples:	Currently available
Mass production:	Expanded lineup from December 2020 [Planned production volume: 500 thousand/month]
Production plant:	NICHICON (OHNO) CORPORATION, SITE II Factory 4-24-15 Technology Center, Tsuchifugo, Ono, Fukui Prefecture (ISO 9001, IATF 16949, and ISO 14001 certified)



SLB series of small Li-ion rechargeable batteries