News Release

Kanadevia
Technology for people and planet

Kanadevia Corporation
14th November 2024

Developed a New Ultra-Thin Model of All Solid-State Lithium-Ion Battery (1Ah), One-Quarter the Thickness of Our Conventional Product

Achieved a thickness of 3.0 mm and an energy density of more than 200 Wh/L per volume.
First Showcase at the 11th BATTERY JAPAN (Kansai), Int'l Rechargeable Battery Expo.

Hitachi Zosen Corporation changed its company name to Kanadevia Corporation in October 2024.

Kanadevia Corporation is pleased to announce that it has developed All-Solid-State Lithium-Ion Battery (1Ah type) "New AS-LiB® (1Ah type, hreinafter, Ultra-thin model)," which is 3.0mm or one-quarter the thickness and has the energy density of more than 200Wh/L per volume or more than double compared to our conventional product, "AS-LiB® (1Ah type)". The Ultra-thin model will be exhibited at the 11th BATTERY JAPAN (Kansai), International Rechargeable Battery Expo which will be held from November 20 to 22, 2024 at INTEX Osaka, Japan.

＜New AS-LiB® (1Ah type) ＞

AS-LiB® features a wide range of usable environments, including a wide operating temperature range and a vacuum range. And, through a joint demonstration project with the Japan Aerospace Exploration Agency (hereinafter, "JAXA"), a device*1 based on the "AS-LiB® (140mAh type)" was the first in the world to be confirmed to have been charged and discharged in space.
Upon its return from space, "AS-LiB® (140mAh type)" received a Certification of Space Flight from

JAXA.

In FY2023, Kanadevia also received the first commercial order for AS-LiB® (140mAh type) for semiconductor manufacturing equipment.

Kanadevia is aiming to adopt AS-LiB® mainly for use in space equipment, semiconductor manufacturing equipment, and industrial machinery due to its unique features, and such equipment requires smaller size of batteries.

The “Ultra-thin model” developed this time is 3.0 mm thick, which is very thin for a 1Ah battery, and has an energy density of 200Wh/L or more, achieving a volumetric energy density equivalent to that of iron phosphate lithium-ion batteries used in industrial applications.

Kanadevia believes that this will enhance the applicability of the battery to the above-mentioned equipment and machinery.

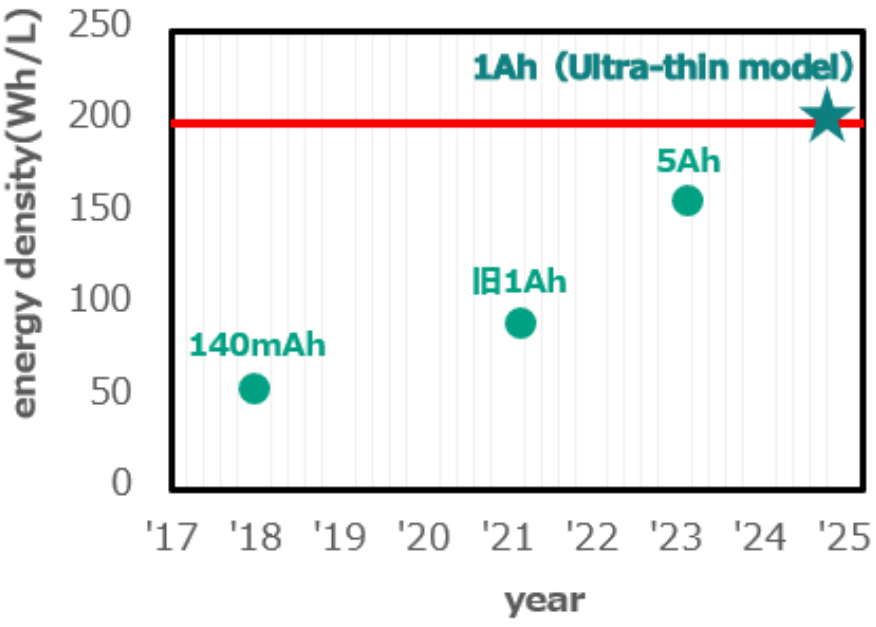
Kanadevia will continue to actively develop AS-LiB® with higher capacity and smaller size.

※1 All solid-state lithium-ion battery on-orbit demonstration device (Space AS-LiB); 15 cells of AS-LiB® (140mAh type) are connected in parallel and used as a power source of approximately 2.1Ah.

[Comparison of size and energy density of AS-LiB® by type]

	140mAh	1Ah (Current model)	5Ah	New 1Ah
Width (mm)	52	50	132	**75**
Depth (mm)	65.5	67	58	**82.5**
Thickness (mm)	2.7	12	16	**3**
Energy density (Wh/L)	55.6	90.8	157.8	**200.4**

[Comparison of energy density per volume of AS-LiB® by type]



[Initial characteristics of AS-LiB® (1Ah, Ultra-thin model)]