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Toshiba Corporation

**Toshiba Launches New SCiB™ Module with Double the Heat Dissipation Performance
for EV Buses, Electric Ships, and Stationary Applications**

- Achieving constant high power input and output while maintaining battery life -

TOKYO—Toshiba Corporation has launched a new SCiB™ module, a lithium-ion battery designed for use in EV buses, electric ships, and stationary applications. The new product features an aluminum baseplate that dissipates approximately twice the heat of current modules. It will be available from mid-April 2025, in Japan and internationally.

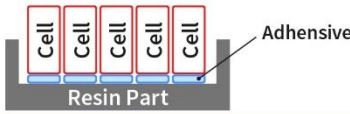
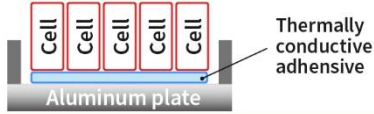


Use of lithium-ion batteries is increasing and diversifying, and there is growing demand for batteries that can support constant rapid charging and discharging in applications as diverse as electric buses and power load leveling in stationary applications. However, constant input and output at high power levels in a short time generates lifeshortening heat in the batteries. The challenge for battery developers is to manage heat dissipation and maintain battery life while realizing high power input and output in a short time.

Toshiba's SCiB™ rechargeable batteries have a lithium titanate negative electrode that realizes safe operation, a long life, low temperature performance, fast charging, high input and output, and a wide effective state of charge (SOC^{*1}). They are widely used in hybrid vehicles and industrial applications, including electric buses, cranes, trains, and automated guided vehicles in logistics centers. In addition to battery packs and cells, Toshiba also offers battery modules that can be connected in series or in parallel connections to meet required voltages and capacities.

Users of module products want a balance between constant high input and output in a short time and battery life. Toshiba has met this increasing demand with a new module that is the first to feature an aluminum baseplate. Aluminum is an excellent conductor, and the new module dissipates heat at approximately twice the rate of current battery modules.

Aluminum has a lower thermal resistance than the resin materials usually used in baseplates. However, as it is a conductor, the baseplate must be insulated from the battery cells. Toshiba has developed a novel structure that achieves the required voltage resistance, allowing commercialization. When used with the same cooling system normally applied by customers, and under typical operating conditions, heat dissipation performance is approximately double that of current modules, significantly extending battery life.

	Current module	New products
Cross-section of module		
Heat dissipation performance		

Adding new products to its module lineup allows Toshiba to respond flexibly to customer demands and application requirements. Toshiba will continue to offer products that leverage the unique features of its SCiB™ lithium-ion battery, while fully considering customer lifecycle costs, from installation to maintenance and disposal.

Product Specifications

Product name	Type4-23 (FM01202CCB04)	Current	160 A (continuous), 350 A (30 sec)
Dimensions	203.8(W) × 395(D) × 134.2(H) mm	Ambient operating temperature	-30 to 50 °C
Weight	Approx. 16.5 kg	Major built-in function	Cell voltage measurement, module temperature measurement, cell balancing ^{*2} and communication
Rated capacity	45 Ah (1,242 Wh)	Voltage range	DC18.0 to 32.4 V
Nominal voltage	27.6 V	Cell configuration	2 in parallel × 12 in series (24 pcs of 23Ah cells)

The battery module will be certified under the UL1973 safety standard for stationary applications, including off-grid applications and microgrids.

Product information: <https://www.global.toshiba/ww/products-solutions/battery/scib/product/module/2p12s.html>

Product specification and Instruction manual can be downloaded from the following link. Please note that user registration is required to access the documents.

[Data Download](#) | [SCiB™ Rechargeable battery](#) | [Toshiba](#)

Note 1: SOC range refers to the range of states of charge over which a battery can actually be used, with 100% SOC indicating

a fully charged state and 0% SOC indicating a fully discharged state.

Note 2: Function to equalize the voltage differences among cells connected in series.