Super Charge Ion Battery

A Breakthrough Nano-Based Lithium-Titanate Technology Today to Meet the Energy and Environmental Challenges of Tomorrow

- **Inherently Safe** - Advanced Safety Features Including Toshiba’s Proprietary Lithium-Titanate Chemistry Prevent Thermal Runaway.
- **Fast Charge Rates** - Capable of Full Recharge in < 10 Minutes (10C Charge Rate). Increases Customer Up-Time and Productivity.
- **Superior Life** - 80% Capacity Retention, Even After 6,000 Rapid Charge-Discharge Cycles. Eliminates the Need for Battery Replacement in Most Applications.
- **Greater Usable Capacity** - Up to 85% Usable Range of SOC without Compromising Cycle Life. Allows the Customer to Size the Battery Smaller by Utilizing More of the Rated Capacity.
- **Superb Temperature Performance** - Excels at Temperatures as Low as -30°C and up to 50°C. Provides Excellent Application Performance in Extreme Environmental Conditions.
- **Proven Production** - Produced on State-of-the-Art Automated High Volume Production Line. Ensures the Customer Receives Highest Quality and Stable Supply to Meet the Most Demanding Application Needs.
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Battery solutions are available as complete battery packs with Toshiba’s proprietary Battery Management System (BMS), as modules with preconfigured arrays of cells, or as individual cells.

**Common Applications Include:**
- HEV, PHEV, & EV
- Solar Power Generation, Wind Power Generation, & Grid Storage
- Forklifts/Automated Guide Vehicles
- Mobile Medical Equipment
- Uninterruptible Power Systems
- Military Power Supplies
- Electric Bicycles, Motorcycles, & Scooters

**Now in production are high energy density 4.2 Ah cells. Additionally, Toshiba is aggressively pursuing a product roadmap focused on further increasing SCiB™ capacity, energy density, and power density. 20 Ah cells with the same characteristics will be available in 2011.**

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**SCiB™ Specifications**

<table>
<thead>
<tr>
<th></th>
<th>Cell</th>
<th>12V Pack</th>
<th>24V Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Voltage</td>
<td>2.4 V</td>
<td>12 V (5 x 2.4 V)</td>
<td>24 V (10 x 2.4 V)</td>
</tr>
<tr>
<td>Nominal Capacity</td>
<td>4.2 Ah</td>
<td>4.0 Ah</td>
<td>4.2 Ah</td>
</tr>
<tr>
<td>Maximum Charge Current</td>
<td>50 A</td>
<td>8.4 A (Continuous)</td>
<td>50 A (BMS Controlled)</td>
</tr>
<tr>
<td>Maximum Discharge Current</td>
<td>45 A</td>
<td>8 A (Continuous)</td>
<td>15 A (Continuous)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 A (≤ 0.3 Seconds)</td>
<td>30 A (≤ 5 Seconds)</td>
</tr>
<tr>
<td>Approximate Size</td>
<td></td>
<td>62x95x13 mm</td>
<td>145 x 109 x 48 mm</td>
</tr>
<tr>
<td>Approximate Weight</td>
<td></td>
<td>155 g</td>
<td>1 Kg</td>
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