



JM Energy to Market a New Lithium Ion Capacitor with Double the Energy Density of the Conventional Product

March 17, 2015 – JM Energy Corporation (President: Eiichi Kobayashi) will market the ULTIMO® CLE2300S1B, a high energy density laminate type cell. The capacity of the new product is twice that of the conventional ULTIMO® laminate type cell of almost the same thickness, achieved by increasing the weight energy density to a level equivalent to lead batteries. The energy density of this lithium ion capacitor is among the highest in the industry.

The new product is expected to meet growing market needs for applications that require reductions in weight and space, such as medical equipment, backup power sources, unmanned transfer systems, solar storage systems, and energy harvesting solutions.

This product was exhibited at Battery Japan (6th International Rechargeable Battery Expo), which was held at Tokyo Big Sight from February 25 to 27, 2015.

LICs are large-capacity capacitors (a type of power storage device), and are characterized by high output density, high energy density, and high voltage. Notably, the ULTIMO® series is the ultra-low resistance type, and is characterized by outstandingly low energy loss in the charge-discharge cycle compared with secondary batteries. The ULTIMO® series provides high reliability and safety as well as long-term durability, achieving more than one million charge-discharge cycles (equivalent to or higher than electric double-layer capacitors [EDLCs]). The products are increasingly used in applications including quick charge-discharge, energy recovery, peak power assistance, and power leveling solutions. Recently, they have been used in renewable energy-related equipment (e.g. wind power generation, photovoltaic generation), various industrial equipment (e.g. instantaneous voltage drop compensators), medical equipment and unmanned transfer systems, as well as large construction machines (e.g. hybrid power shovels), hybrid buses, and other mobile applications.

LICs have a higher energy density than EDLCs, contributing to a reduction in installation space and weight. The new product helps achieve further reductions in space and weight.



In November 2008, JM Energy started to operate its mass production line for the world's first large-capacity LIC. The company markets the ULTIMO[®] series products globally: light and thin laminate type cells (production capacity: 300,000 cells/year), highly rigid flat prismatic type cells (production capacity: 120,000 cells/year) and module solutions (connecting cells) for high voltage applications. The products have been increasingly used in a range of areas, from low-voltage stationary applications to high-voltage mobile applications. As the demand is expected to grow rapidly, JM Energy has just completed the construction of a mass production plant to manufacture flat prismatic type cells (production capacity: 3 million cells/year) at Yamanashi HQ Plant, thereby enhancing the supply system and establishing a cost advantage in the market. Production is scheduled to begin this summer.

With JM Energy Corporation serving as the core company, the JSR Group remains committed to ensuring coordination with affiliated companies in Europe and the U.S. to offer the ULTIMO[®] series (key devices for reducing power consumption and effectively using energy) in various application fields.

<Overview of the new product ULTIMO[®] CLE2300S1B>

Type: High energy density type laminate type cell

Dimensions (W × H × T in mm): 180 × 126 × 5.2 (excl. terminals)

Capacity: 2300 farads

Weight energy density: 28 Wh/kg



<Reference: Overview of the conventional laminate type cell ULTIMO[®] CLQ1100S1A>

Dimensions (W × H × T in mm): 180 × 126 × 5.5 (excluding terminals)

Capacity: 1100 farads

Weight energy density: 10 Wh/kg