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Sojitz Corporation

Sojitz Invests in ACT, Manufacturer of Lithium-Ion Capacitors

—Tie-Up to Manufacture and Sell Environmentally-friendly Premlis[®] Lithium-Ion Capacitors—

Sojitz Corporation and Taiyo Yuden Co., Ltd. made an investment in Advanced Capacitor Technologies, Inc. (ACT : head office in Akishima-shi, Tokyo; Fumiyasu Matsuura, President) through the allocation of new shares to a third party. ACT, Sojitz and Taiyo Yuden will tie-up in manufacturing and selling Premlis[®] lithium-ion capacitors. Demand for such capacitors is expected to increase for use in photovoltaic power generation and as a replacement for lead acid batteries.

Sojitz and Taiyo Yuden each invested 300 million yen in ACT, and JEOL Ltd. and several venture capital firms also made investments, providing ACT with a total of 1.17 billion yen, bringing ACT's capital to 1.22 billion yen. JEOL owns 51.6% of ACT, and Sojitz and Taiyo Yuden each own 11.5%.

ACT will use the capital it procures from the investments to expand its Premlis[®] manufacturing facilities and create a production structure with a capacity of 20,000 cells per month by the summer of 2010. Sojitz will assign an officer to ACT to support its management and will develop markets and sales channels by conducting sales activities for Premlis[®] in Japan and abroad. Taiyo Yuden will support the creation of mass production structures for Premlis[®].



【Premlis[®], lithium-ion capacitor manufactured by ACT】

Lithium-ion capacitors are a new type of electrical storage device that offers the advantages of secondary batteries such as lithium-ion and lead acid batteries and of electrical double-layer capacitors, which can charge and discharge very rapidly. They feature long cycle lives, outstanding charging and discharging efficiency, and the ability to charge in a very short time. In addition, they are extremely safe and pose no risk of fire or explosion. Lithium-ion capacitors contain no hazardous substances, making them environmentally-friendly electrical storage devices. ACT's Premlis[®] capacitors boast world-leading energy density (25 Wh/kg) and are smaller and lighter than earlier electric double-layer capacitors.

Lithium-ion capacitors are characterized by an ability to charge with even weak current, and as a result, demand is expected to increase substantially in environmentally-friendly fields such as solar power generation. The use of lithium-ion capacitors as independent power supplies in combination with photovoltaic panels is being considered for a wide range of devices such as street lights, surveillance cameras, and security sensors. It is also believed that the capacitors can replace lead acid batteries in material handling systems, auxiliary power supplies in construction and heavy equipment, and uninterrupted power supplies (UPS). Automotive applications such as idling stop systems and backup power supply for electronic control systems also hold promise for the future, and it is projected that the market for lithium-ion capacitors will expand to 100 billion yen in 2015.

ACT, Sojitz, and Taiyo Yuden will use this tie-up to mass produce lithium-ion capacitors and develop new markets, and have set a sales target of 10 billion yen annually by 2014.

Features of Premlis[®] Lithium-Ion Capacitors

Cycle life	Long (approximately 100,000 cycles or 10 years)
Charging and discharging time	Extremely short (several seconds to tens of minutes)
Charging and discharging efficiency	High (can be charged even with extremely weak current)
Safety	High (no risk of fire or explosion)
Operating temperature range	Wide (-30°C - 60°C; capacitors withstand even harsh use environments)

Environmental performance	Excellent (no hazardous materials such as heavy metals or acids)
Maintenance	No maintenance is required within the standard Cycle Life

Lithium-Ion Capacitor Applications

Field	Solar power	Industrial & construction	Automobiles
Applications	Solar street lights Solar signs Security sensors	Emergency power supply Energy storage of re-generated energy from cranes and other equipment Material handling systems	Onboard electronics (ECU) Idling stop systems



【LED lighting combined with photovoltaic panels】

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