

# **Solid State Thin Film Battery, Printed Battery, and Smarter Computing Market Shares, Strategies, and Forecasts, Worldwide, 2012 to 2018**

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## **Abstracts**

WinterGreen Research announces that it has a new study on Solid State Thin Film Battery, Printed Battery, and Smarter Computing Market Shares and Forecasts, Worldwide, 2012-2018. The 2012 study has 530 pages, 175 tables and figures.

Thin film battery market driving forces include creating business inflection by delivering technology that supports entirely new capabilities. Sensor networks are creating demand for thin film solid state devices. Vendors doubled revenue and almost tripled production volume from first quarter. Multiple customers are moving into production with innovative products after successful trials. A strong business pipeline has emerged with customer activity in all target markets. Vendors report full-year revenue more than doubled in 2011.

Infinite Power Solutions IPS has moved beyond R&D and commenced operations on the world's first high-volume production line for TFBs in Littleton, Colorado. Infinite Power Solutions, Inc. (IPS), a privately-held venture backed technology company near Denver, Colorado, is the global leader in developing and manufacturing solid-state, rechargeable thin-film batteries (TFBs) for micro-electronics applications. Thin film battery technology technical approaches differ.

Infinite Power Solutions IPS ORNL thin-film battery technology is achieved by developing nitride and sub-nitride Lithium-ion thin-film anodes as well as the 'Li-free' battery, which combines the most desirable properties of a Li-ion and a Li battery.

Smarter computing is part of an IT opportunity, brought by the availability of many, many devices that measure what is going on in the world. These devices are made

possible by the availability of small, inexpensive, reliable batteries. Smarter computing is related to achieving a more instrumented, interconnected and intelligent infrastructure. Blue Spark Technologies is the market leader in printed batteries with 46% share. It provides RFID and related smart card printed battery units.

The need to capture and analyze increasing amounts of data, deliver results to more users, and respond faster across all devices, without a corresponding increase in budget is a function of better management and better systems. A large amount of IT resources and about 70% of the overall IT budget is impacted by efficiencies that can be brought by smarter computing. As applications continue to increase in complexity, and IT resources become scarce, organizations are in need of simple technologies that can help them reduce costs, quicken time to market and enhance their levels of customer service.

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Electric distribution substations are used to transform power from transmission voltage to the lower voltage used for local distribution. These provide a center for local energy storage as renewable energy creates a need for local storage and local distribution of intermittent energy. These substations are also expected to implement hydrogen based fuel cells that convert energy to hydrogen to store it.

Smart buildings save 30% of energy use. Smarter cities use sensors in the networks in the roads, traffic lights, light poles, police surveillance work, fire detection work, and airports.

Solid state thin film battery market segments include RFID, medical, remote sensor, and electric vehicle batteries. Forecasts differ by segment depending on the relative maturity of the technology for each segment. The smaller batteries are beginning to be shipped in production quantities. The larger electric vehicle EV batteries await further technology development.

Solid State thin film battery markets at \$137.6 million in 2011 are anticipated to reach \$3.9 billion in 2018. Market growth comes in large part from development of a new market for solar and renewable energy as a storage device for these intermittent power sources. Stationary fuel cells will complement the solid state batteries by providing campus and substation storage of renewable energy as hydrogen. Electric vehicles promise to use solid state batteries to be a significant source of renewable solar and wind energy storage as well as personal transport.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Global Information Info Shop, Market Research.com, Research and Markets, Bloomberg, and Thompson Financial.

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