



Infinite Power Solutions®

# PRESS RELEASE

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### **INFINITE POWER SOLUTIONS LAUNCHES ITS THINERGY™ MICRO-ENERGY CELL PRODUCT FAMILY**

#### **Unveils Performance Specifications That Far Exceed Competing Micro-Battery Technologies**

**Littleton, Colo., June 9, 2009**—Infinite Power Solutions, Inc. (IPS), a maker of innovative solid-state, rechargeable, thin-film micro-energy storage devices, today formally unveiled its THINERGY™ family of micro-energy cell (MEC) products and accompanying technical specifications. THINERGY MECs are the world's most powerful batteries for their size and outperform all other micro-batteries (primary and rechargeable), including Lithium (Li) coin cells, printed batteries and other thin-film batteries (TFBs). Extremely small and powerful, these ultra-thin MECs are also reliable, safe and eco-friendly. A truly transformational technology, MECs change how the power source for micro-electronic systems will be designed now and in the future.

IPS reports that its THINERGY MECs, when recharged over their lifetime, provide tens of Watt-hours of energy, equivalent to or more than traditional primary cells that are hundreds of times larger in total volume. Combined with ambient energy harvesting, THINERGY MECs deliver perpetual power to wireless sensor nodes and other micro-systems for more than a decade of maintenance-free operation. As a result, these unique products represent a new class of electronic component that bridges the performance gap between batteries and supercapacitors. In fact, the unprecedented discharge current demonstrated by THINERGY MECs makes it the first technology suitable for replacing supercapacitors in many applications.

Today, IPS is announcing four standard products within its THINERGY MEC family. Two products are available now, the THINERGY MEC101 and THINERGY MEC120, with capacity options up to 1.0mAh and 0.4mAh, respectively. The other two products (one larger and one smaller in both size and capacity) will be available later this year. Key features include:

- Ultra-thin and flexible package fits and conforms where other solutions cannot
- High-power discharge eliminates need for external boost capacitors for high-pulse currents

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- Stackable for increased energy and power without increasing footprint
- Can be deeply embedded and laminated within PCBs or other materials
- Lasts the lifetime of the system for zero maintenance or replacement cost
- Solderable tabs on metal foil package simplify mounting and electrical connections
- Superior charge acceptance, even at charge currents of a few hundred nanoAmps
- Supports more recharge cycles than any other rechargeable battery
- Rapid recharge in seconds to minutes, depending on the state of charge
- All solid-state chemistry with no liquid or polymer (organic) electrolyte used
- Ultra-low leakage with less than 1% reversible charge loss per year
- Extremely broad operating temperature range beyond most other batteries
- Safe and RoHS-compliant; contains no heavy metal or toxic chemicals

Beyond some of the features listed above, IPS has published the following table of key specifications and performance metrics surrounding its THINERGY MEC family. This matrix demonstrates that THINERGY MECs truly outperform all other rechargeable micro-batteries across all aspects of operations, including internal resistance, current density, cycle life, speed of recharge, charge efficiency, service life and self discharge current.

<b>THINERGY™ Family of Solid-State, Rechargeable MEC Standard Products</b>	<b>Units</b>	<b>MEC125</b>	<b>MEC120</b>	<b>MEC101</b>	<b>MEC102</b>
Open Circuit Voltage (OCV)	V	4.1	4.1	4.1	4.1
Package Size/Footprint	mm	12.7 x 12.7	25.4 x 12.7	25.4 x 25.4	25.4 x 50.8
Package Thickness	mm	0.17	0.17	0.17	0.17
Typical Internal Resistance	Ohms	200	100	35	15
Maximum Continuous Current	mA	7.5	15	40	100
Capacity Options Available Up To:	mAh	0.2	0.4	1.0	2.5
Equivalent Energy in Joules	J	3	6	14	36
Typical Recharge Time to 90% (at 4.1V CV)	Min.	10	10	10	10
Operating Temperature Range	°C	-40 to +85	-40 to +85	-40 to +85	-40 to +85
Operating/Shelf Life	Years	>10	>10	>10	>10
Cycle Life to 80% Capacity (100% DOD)		>10,000	>10,000	>10,000	>10,000
Charge Loss/Year		<1%	<1%	<1%	<1%
Availability		Q4 2009	Now	Now	Q4 2009

All performance metrics measured at 25°C. Capacity options are available for each cell type.

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**IPS UNVEILS ITS THINERGY MICRO-ENERGY CELL PRODUCT FAMILY & SPECIFICATIONS.....PAGE 3 OF 3**

IPS conservatively specifies its THINERGY MEC cycle life to 10,000 cycles at 100-percent depth of discharge (DOD) and 80-percent capacity retention. Although testing is ongoing, IPS expects its devices to achieve more than 20,000 recharge cycles with 100-percent DOD and more than 100,000 recharge cycles with shallow cycling to 50-percent DOD. In comparison, other competing solid-state, thin-film batteries specify only 1,000 cycles at 50-percent DOD on cells with far less capacity, while delivering only a fraction of the performance and lifetime of a THINERGY MEC.

THINERGY MECs are available now to qualified customers in production quantities and can be ordered directly from IPS' Colorado-based manufacturing factory, which is the world's first and only volume manufacturing facility for solid-state thin-film batteries. Pricing is available upon request.

IPS will be showcasing its THINERGY MEC technology and related products at its booth, #1031, during the Sensors Expo & Conference, which is being held this week (June 8-10, 2009) at the Donald E. Stephens Convention Center in Rosemont, Ill. Editors interested in meeting with IPS executives to learn more about IPS and its transformational energy storage technology can contact Marie Labrie at [mlabrie@mcapr.com](mailto:mlabrie@mcapr.com).

**Note to Editors:** Photos of IPS' THINERGY MEC family are available upon request.

***About Infinite Power Solutions, Inc.***

Infinite Power Solutions, Inc. (IPS)—a U.S.-based, clean-technology company—is the global leader in developing, marketing and manufacturing solid-state, rechargeable thin-film micro-energy storage devices for a variety of micro-electronic applications. Founded in 2001, IPS is privately held with corporate headquarters and manufacturing in Littleton, Colo. The company manufactures its revolutionary THINERGY™ family of thin-film micro-energy cell (MEC) products at its new state-of-the-art facility, which is the world's first volume manufacturing facility for solid-state, thin-film batteries. The company's energy storage products, with unrivalled performance and service life, uniquely enable ambient energy harvesting solutions to create miniature, autonomous, perpetual power supplies to address the growing demand among customers in the wireless sensor, active RFID, powered smart card, medical device, consumer electronics, automotive and civil/military/aerospace markets. Additional information about IPS is available at [www.InfinitePowerSolutions.com](http://www.InfinitePowerSolutions.com).

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