

Commercialization of Solid-State, Rechargeable Thin-Film Micro Energy Cells™ (TFMEC™)

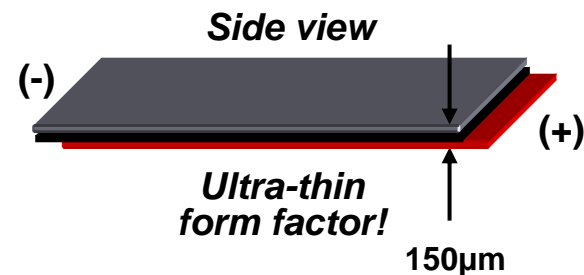
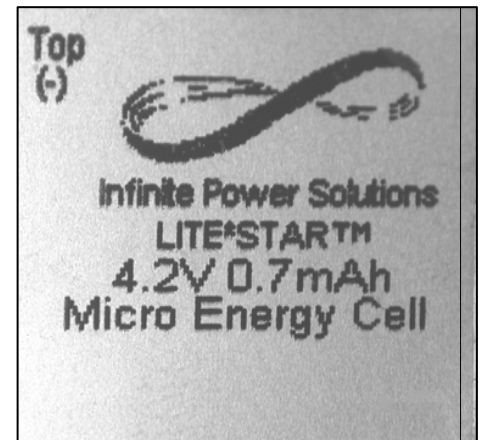


Tim Bradow
VP Business Development
November 7, 2007

IPS Thin-Film Micro Energy Cells TFMEC™

Disruptive Technology/Industry Changing

- Ultra-Thin
- Flexible
- Solid-State
- Rapid Recharge
- Safe
- High Discharge Rate (Powerful)
- Volume Manufacturable
- Scalable
- Stackable
- Integration Capable



Human Hair
(50-100µm)

Only available from IPS!

IPS Company History/Overview

- Incorporated in 2001, 26-full time employees
- Privately-held, VC-backed
- US\$50 Million invested to date
 - Includes US\$35.7 Million Series A – Closed August, '06



Two Production Facilities In Denver Metro-Area

- **R&D Pilot Production Line - Golden, CO**
 - Complete TFMEC pilot line
 - Producing Engineering Samples (ES)

- **World's First High Volume TFMEC Mfg Facility - Littleton, CO**
 - 36,000 ft² mfg & office space
 - Volume production begins 2008



IPS R&D Facility - Golden, CO



IPS Volume Mfg Facility - Littleton, CO

Market Drivers

Microelectronics Trend Demands IPS TFMECs

- Microelectronic systems continue to shrink
- Conventional battery technologies don't scale sufficiently for miniaturized systems
- Result: Explosive demand for smaller, rechargeable, & safe micro energy storage devices
- IPS Solution:

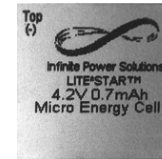
The LiTE★STAR™ Family of Thin-Film Micro Energy Cells



IPS TFMEC Integration Roadmap

■ Discrete family of TFMECs

- Now sampling to Tier 1 customers
- Will be in volume production in 1Q08
- Patents issued & pending



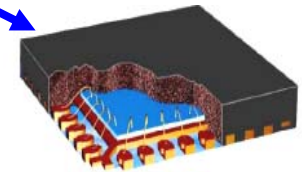
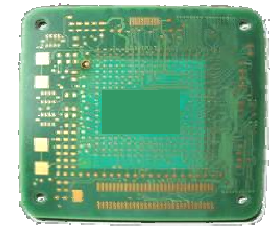
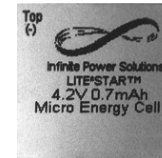
LS101



LS120

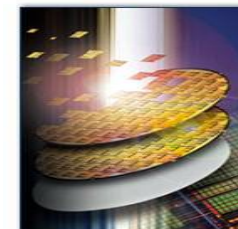
■ Embedded into PCBs & IC packaging

- Rigid or Flex PCBs (Proven with Partners)
 - Withstands PCB & Smart Card lamination processes
- Patents pending



■ Integrated with Silicon IC

- Demonstrated feasibility
- Patents pending



Each phase provides solutions to HIGH-VOLUME vertical market applications

High Volume Applications for Discrete TFMECs

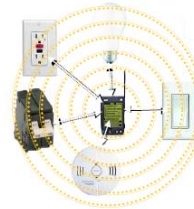
- **Semi-Active RFID**

- Long reach asset tracking



- **Wireless Sensors**

- ZigBee, Wi-Fi, other



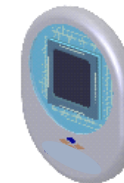
- **Smart Cards**

- Fingerprint Authentication
- Password generation



- **Medical Sensors**

- Topical & Implantable



Projected TFMEC Serviceable Market (SAM) >1B units by 2012

IPS TFMEC Differentiators

Barriers to the competition

- Proven technology with significant performance advantages
- Scalable to high volume manufacturing
- Market leadership position
- IPS' CTO is the thin film battery co-inventor from ORNL
- Created competitive barriers with broad & growing IP portfolio
 - Far beyond that licensed from ORNL

Launched Disruptive/“Game Changing” Technology (not just R&D devices)

- Sampling initial LiTE★STAR™ product family now!
- Moving to volume production in 2008
- Developing follow-on product families with higher capacities and energy densities
- Deeply engaged with tier 1 customers with high volume applications
- Leading the industry in moving TFMECs into volume production



LiTE★STAR™

Solid-State Rechargeable Thin-Film Micro Energy Cells

“A Different Way of Thinking About Batteries”

Tim Bradow – VP Business Development

Office: 303-749-4744

Mobile: 612-817-0379