

2009 INVESTOR DAY







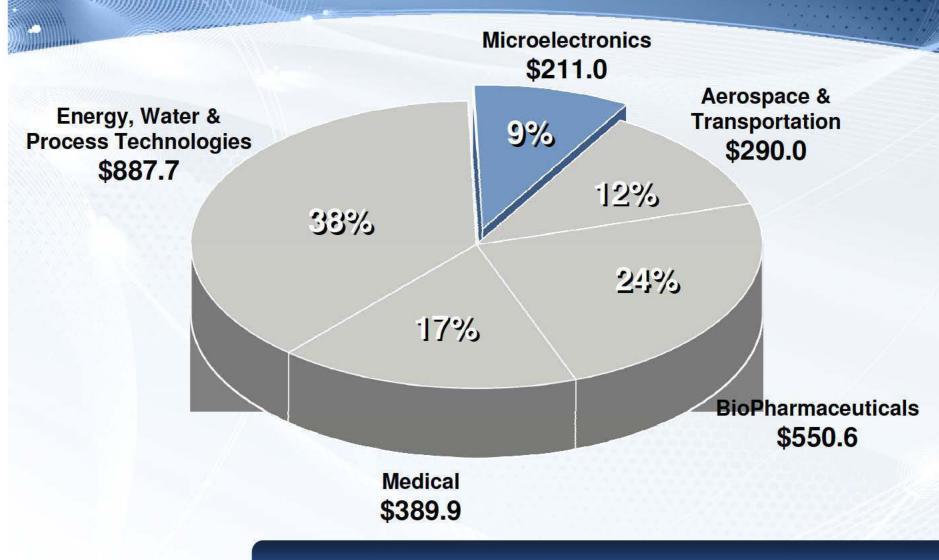


Microelectronics

Steven Chisolm Senior Vice President December 17, 2009

Sustainable, Profitable Growth

Microelectronics Sales



(Dollars in Millions)

Microelectronics Revenue Potential = \$1.3B



We provide solutions to the following end markets:

Semiconductors

- Photolithography
- CMP
- High-purity water
- Chemical dispense
- High-purity gases

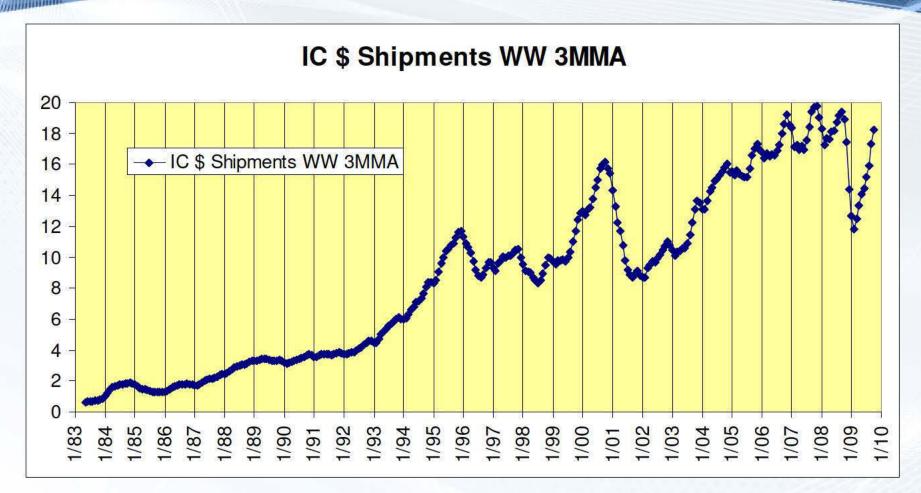
▲ Consumer electronics

- Displays
- Data storage
- Inkjet
- ▲ Photovoltaic (Solar cells)
- ▲ Electronic components





Microelectronics: Semiconductor Cycle



(Dollars in Billions)

Source: Advanced Forecasting, Inc.



In Fiscal Year 2009...

- Semiconductor industry downturn was exacerbated by the economy
- FAB utilization and capital spending was at record lows
- Demand was affected by corporate and consumer
- ▲ Approximately 31 FABs closed in 2009*
- Consolidation of LCD manufacturers



* Source: Semiconductor Equipment & Materials International (SEMI)



For the road ahead, we see...

- Digital convergence and renewed consumer confidence
- ▲ Smart phones drives all submarkets
- The human condition will increasingly rely on electronics
- ▲ FAB construction spending expected to increase by 70%
- ▲ Equipment spending expected to increase by 65%
- ▲ Emerging middle class in China





Microelectronics Market Drivers

- ▲ First wave Personal computing
- ▲ Second wave Digital desktop
- ▲ Third wave Digital convergence
- Primary drivers
 - Communications, pervasive computing, gaming, storage, and social connectivity are all in one device
 - Devices smaller IC line widths narrowing driving demand for finer filtration
 - Displays
 - Incorporate OLEDS, giving rise to new purification opportunities
 - Storage
 - Increasing demand for thin film rigid disk and flash memory storage



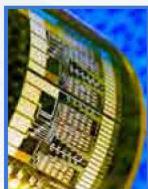


Leveraging expertise to penetrate new markets

- Printed electronics market has huge potential
- Circuits, displays, sensors are just a few applications
- Pall lithography & inkjet expertise are enablers
- Flexible electronics (example) will employ inkjet and lithography
- Pall Microelectronics has strong positions in the market









"High Bright" LEDs save energy

- Architectural lighting
- Automotive lighting
- ▲ LCD TV, Laptops, Desktops
- ▲ Semiconductor manufacturing process
- ▲ Filtration / purification are process enablers





Expected growth of 15% in 2009, and 40-50% in subsequent years when the economy recovers





Helping make solar production Green

- Production of crystalline silicon wafers
- Filtration of reactor feed gas
- Chemical filtration for crystalline solar cells
- Purification of gaseous molecular contaminants
- Process water and silicon reclamation







Solar manufacturing environmental sustainability

- Silicon ingot shaping uses large amounts of water
- Water quality influences overall process
- DI water is expensive and must be recycled
- ▲ Pall reclaim systems recover 95% of the process water







Long-term market drivers

- Environmental
- ▲ Energy usage
- Water conservation
- ▲ Increasing FAB utilization
- ▲ Electronic device complexity
- ▲ LCD / LED display adoption
- ▲ Pervasive computing
- ▲ Automotive electronic content



