



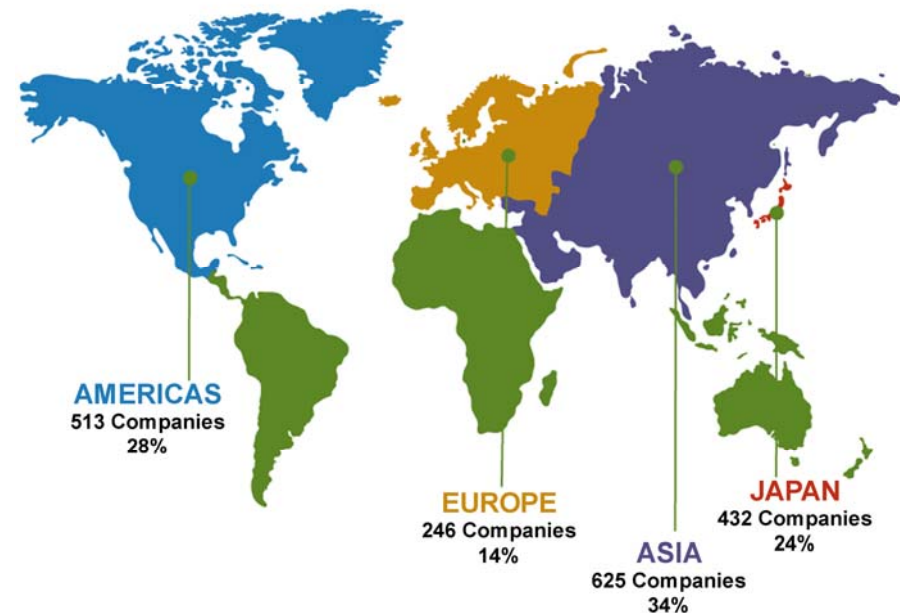
Worldwide PV Equipment Bookings and Billings Market Statistics Program

SEMI
July 2011

Introduction to SEMI and PV Group

- SEMI
 - 40-year old global industry association supporting ~ 1,800 member companies worldwide
 - SEMI Member Companies participate in the global manufacturing supply chains of Semiconductor, Photovoltaic, Flat Panel Display, Nanotechnology, MEMS, and LED / SSL
- PV Group
 - Established in 2008, PV Group represents currently about 500 companies worldwide actively engaged in PV manufacturing, from feedstock/starting materials to module assembly

Member Companies by Region



Source: SEMI



Key Global Initiatives

- Expositions and Conferences
- Industry Standards
- Industry Research & Statistics
- Public Policy and Industry Advocacy
- Industry Collaboration and Technology Roadmap Development
- EH&S/Sustainability

Source: SEMI



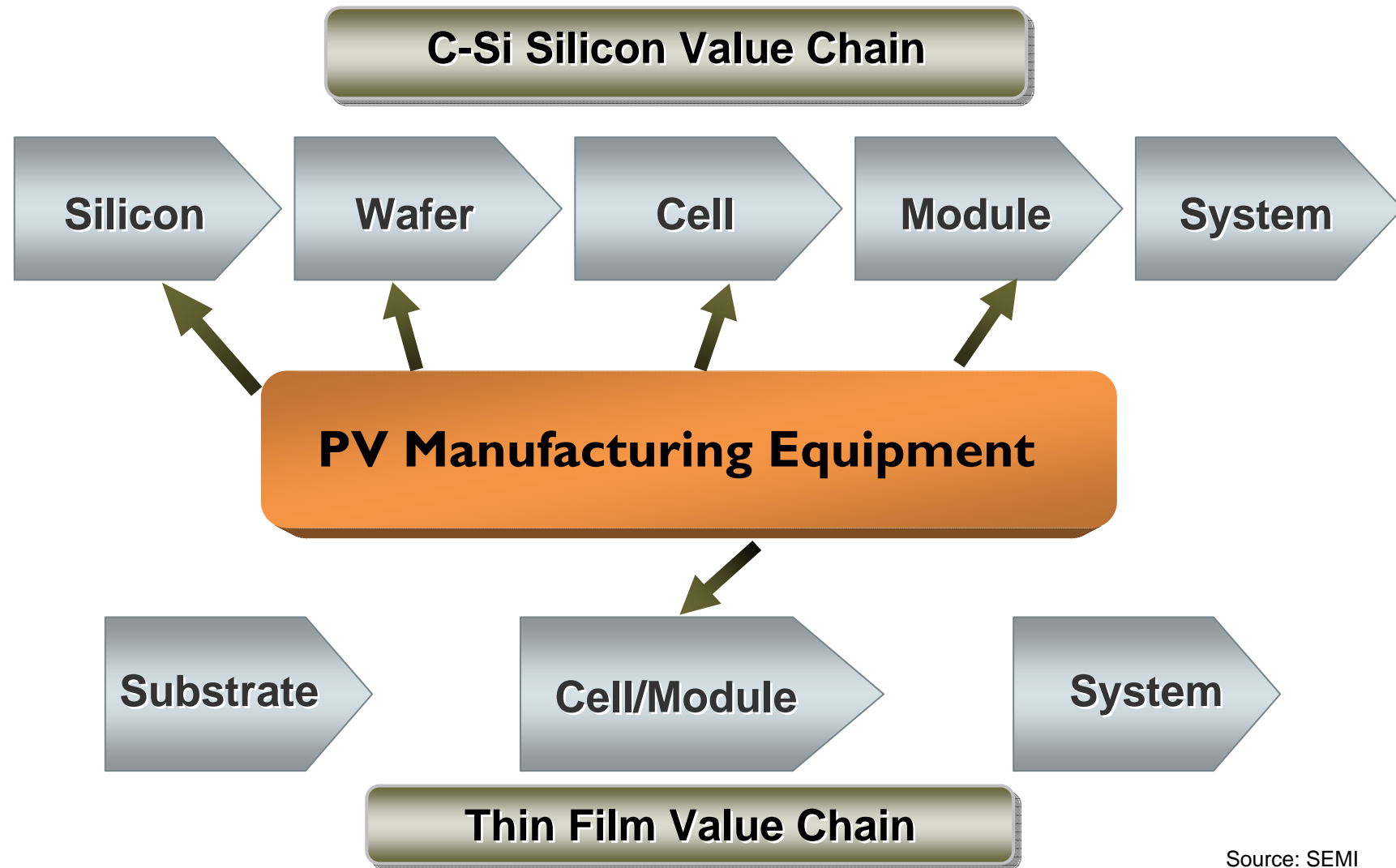
SEMI Board of Directors

- SEMI is governed by an international Board of Directors
- Five board members sit on the PV Standing Committee
 - M. Splinter, President & CEO, Applied Materials – Committee Chair
 - S. Kohyama, President & CEO, Covalent Materials Corporation
 - E. Weber, Director, Fraunhofer-Institute for Solar Energy Systems
 - Zhengrong Shi, Founder, Chairman & CEO, Suntech Power Holdings
 - T. Higashi, Chairman & CEO, Tokyo Electron Ltd.

Source: SEMI



Equipment Coverage



Source: SEMI

PV Equipment Book to Bill Ratio

- The book-to-bill ratio is most commonly used in the semiconductor equipment industry, and it is applicable to any industry that takes orders significantly in advance of billings
- Photovoltaic manufacturing equipment industry embodies such characteristics
- A book-to-bill ratio can serve as an important indicator for strategic planning and forecasting in the photovoltaic and related industries:
 - One indicates stability
 - Greater than one indicates growth
 - Less than one indicates decline

Source: SEMI



Worldwide PV Equipment Data Program

- Quarterly worldwide bookings and billings data collection program for PV manufacturing equipment
- Data is based on direct inputs from PV equipment manufacturers worldwide – truly global coverage
- SEMI and the German Engineering Federation (VDMA) collaborate on data collection
- Quarterly reports provide equipment bookings and billings data by region, by supply chain segment, and by equipment type

Source: SEMI



Reporting Categories

- **Manufacturing Supply Chain Segments**

- Poly/Ingot/Wafer
- C-Si Cell
- C-Si Module
- Thin Film

- **Equipment Types**

- Component
- Single Equipment
- Equipment Line

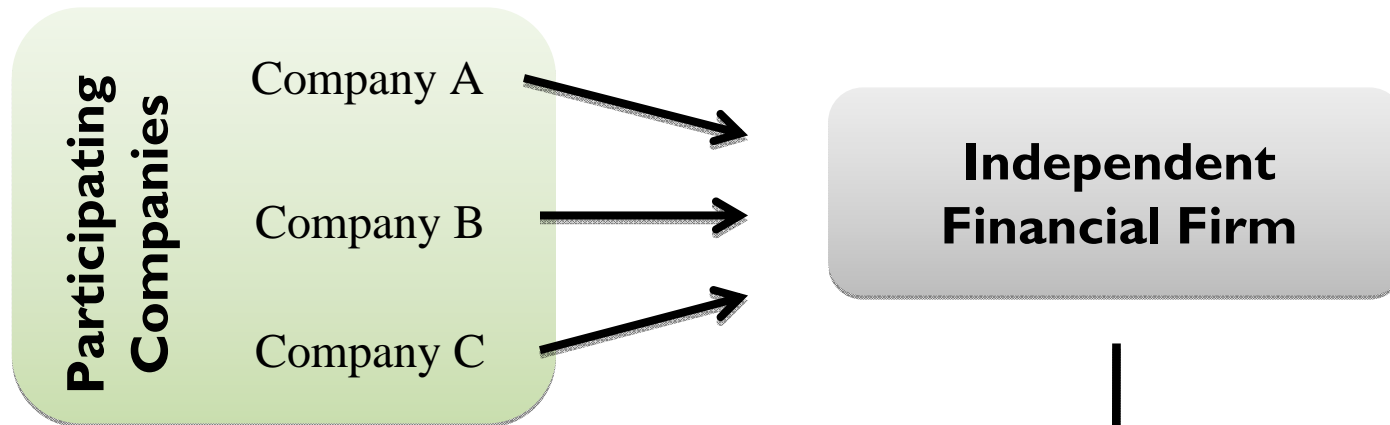
- **Market Regions**

- Americas
- Europe
- China
- Taiwan
- Japan
- Korea
- Rest of Asia
- Rest of World

Source: SEMI

Methodology for Data Collection

1. Proprietary company data input directly to third party financial firm
2. Data aggregated and company confidentiality ensured



4. Quarterly report released

3. SEMI compiles report

Source: SEMI

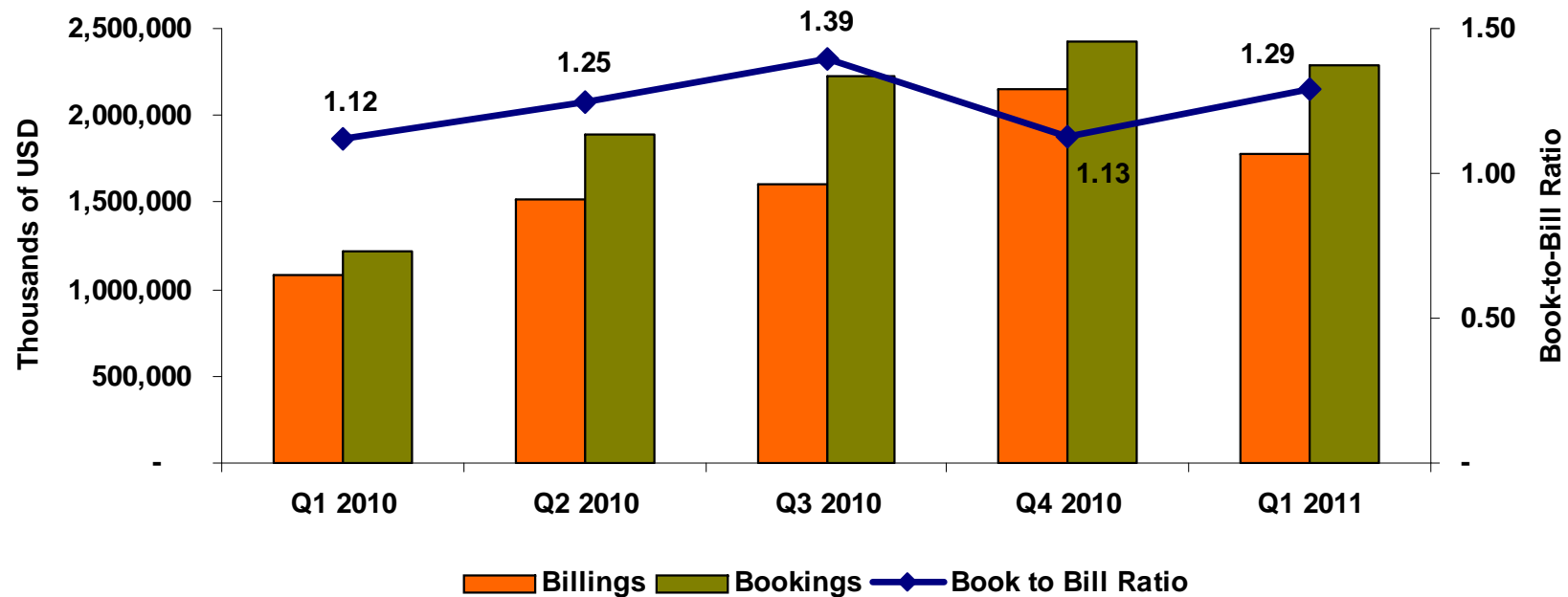
Quarterly Release

- Quarterly PV Equipment Book to Bill Report (Excel)
- Market analysis based on the most recent quarterly data as well as historical data (PPT)
- Bookings and billings database with data from the start of the program (Excel pivot table)

Source: SEMI

Worldwide Bookings and Billings

Worldwide PV Manufacturing Equipment Bookings, Billings, and Book-to-Bill Ratio

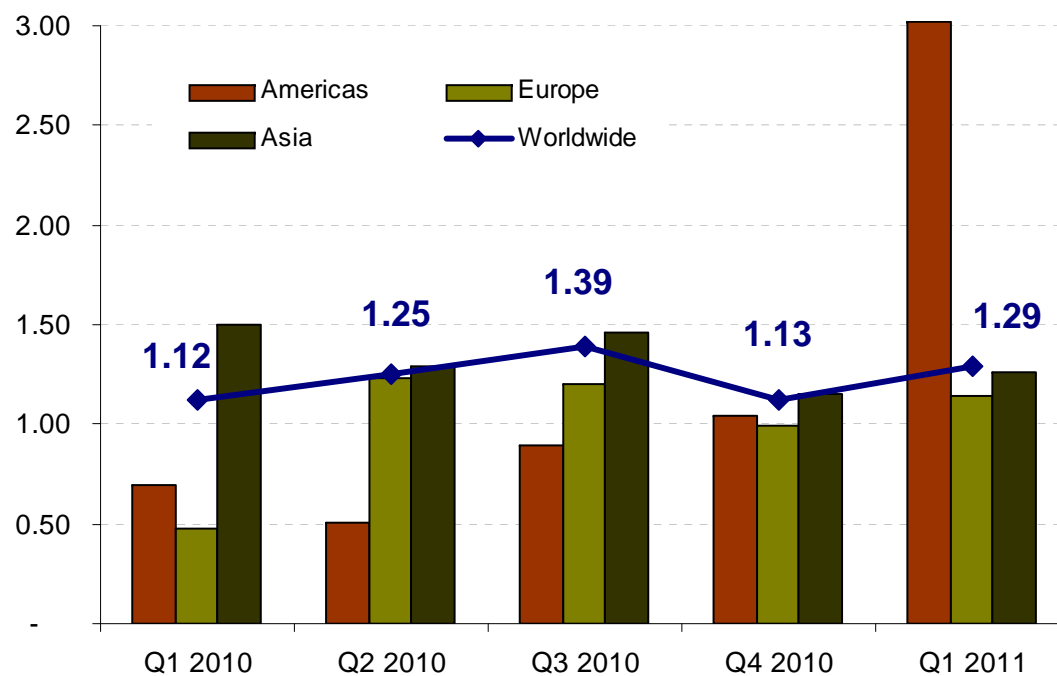


Source: SEMI and VDMA



Book-to-Bill Ratio by Region

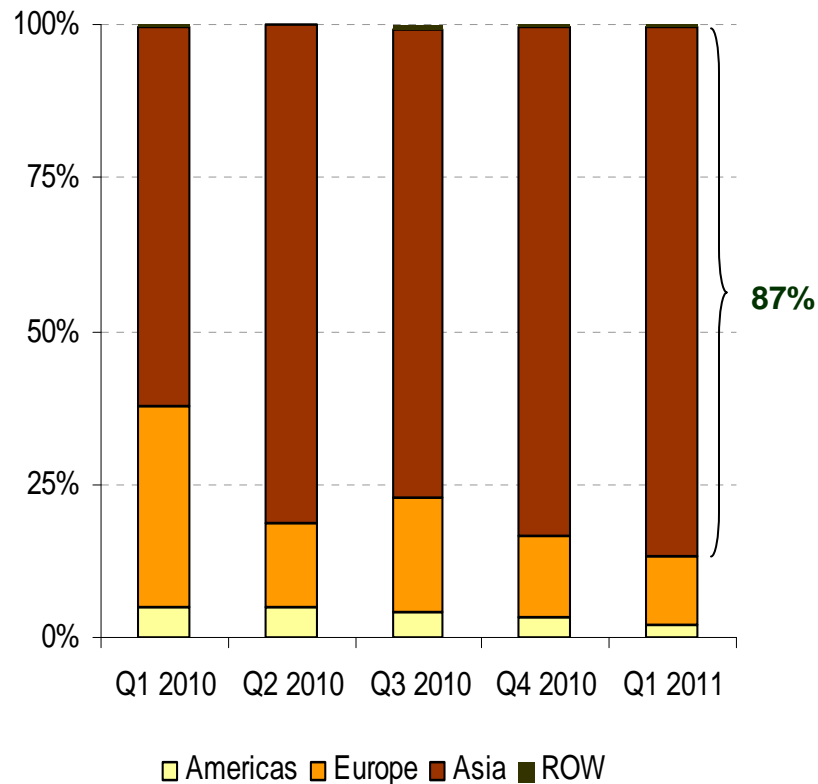
	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q1 2011
Americas	0.70	0.50	0.89	1.04	3.02
Europe	0.47	1.23	1.20	0.99	1.14
Asia	1.50	1.29	1.46	1.15	1.26
ROW	0.59	5.19	1.82	2.19	1.21
Worldwide	1.12	1.25	1.39	1.13	1.29



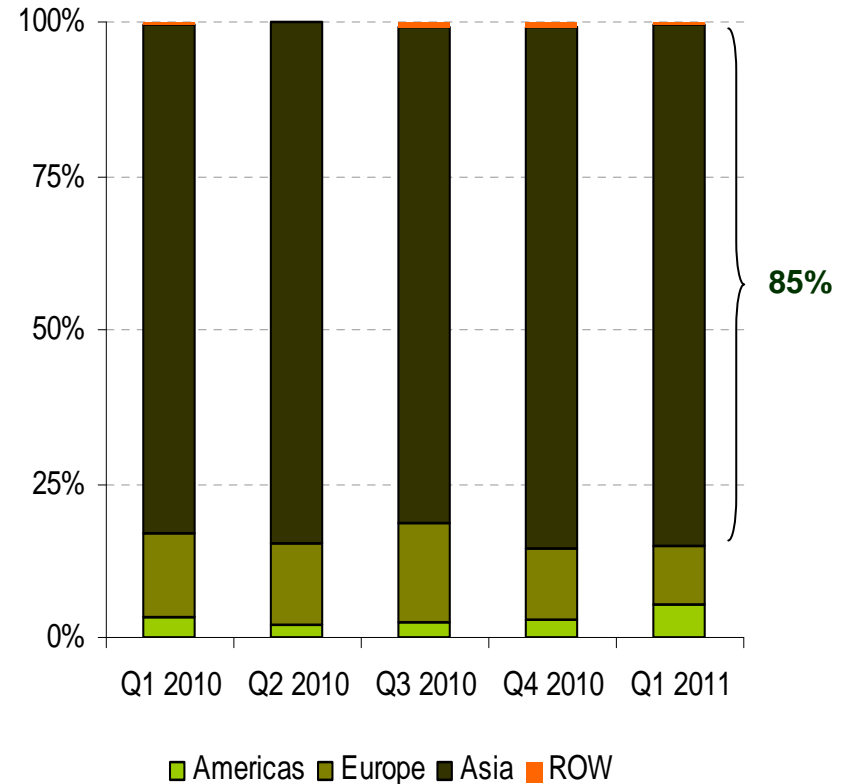
Source: SEMI and VDMA

Bookings and Billings By Region

Regional Distribution of Billings



Regional Distribution of Bookings



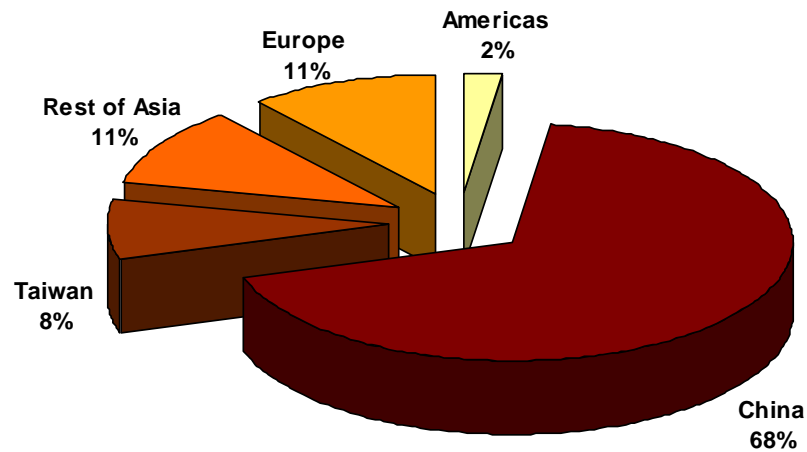
Source: SEMI and VDMA



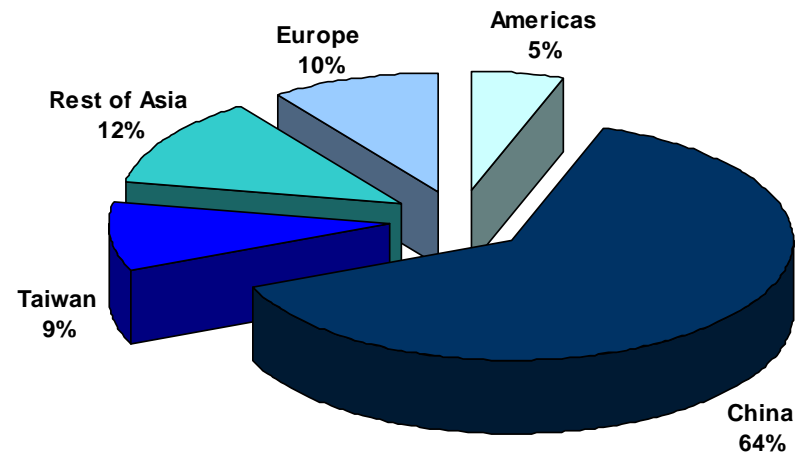
Billings and Bookings by Region Q1 2011



1Q 2011 Billings



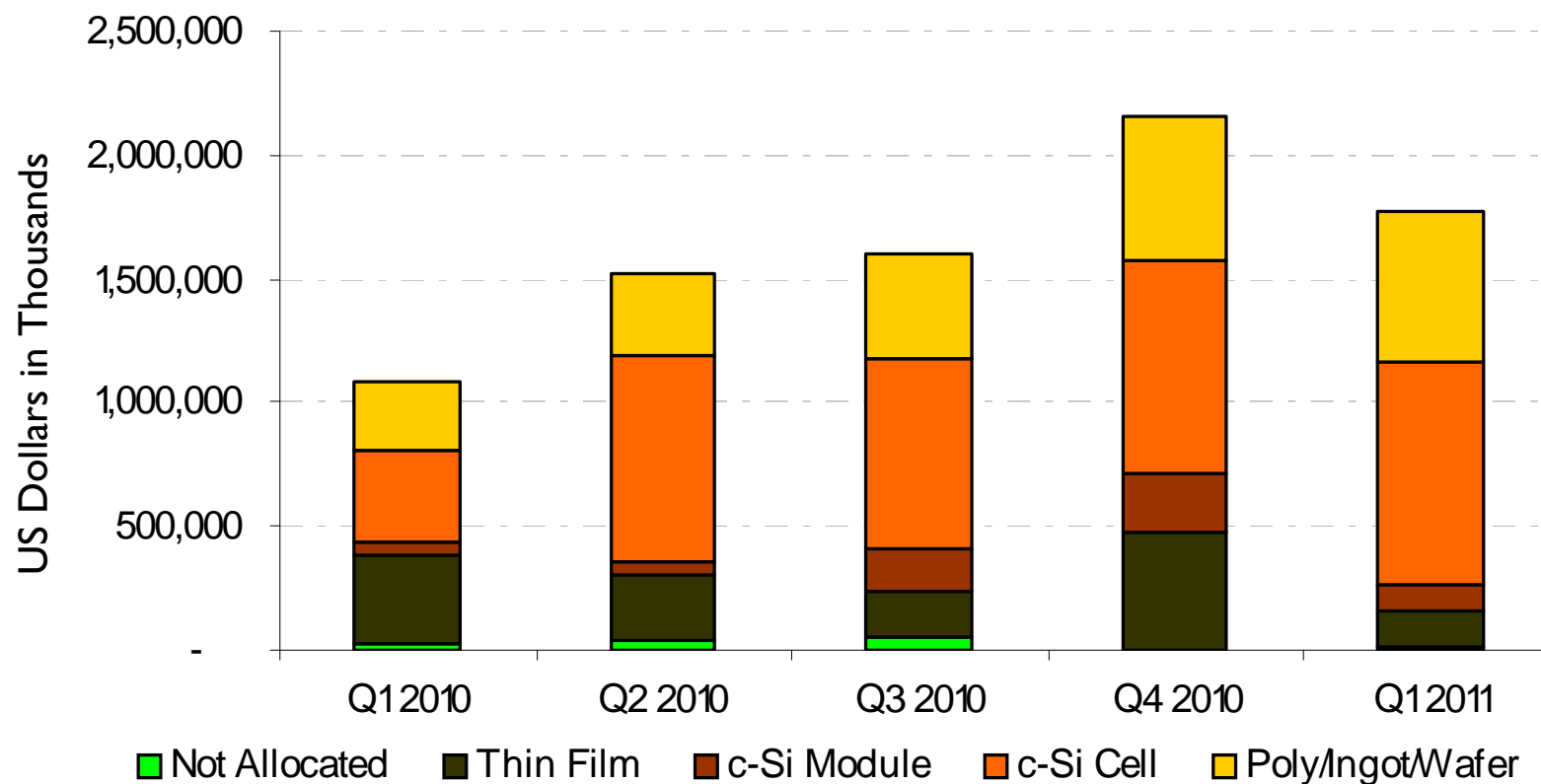
1Q 2011 Bookings



Source: SEMI and VDMA



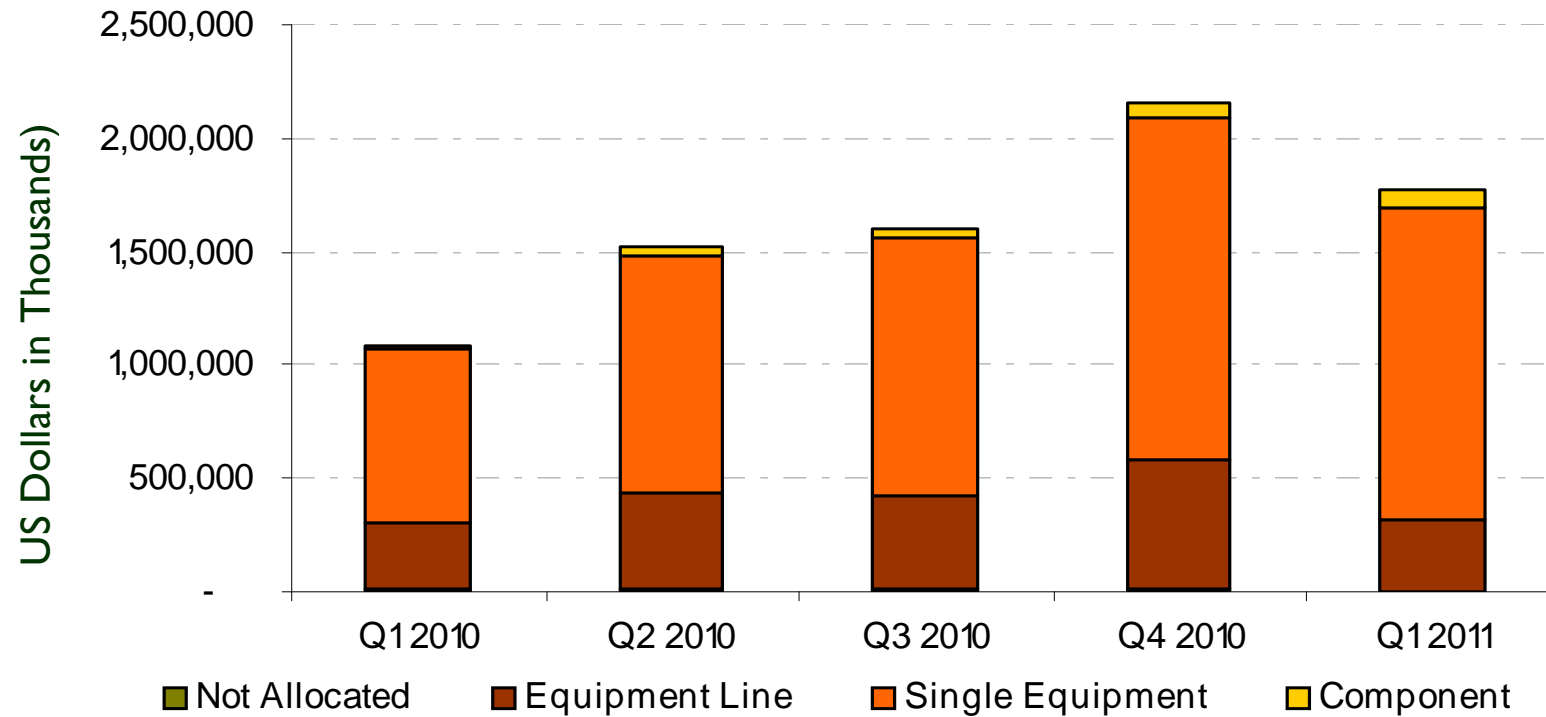
Billings by Supply Chain Segment



Source: SEMI and VDMA



Billings by Equipment Type



Source: SEMI and VDMA



Contact

**If you are interested in participating in the program,
please contact:**

Melody Song

SEMI

408.943.7949

msong@semi.org

www.semi.org

www.pvgroup.org