standards

SEMI® International Standards—Connect to make things work together

SEMI Standards play a critical role in the success and growth of the global microelectronics industry. Standards make equipment, fabs, and the industry fit together and work together by ensuring interoperability of equipment and components, material conformance, and safe and sustainable manufacturing practices and facilities. From sand to system, SEMI Standards touch and influence every step in the production of today's microelectronics.

The SEMI International Standards program fosters consensus-based solutions to manufacturing technology challenges and drives cross-industry collaboration to develop and advance globally recognized standards, specifications, and guidelines. More than 900 SEMI Standards, 1,800 participating companies, and 4,500 volunteers keep fabs and our global industry moving by making thousands of parts and processes work better together.

GLOBAL TECHNICAL COMMITTEES

- 3DS-IC
- Assembly and Packaging
- Automated Test Equipment
- Automation Technology
- Compound Semiconductor Materials
- Environmental, Health and Safety
- Facilities
- FPD—Materials and Components
- FPD—Metrology
- Gases
- HB-LED
- Information and Control
- Liquid Chemicals
- MEMS/NEMS
- Metrics
- Micropatterning
- Photovoltaic
- Photovoltaic—Materials
- Physical Interfaces and Carriers
- Silicon Wafer
- Traceability

ABOUT SEMI STANDARDS

The first Standards milestone was in 1973, as the industry addressed a critical silicon shortage and the resulting strain on the supply chain by developing the first standard for silicon wafer diameter. By 1974, over 80 percent of wafers being shipped conformed to the standard.

Today, SEMI Standards address every major step in the semiconductor manufacturing process, from materials characterization, through wafer production, assembly, packaging and test. From its roots in North America, the SEMI International Standards program now sponsors standards development activity around the world, including Japan, China, Korea, Taiwan, and Europe.

SEMI International Standards

WHY STANDARDS?

Standards enable and ensure interoperability of materials, components, equipment, and processes, which in turn create a fair and competitive market for companies around the world. Standards increase market access, promote communication within and across industries, accelerate product development, enable faster commercialization, reduce costs, and protect workers and the environment.

HOW DOES THE SEMI STANDARDS PROGRAM WORK?

The SEMI Standards program provides the framework and procedures for industry experts to meet, discuss, and develop essential standards and safety guidelines. Once the need for a standard has been identified and supported by suppliers and users, a committee creates a task force to carry out the development effort. The task force drafts a ballot, which is distributed to all global members of the committee for technical review. For the document to be approved, all objections must be resolved by the committee, ensuring a consensus standard. Following publication, manufacturers cite SEMI Standards in their purchase specifications, and utilize them in equipment and materials evaluations. Suppliers produce their equipment, materials, or services to comply with SEMI Standards.

"The SEMI Standards Program continues to be the best environment to sit down with your industry technical peers, understand common problems, and work towards solutions that provide benefit to everyone… while still allowing for individual differentiation and competitive advantage."

BENEFITS OF PARTICIPATION IN STANDARDS DEVELOPMENT

Influence Technology Development

By taking an active role, companies and people influence the outcome of standards development and help shape the direction and future of microelectronics manufacturing.

Get a Head Start on the Competition

Program participants get an exclusive, early view to developing standards and gain a greater understanding of manufacturing processes and the standards themselves.

Demonstrate Industry and Technology Leadership

Participating companies enhance their visibility and standing within the global industry and strengthen their connections across the supply chain with partners and customers.

Build Professional Relationships and Your Career

Involvement in standards development activities builds skills in cooperation and consensus-building, strengthens technical knowledge, understanding of technology trends, and develops relationships with peers and mentors across the supply chain and around the world. SEMI Standards volunteers are frequently sought after as technical experts and resources.

Connect to make things work together—Join the SEMI International Standards Program

TO LEARN MORE about the SEMI International Standards program or to join, go to:
www.semi.org/standards