

GLASS CORE SUBSTRATE: MARKET & DEVELOPMENT TRENDS REPORT

A POTENTIAL \$13B OPPORTUNITY BY 2040

TECHNOLOGY, SUPPLY CHAIN, AND MARKET OUTLOOK

As AI and high-performance computing (HPC) packages become larger and more complex, organic-core substrates face growing challenges in **dimensional stability, warpage, and manufacturing scalability**. Glass cores are emerging as a potential alternative, offering high flatness and rigidity, favorable electrical performance, and closer coefficient-of-thermal-expansion (CTE) alignment with silicon.

This report provides a scenario-based market outlook through 2040 and examines **manufacturing bottlenecks, supply-chain readiness, technology roadmaps, and company activity**. It helps organizations assess adoption timing, evaluate supplier readiness, prioritize R&D, and support strategic planning.

VIEW MORE DETAILS



BENEFITS

- Assess Technology and Manufacturing Risk**
 Understand key process bottlenecks, yield considerations, cost challenges, and supply-chain constraints.
- Map the Emerging Supply Chain**
 Identify participants across substrate manufacturing, glass, equipment, and materials and compare their reported capabilities.
- Evaluate Supplier Readiness**
 Screen potential suppliers by technology maturity, manufacturing progress, geography, and position in the value chain.
- Track Adoption and Competitive Activity**
 Monitor qualification milestones, company investments, regional developments, and the potential transition toward volume production.

GLASS CORE SUBSTRATE: MARKET & DEVELOPMENT TRENDS REPORT

METHODOLOGY

The report combines public company disclosures, financial information, industry sources, and expert interviews. Market forecasts and technology assessments incorporate SEMI and Global Net Corp. estimates based on the available evidence and industry input.

Because glass core substrates remain at an early stage of commercialization, forecasts and production timelines should be interpreted as scenario-based estimates rather than fixed outcomes. Actual adoption will depend on qualification progress, manufacturing yields, supply-chain readiness, economics, and the development of industry standards.

REPORT HIGHLIGHTS

- **Scenario-Based Market Outlook Through 2040**
Production forecasts, market estimates, and growth scenarios for glass core substrates in AI, HPC, and other advanced semiconductor applications.
- **Manufacturing Bottlenecks and Process Challenges**
Analysis of TGV formation, metallization, build-up processes, dicing, cracking, and other barriers to scalable production.
- **Glass Core Versus Organic Substrates**
Comparison of dimensional stability, flatness, rigidity, electrical performance, CTE characteristics, and manufacturing trade-offs.
- **Company and Regional Activity**
Investments, capabilities, and development activity across substrate manufacturers, glass producers, equipment suppliers, materials providers, and research organizations.
- **Adoption and Production Roadmap**
Qualification progress and potential transition from pilot and limited-volume production to high-volume manufacturing.
- **Supply-Chain Readiness and Industry Standards**
Assessment of ecosystem development, supplier readiness, technology gaps, evolving standards, and market trends.

DETAILS:

- **Format:** Adobe® PDF (.pdf), Microsoft® Excel® file (.xlsx)
- **Research and Analysis:** Global Net Corp. and SEMI

RELATED REPORT:

- **Worldwide Assembly & Test Facility Database**



DOWNLOAD
SAMPLE
REPORT

**MORE THAN
ONE USER?**

mktstats@semi.org

APPLICABLE TO: Substrate, glass, semiconductor equipment, and materials suppliers; IDMs, foundries, fabless companies, and OSATs; advanced packaging and R&D organizations; and professionals in strategy, business development, supply-chain management, engineering, market analysis, consulting, and investment research.