



Freedonia Focus Reports
US Collection

Semiconductor Machinery: United States

February 2018



BROCHURE
CLICK TO ORDER
FULL REPORT

www.freedoniafocusreports.com

Table of Contents

1. Highlights	3
2. Market Environment	4
Historical Trends	4
Key Economic Indicators	5
Trade	6
US Semiconductor Industry Outlook	9
Environmental & Regulatory Factors	11
3. Segmentation & Forecasts	13
Products	13
Wafer Processing	16
Testing	19
Assembly	20
4. Industry Structure	23
Industry Characteristics	23
Market Leaders	26
ASM Pacific	26
ASML	26
Teradyne	27
5. About This Report	28
Scope & Method	28
Sources	28
Industry Codes	29
Resources	30

List of Tables & Figures

Figure 1 Key Trends in US Semiconductor Machinery Demand, 2016 – 2021	3
Figure 2 US Semiconductor Machinery Demand Trends, 2006 – 2016	4
Table 1 Key Indicators for US Semiconductor Machinery Demand, 2006 – 2021 (US\$ bil)	5
Figure 3 US Semiconductor Machinery Trade, 2006 – 2016 (US\$ mil)	6
Table 2 US Semiconductor Machinery Trade, 2006 – 2016 (US\$ mil)	6
Figure 4 US Semiconductor Machinery Imports by Country, 2006 – 2016 (US\$ mil)	7
Table 3 US Semiconductor Machinery Imports by Country, 2006 – 2016 (US\$ mil)	7
Figure 5 US Semiconductor Machinery Exports by Country, 2006 – 2016 (US\$ mil)	8
Table 4 US Semiconductor Machinery Exports by Country, 2006 – 2016 (US\$ mil)	8
Figure 6 US Semiconductor Shipments, 2006 – 2021 (US\$ mil)	9
Table 5 US Semiconductor Shipments, 2006 – 2021 (US\$ mil)	9
Figure 7 US Semiconductor Machinery Demand by Product, 2006 – 2021 (US\$ mil)	13
Table 6 US Semiconductor Machinery Demand by Product, 2006 – 2021 (US\$ mil)	13
Figure 8 US Semiconductor Machinery Shipments, 2006 – 2021 (US\$ mil)	14
Table 7 US Semiconductor Machinery Shipments, 2006 – 2021 (US\$ mil)	14
Figure 9 US Semiconductor Machinery Demand by Product, 2006 – 2021 (%)	22
Figure 10 US Semiconductor Machinery Industry Shipments Concentration, 2002 – 2012 (%)	23
Figure 11 US Semiconductor Machinery Industry Employer Firms & Establishments, 2006 – 2015	24
Table 8 US Semiconductor Machinery Industry Employer Firms & Establishments, 2006 – 2015	24
Table 9 Leading Suppliers to the US Semiconductor Machinery Market by Product	26
Table 10 Industry Codes Related to Semiconductor Machinery	29

About This Report

Scope & Method

This report forecasts to 2021 US semiconductor machinery demand and shipments in nominal US dollars at the manufacturer level. Total demand is segmented by product in terms of:

- wafer processing
- testing
- assembly

To illustrate historical trends, total demand, total shipments, the various segments, and trade are provided in annual series from 2006 to 2016.

This report quantifies trends in various measures of growth and volatility. Growth (or decline) expressed as an average annual growth rate (AAGR) is the least squares growth rate, which takes into account all available datapoints over a period. The volatility of datapoints around a least squares growth trend over time is expressed via the coefficient of determination, or r^2 . The most stable data series relative to the trend carries an r^2 value of 1.0; the most volatile – 0.0. Growth calculated as a compound annual growth rate (CAGR) employs, by definition, only the first and last datapoints over a period. The CAGR is used to describe forecast growth, defined as the expected trend beginning in the base year and ending in the forecast year. Readers are encouraged to consider historical volatility when assessing particular annual values along the forecast trend, including in the forecast year.

Key macroeconomic indicators are also provided with quantified trends. Other various topics, including profiles of pertinent leading suppliers, are covered in this report. A full outline of report items by page is available in the Table of Contents.

Sources

Semiconductor Machinery: United States (FF75028) represents the synthesis and analysis of data from various primary, secondary, macroeconomic, and demographic sources including:

- firms participating in the industry, and their suppliers and customers
- government/public agencies
- national, regional, and international non-governmental organizations
- trade associations and their publications
- the business and trade press
- indicator forecasts by The Freedonia Group
- the findings of other reports and studies by The Freedonia Group

About This Report

Specific sources and additional resources are listed in the Resources section of this publication for reference and to facilitate further research.

Industry Codes

Table 10 | Industry Codes Related to Semiconductor Machinery

NAICS/SCIAN 2007		SIC	
North American Industry Classification System		Standard Industrial Classification	
333295	Semiconductor Machinery Manufacturing	3559	Special Industry Machinery, NEC
334515	Instrument Manufacturing for Measuring & Testing Electricity & Electrical Signals	3825	Instruments for Measuring & Testing of Electricity & Electrical Signals

Source: US Census Bureau

Copyright & Licensing

The full report is protected by copyright laws of the United States of America and international treaties. The entire contents of the publication are copyrighted by The Freedonia Group.

Resources

The Freedonia Group

Freedonia Industry Studies

World Industrial Silica Sand, October 2016

World Specialty Silicas, April 2016

Specialty Silicas, January 2016

Freedonia Focus Reports

Analytical Instruments: United States

Audio & Video Equipment: United States

Computers & Peripherals: United States

Control Technologies: United States

Electronic Components: United States

Semiconductors: United States

Silicon: United States

Freedonia Custom Research

Trade Publications

Compound Semiconductor

EDN Network

EE Times

Electronic Design

Electronic Engineering Journal

ExtremeTech

Semiconductor Manufacturing & Design

Solid State Technology

Agencies & Associations

Electronic Components Industry Association

Global Semiconductor Alliance

Institute of Electrical and Electronics Engineers

The Optical Society

Semiconductor Equipment and Materials International

Semiconductor Industry Association

United States Department of Commerce

Bureau of Economic Analysis

United States Census Bureau

United States International Trade Commission

World Semiconductor Trade Statistics