

NANOMETRICS INC  
Form 425  
February 21, 2006

**Filed by Nanometrics Incorporated**

**Pursuant to Rule 425 under the Securities Act of 1933**

**and deemed filed pursuant to Rule 14a-12**

**under the Securities Exchange Act of 1934**

**Commission File No. 000-13470**

**Subject Company: Nanometrics Incorporated**

Investor Presentation  
February 2006

Who is Nanometrics?

Who is Nanometrics?

A leading provider of integrated and  
stand-alone

metrology and process

control technology to the global

semiconductor manufacturing industry

What s Driving the Semiconductor Industry Today?  
What s Driving the Semiconductor Industry Today?

Consumer electronics surpassing PCs  
Consumer electronics surpassing PCs

Accelerated development timeline  
Accelerated development timeline

New chips require 300mm processing  
New chips require 300mm processing

SOC, DDR2, Flash

Majority of industry profits driven by:  
Majority of industry profits driven by:

Newly-released products

Highest performance devices

New Fabs  
New Fabs  
in Asia Korea and Japan  
in Asia Korea and Japan

Semiconductor Manufacturing in the 300mm Era  
Semiconductor Manufacturing in the 300mm Era  
As market windows are collapsing  
Manufacturing is increasingly expensive,  
more automated  
taking people out of the cleanroom  
altogether.

Increasing Importance of Process Control  
Increasing Importance of Process Control  
Growing Share of Semiconductor Capital Spending  
Growing Share of Semiconductor Capital Spending  
Source: Dataquest



Larger Wafers Require More Metrology  
Larger Wafers Require More Metrology

-  
-

More mask layers  
More mask layers

-  
-

More process steps  
More process steps

-  
-

More single-wafer processes  
More single-wafer processes

-  
-

More importance placed on each wafer (\$\$)  
More importance placed on each wafer (\$\$)

-  
-

More metrology points on each wafer  
More metrology points on each wafer

More metrology  
More metrology

tools required  
tools required

per line  
per line



Trends Driving Integrated Metrology  
Trends Driving Integrated Metrology

Accelerating ramp to production  
Accelerating ramp to production

Speed up the learning cycle

Improved production economics  
Improved production economics

Throughput

Footprint

Transport

Every wafer is valuable  
Every wafer is valuable

Catch problems early

Increasing automation and fab-wide advanced  
Increasing automation and fab-wide advanced  
process control (APC)  
process control (APC)

Requires metrology feedback loop

Integrated Improves Productivity  
Integrated Improves Productivity

- \*
- \*
- \*
- \*

3 mins

Travel Time

30 secs

30 secs

100

WPH

90

WPH

100

60

w/min

6

min

= 10 wafers

Lost Productivity

2 mins

Measurement

Time

When running qualification cycles..

Productivity Loss = 10%

without Integrated Metrology











It's About More than Maximizing Yield

ASPs

Profit captured getting

to 80% yield one

quarter faster

Incremental revenue for

increasing yield from

95% to 99%

Semiconductor Product Life Cycle

Semiconductor Product Life Cycle

Time

Conventional ramp

Ramp accelerated with

Integrated Metrology

USA  
34%  
Japan  
26%  
Korea  
25%  
Taiwan

11%  
Other  
4%  
Integrated  
38%  
Stand-  
Alone  
56%  
Other  
6%  
Nanometrics Today  
Nanometrics Today

30 years in the business  
30 years in the business

Leading provider of transparent thin film metrology  
Leading provider of transparent thin film metrology

Market flexible, multiple-metrology solutions for both  
Market flexible, multiple-metrology solutions for both  
integrated and stand-alone applications  
integrated and stand-alone applications

Financially sound and poised for growth  
Financially sound and poised for growth

Acquiring Accent Optical Technologies for ~\$80 million \*  
Acquiring Accent Optical Technologies for ~\$80 million \*

Based on 5 million shares at \$14 plus \$10.6M debt

\* The transaction is subject to approval of Nanometrics and Accent shareholders and is expected to be completed in 1H 2006.







Constant Innovation, Expanding Product Line  
Constant Innovation, Expanding Product Line  
Core Products with  
Leading Market Share  
Atlas/FLX

-

Transparent Film Thickness  
9010/BOLTS

-

Dielectric CMP, CVD  
New Products and  
Expanding Markets  
Orion

-

Advanced Overlay Control  
Atlas-M

-

Mask

and

Reticle

Metrology

NanoOCD

-

Optical CD Measurement

9010 UDI

-

Defect Detection

Penetration into additional process steps:

Track, Etch, Metal CMP



Who is Accent Optical?  
Who is Accent Optical?

Metrology company offering several technologies:  
Metrology company offering several technologies:

Overlay metrology

Thin film metrology (film characterization, wafer mapping)

Optical CD

Defect detection

Serving diverse markets:

Serving diverse markets:

Semiconductor photolithography process control

Bare wafers/substrates: SSi, SOI

Wireless/HBLEDs

With strong history and financials

With strong history and financials

25 years in the business; buyout of Bio-Rad

HQ in Bend, Oregon with R&D/Mfg in York, England

200+ employees

Healthy revenue run-rate and strong margins

Accent Acquisition Expected to Strengthen Position  
Accent Acquisition Expected to Strengthen Position

Huge customer cross-selling opportunities  
Huge customer cross-selling opportunities

Stronger player with greater scale  
Stronger player with greater scale

Complementary technologies  
Complementary technologies

Adds depth to management team  
Adds depth to management team

Financial strength  
Financial strength

Integrated metrology opportunity  
Integrated metrology opportunity



Nanometrics Addresses Large and Growing Markets

Nanometrics Addresses Large and Growing Markets

\$0

\$200

\$400

\$600

\$800

\$1,000

\$1,200

2003

2005

2009

Non-Metal Thin Film Metrology

Overlay Metrology

Integrated Metrology

Macro Defect Inspection

Mask Metrology

OCD/Profile Measurement

\$650 million

\$800 million

\$340 million

22% CAGR

51% CAGR

Accent acquisition expected to add an additional ~\$100 million to SAM

Source: Dataquest





Expanding Presence in Key Markets  
Expanding Presence in Key Markets  
Non-Metal TF  
Integrated  
OCD/Profile  
Overlay  
Macro Defect  
Mask  
Tied for #2 with TWAV  
KLA #1, Rudolph #4, Accent #5  
Leading Market Share  
Nova #2  
KLA, TEL and Rudolph <\$10M  
NANO a newer entrant; only one with integrated  
KLA and TWAV have majority of market  
Accent shipping tools  
NANO Shipping Tools  
KLA #1, Accent #2  
In Development Stage  
KLA #1, August #2  
Shipping Tools  
New Products for NANO



Segment wedges denote relative market size in 2005



Accent Top Customers  
Accent Top Customers  
Nanometrics Top Customers  
Nanometrics Top Customers  
Positioned with Customers at the Forefront of 300mm  
Positioned with Customers at the Forefront of 300mm  
-  
Other major

-  
Other major

Nanometrics  
Growth Opportunities  
Nanometrics  
Growth Opportunities

Increase in semiconductor capital spending  
Increase in semiconductor capital spending

Greater importance of process control as % of CapEx  
Greater importance of process control as % of CapEx

Growing market for NAND/Flash memory  
Growing market for NAND/Flash memory

Increased adoption of Integrated Metrology  
Increased adoption of Integrated Metrology

Introduction of new products in high-growth markets  
Introduction of new products in high-growth markets

Market share gains vs  
Market share gains vs  
weak competition  
weak competition

Growth through acquisition  
Growth through acquisition

Financial Overview  
Financial Overview  
Financial Overview

Creating Operating Leverage  
Creating Operating Leverage

Streamlined business in 2005  
Streamlined business in 2005

Focus on semiconductors; sold FPD business

Upgraded financial team  
Upgraded financial team

CFO, Chief Accounting Officer and Corporate Controller

Increased controls, better forecasting

Re-organized operations and engineering  
Re-organized operations and engineering

Reducing costs through better manufacturing practices and  
improved material control processes

Leveraging service organization  
Leveraging service organization

Keep spending flat, support more tools



\$0  
\$10  
\$20  
\$30  
\$40  
\$50  
\$60  
\$70  
\$80  
\$90  
\$100  
Quarterly Revenues

Annualized  
Scaling the Business  
Scaling the Business  
2002  
2003  
2004  
2005



Fourth Quarter 2005 Financials

Fourth Quarter 2005 Financials

Revenue

\$ 14.2 M

Gross Margin

46%

Operating Expenses

\$ 9.1 M

Operating Loss

(\$ 2.5 M)

Net Loss

(\$ 2.1 M)

EPS

(\$ 0.16)

Cash and Short-Term Investments      \$ 45.4 M

Total Debt

\$

3.0 M



Significant Operating Leverage in the Model

Significant Operating Leverage in the Model

Recent Results

Target Model \*

Product Gross Margin

52%

60%

Service Gross Margin

(12%)

20%

Blended Gross Margin

43%

55%

SG&A

32%

21%

R&D

18%

14%

Operating Margin

(7%)

20%

Re-organize Engineering

Leverage Service Group

\* Excludes expenses from patent litigation, amortization of intangibles and equity-based compensation.

Conclusion: Nanometrics is in a Strong Position  
Conclusion: Nanometrics is in a Strong Position

Right market segment  
Right market segment

Well positioned with customers that are spending  
Well positioned with customers that are spending  
money on 300mm  
money on 300mm

Right complement of products  
Right complement of products  
integrated and  
integrated and  
stand-alone metrology  
stand-alone metrology

Opportunity for significant operating leverage  
Opportunity for significant operating leverage

Consolidator of the metrology market



Consolidator of the metrology market

More than driving yield

More than driving yield

Accelerating the production ramp.

Accelerating the production ramp.

Additional Information and Where to Find It  
Additional Information and Where to Find It  
In connection with the planned merger (the Merger ) between Nanometrics, Inc.  
( Nanometrics )  
and  
Accent  
Optical  
Technologies,  
Inc.  
( Accent )  
pursuant  
to  
the  
Agreement  
and  
Plan  
of  
Merger

and  
Reorganization  
dated  
January  
25,  
2006

(the  
Merger  
Agreement ),

by  
and  
between  
Nanometrics,  
Alloy  
Merger  
Corporation  
(a  
wholly  
owned  
subsidiary  
of  
Nanometrics)

and  
Accent,

Nanometrics and Accent will file a joint proxy statement/prospectus. Nanometrics intends to include in such proxy statement/prospectus a resolution for shareholder approval of the issuance of Nanometrics common stock in consideration for all the outstanding shares of Accent capital stock and the rights to acquire

Accent  
capital  
stock

(the  
Share  
Issuance ),

and  
certain  
other  
matters  
contemplated

by  
the

Merger Agreement. Accent intends to include in such proxy statement/prospectus a resolution for stockholder approval of the Merger Agreement and the Merger and certain other matters contemplated by the Merger Agreement. The joint proxy statement/prospectus will be mailed to the shareholders of Accent and Nanometrics. **INVESTORS AND SECURITY HOLDERS ARE URGED TO READ THE JOINT PROXY STATEMENT/PROSPECTUS REGARDING THE PROPOSED MERGER WHEN IT BECOMES AVAILABLE BECAUSE IT WILL CONTAIN IMPORTANT INFORMATION ABOUT THE TRANSACTION.** The joint proxy statement/prospectus will be filed with the Securities and Exchange Commission

( SEC )

by  
Nanometrics  
and  
Accent.  
Investors  
and  
security  
holders  
may  
obtain  
a  
free  
copy

of the joint proxy statement/prospectus (when it is available) and other documents filed by Nanometrics with the SEC at the SEC's web site at [www.sec.gov](http://www.sec.gov). The joint proxy statement/prospectus and these other documents may also be obtained for free from Nanometrics by directing a request to Nanometrics, Inc., 1550 Buckeye Drive, Milpitas, California 95035, Attention: Investor Relations, Telephone: (408) 435-9600 or by sending an email request to [investors@nanometrics.com](mailto:investors@nanometrics.com).

Additional Information and Where to Find It

Additional Information and Where to Find It

Nanometrics and its executive officers and directors may be deemed to be participants in the solicitation of proxies from