

Filed by: Amtech Systems, Inc. (File No. 000-11412)
Pursuant to Rule 425 under the Securities Act of 1933
(deemed filed pursuant to Rule 14a-12 under the Securities Exchange Act of 1934)
Subject Company: BTU International, Inc. (File No. 000-17297)

- The following is a presentation to attendees at Needham & Company's 17th Annual Growth Conference in New York, on Tuesday, January 13, at the New York Palace Hotel.

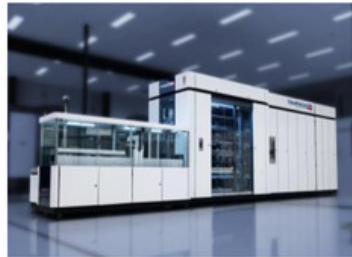
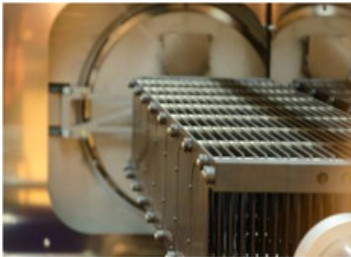
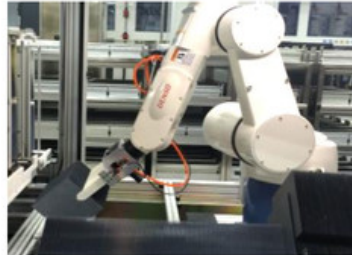
Important Information For Investors and Shareholders

This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval. In connection with the proposed merger, Amtech Systems, Inc. ("Amtech") and BTU International, Inc. ("BTU") filed a registration statement on Form S-4 with the Securities and Exchange Commission (the "SEC"), containing a joint proxy statement/prospectus, relating to the proposed merger. Amtech and BTU also intend to file other relevant documents relating to the proposed merger with the SEC. The proposals for the proposed merger will be made solely through the joint proxy statement/prospectus, which was filed on December 23, 2014 with the SEC. **BTU AND AMTECH URGE INVESTORS AND SHAREHOLDERS TO READ THE JOINT PROXY STATEMENT/PROSPECTUS (INCLUDING ANY AMENDMENTS AND SUPPLEMENTS THERETO) AND ANY OTHER RELEVANT DOCUMENTS FILED BY EITHER PARTY WITH THE SEC BECAUSE THEY CONTAIN IMPORTANT INFORMATION ABOUT AMTECH, BTU AND THE PROPOSED MERGER.**

Investors and shareholders of Amtech and BTU can obtain the joint proxy statement/prospectus and other documents filed with the SEC free of charge at the website maintained by the SEC at www.sec.gov. In addition, documents filed with the SEC by BTU will be available free of charge on the investor relations portion of the Company's website at www.btu.com. Documents filed with the SEC by Amtech will be available free of charge on the investor relations portion of the Amtech website at www.amtechsystems.com.

Participants in the Solicitation

This communication is not a solicitation of a proxy from any security holder of BTU or Amtech. BTU and its directors and executive officers, and Amtech and its directors and executive officers may be deemed to be participants in the solicitation of proxies from the holders of BTU and Amtech common stock in respect of the proposed merger and the transactions contemplated thereby. Information about the directors and executive officers of BTU is set forth in the proxy statement for BTU's 2014 annual meeting of stockholders, which was filed with the SEC on April 14, 2014. Information about the directors and executive officers of Amtech is set forth in the proxy statement for Amtech's 2014 annual meeting of stockholders, which was filed with the SEC on March 28, 2014. Investors and shareholders can obtain more detailed information regarding the direct and indirect interests of BTU's and Amtech's directors and executive officers in the proposed merger by reading the joint proxy statement/prospectus and any other relevant documents filed with the SEC.



J.S. Whang
Executive Chairman

Fokko Pentinga
President & CEO

Brad Anderson
Executive VP & CFO

Safe Harbor Statement



This Presentation may contain certain statements or information that constitute "forward-looking statements" (as defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended). In some but not all cases, forward-looking statements can be identified by terminology such as, for example, "may," "will," "should," "would," "expects," "plans," "anticipates," "intends," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other comparable terminology. Examples of forward-looking statements include statements regarding Amtech System, Inc.'s (the "Company") future financial results, operating results, business strategies, projected costs, products under development, competitive positions and plans and objectives of the Company and its management for future operations. Such forward-looking statements and information are provided by the Company based on current expectations of the Company and reflect various assumptions of management concerning the future performance of the Company, and are subject to significant business, economic and competitive risks, uncertainties and contingencies, many of which are beyond the control of the Company. Accordingly, there can be no guarantee that such forward-looking statements or information will be realized. Actual results may vary from any anticipated results included in such forward-looking statements and information and such variations may be material. No representations or warranties are made as to the accuracy or reasonableness of any expectations or assumptions or the forward-looking statements or information based thereon. Only those representations and warranties that are made in a definitive written agreement relating to a transaction, when and if executed, and subject to any limitations and restrictions as may be specified in such definitive agreement, shall have any effect, legal or otherwise. Each recipient of forward-looking statements should make an independent assessment of the merits of and should consult its own professional advisors. Except as required by law, we undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events, or otherwise.

Amtech Group



- Global supplier of solar & semiconductor process equipment technology and automation systems
 - Headquartered in Tempe, AZ
 - Global presence in NA, Europe, Asia
- Leading supplier of solar & semiconductor diffusion furnaces
- Leading edge platform driven by acquisition of technology and continuous innovation
 - Successful deployment of next generation n-type cell
 - Transformed from equipment supplier to **technology provider**



SOLAR



SEMICONDUCTORS



LED



Management Overview



Member

Position

Experience



J.S. Whang

Executive Chairman

- 37 years of semiconductor & solar experience
- Siltronics
- U.S. Quartz



Fokko Pentinga

President & CEO

- 30 years of semiconductor and solar experience
- Tempres Systems



Brad Anderson

EVP & Chief Financial Officer

- 28 years of financial and public company experience
- Deloitte
- Zila

Amtech Group business model



Acquisitions



Gen 1 600MW n-PASHA production	Low cost Ion implanter	Batch PECVD 1850w/h	PID free PECVD	Gen 2 100MW n-PASHA production	HD-POC3 3200 w/h production	PERC ALD combination with PECVD
Innovations						

- The merger with BTU is anticipated to close in the first quarter of calendar 2015 and remains subject to shareholder approval of both companies.

Amtech Group locations



Amtech Products & Applications



Process Equipment

Diffusion,
Annealing
Furnace



PECVD
Furnace



Ion
Implanter



Furnace Automation & Wafer Handling Systems

Furnace
Automation

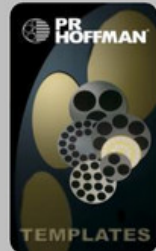


S-300



Wafer Carriers, Templates & Polishing Tools

Templates



Carriers

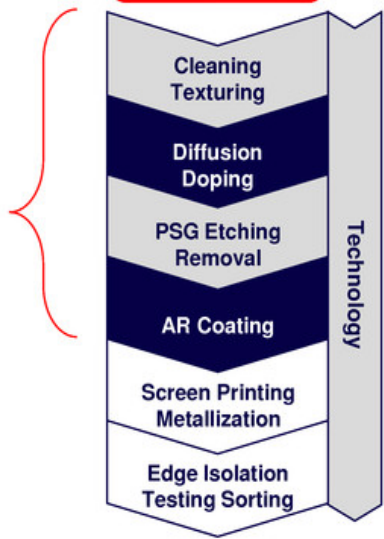
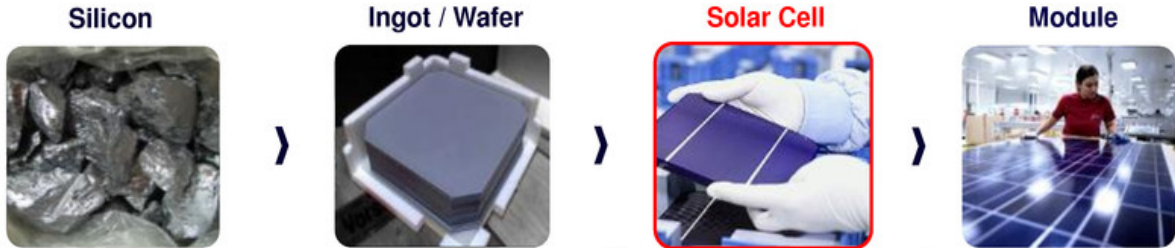


Solar Cells & Semiconductor Chips

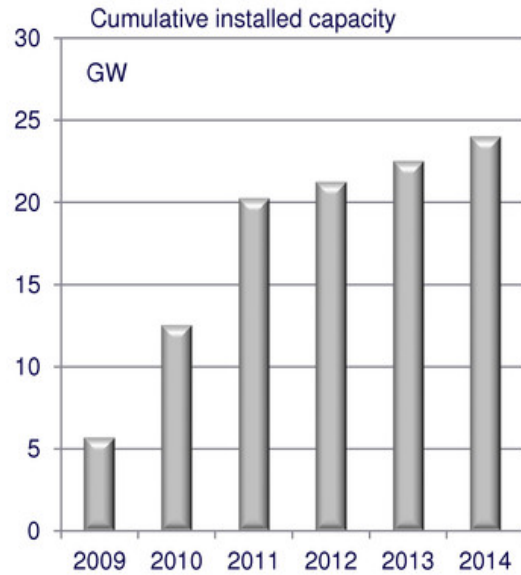
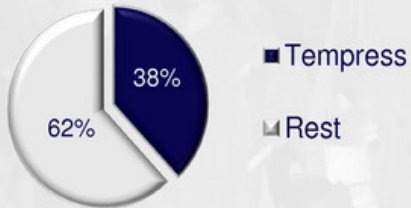
LED & Silicon Wafers

Solar value chain

Our integrated offering



- >500 systems at customers
- Production capacity >24 GW
- Diffusion share >35%



Sources:
Internal data center
Market share by Solar Buzz Research

80+ PRODUCTION FACILITIES



- *With the courtesy of the above mentioned companies

R&D Installed base and Cooperations



SEMI

DIFFUSION

- Oxide
- POC13
- BBr3
- Solid source Doping
- Sintering / Alloying
- Annealing / Drive-In

DEPOSITION

- Poly Silicon
- SIPOS
- PECVD Nitride, Oxy-Nitride
- LPCVD, LS Nitride, Oxy-Nitride
- TEOS
- LTO
- HTO
- Ta2O5

SOLAR

DIFFUSION

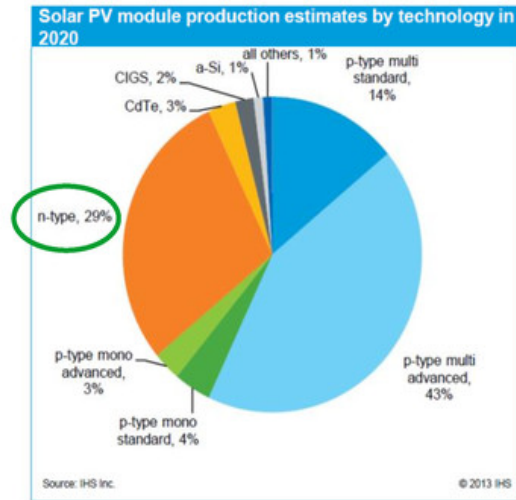
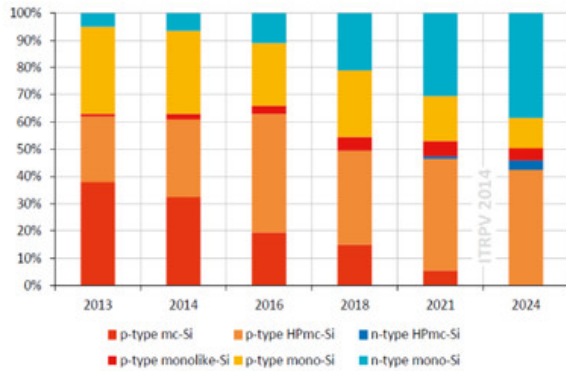
- POC13
- BBr3
- Annealing
- Oxidation

DEPOSITION

- PECVD ARC
- Ox-Poly

IHS and ITRPV forecast that n-type applications will mature and find their way into mainstream manufacturing. Looking forward, n-type will be mostly a mono crystalline technology, growing from 8 percent of total cell production capacity to approximately 29 percent by 2020.

Fig. 25
Expected relative market shares for casted and mono-Si materials.



Generations of technologies



- Standard p-type multi/mono (2006 – 2012) – cell efficiency 18%

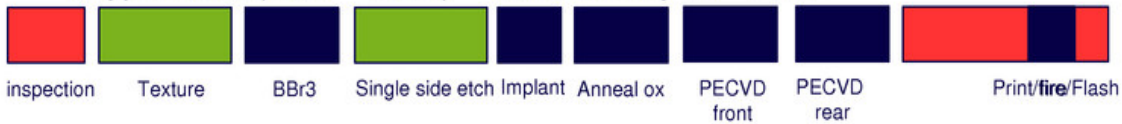


1. Innovation
2. Acquisition
3. Technology

- PERC multi or mono (2013 – 2018) – cell efficiency 19 – 20%

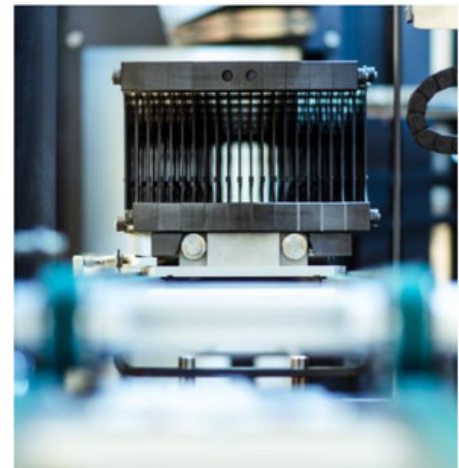


- N-type mono (2014 – 2024) – cell efficiency 21 – 23%



Solar Fundamentals

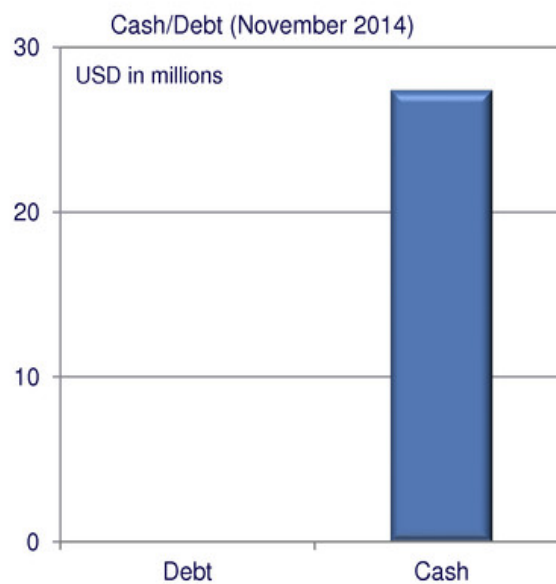
- >50% of the global population and politicians believe in the need for clean energy.
- Solar is becoming global and demand from the global emerging market for 2013 reached ~8GW and is growing.
- Solar annual demand is expected to grow from 38GW in 2013 to 100GW in 2018.
- Supply-Demand Equilibrium to be achieved within the next 12 months.



During the downturn – Financial Management

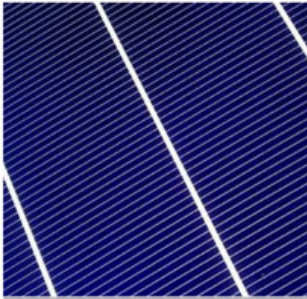


- Strong financial position
- Flexible supply chain
- 40 years experience with cyclic market developments in Semi
- Careful investments in upturn to preserve cash

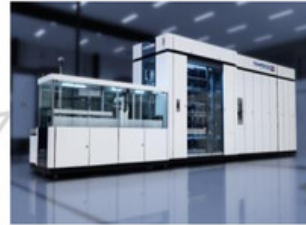
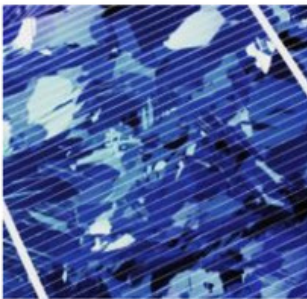


Mono

p-type / n-type



Multi



QUANTUM platform

- POC13
- HD POCL3
- BBr3
- Annealing
- Oxidation
- R&D system



SPECTRE platform

- PECVD SiN_x, SiO₂
- LPCVD Poly



Kingstone IonSolar

- p-type / n-type
- IBC

AMTECH SYSTEMS TO ACQUIRE BTU INTERNATIONAL

ANNOUNCED October 22, 2014



- The merger with BTU is anticipated to close in the first quarter of calendar 2015 and remains subject to shareholder approval of both companies.

Solar | Semiconductor | LED

SolayTec

Ultrafast ALD for Al_2O_3 deposition

TEMPRESS
AMTECH GROUP 



www.solaytec.com
www.tempress.nl

Expansion of Served Available Markets

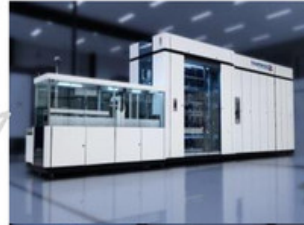
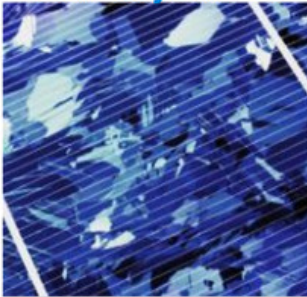


Mono Crystalline

p-type / n-type



Multi Crystalline



Tempress Diffusion

- POCl₃
- HD POCL₃
- BBr₃
- Annealing
- Oxidation
- R&D system



Tempress SPECTRE

- PECVD SiN_x, SiO₂
- LPCVD Poly



SolayTec InPassion ALD

- ALD Al₂O₃
- p-type / n-type
- PERC, IBC, n-Pasha



Kingstone IonSolar

- p-type / n-type
- IBC

Analog / Power Chip Sector

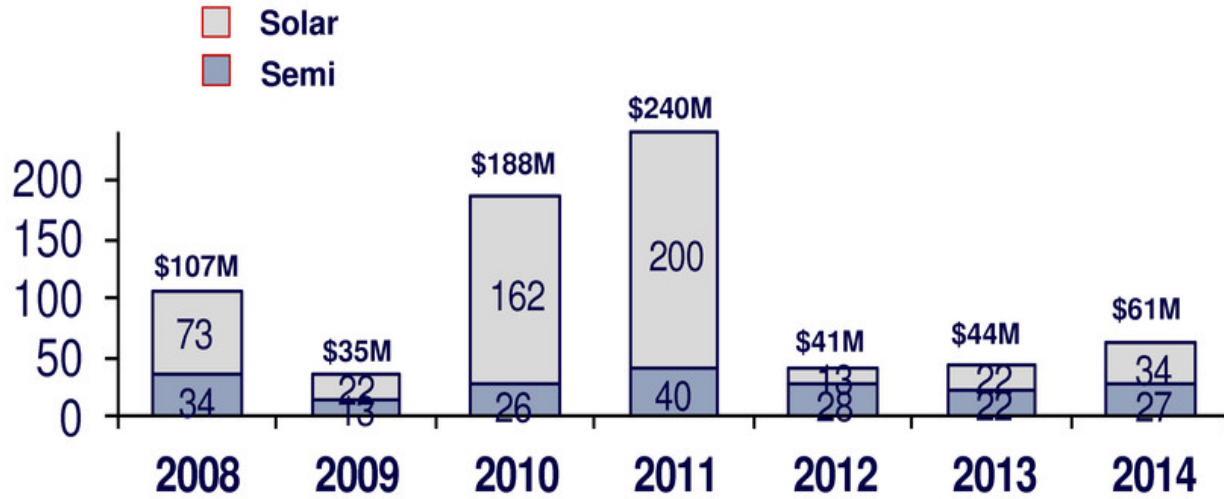
- Serve top players in Analog and Power Chip Sectors, including #1 Infineon, Texas Instruments (including TI Aizu and Miho), Analog Devices (ADI), Samsung, UMC, Vanguard, SEH, SUMCO, Dongbu-ANAM, Soitec
- Potential migration from 6" (2/3rd) to 8" (1/3rd) to 12" wafers
- Longer term opportunity

LED & Optics

- LED consumable growth
- LED and Optics equipment opportunities

Financial Overview

Annual Order Trend (solar/semi)



Fiscal Year (Oct. 1 – Sept. 30)

Balance Sheet – Financial Strength



Sept 30, 2014

Total Cash	\$29.7
Working Capital	\$32.3
Total Assets	\$89.9
Total Debt	\$0.0
Total Liabilities	\$36.3
Stockholders' Equity	\$53.6

AMTECH SYSTEMS TO ACQUIRE BTU INTERNATIONAL

Announced October 22, 2014



Transaction Rationale Highlights



- **Greater scale, operating efficiencies and end market diversification**
- **Combination reinforces Amtech's solar growth opportunity**
- **BTU's Semi Reflow business is ~\$40 million of revenue and a consistently profitable business**
- **BTU's non-Semi Reflow business offers potential upside opportunity**
- **Transaction is expected to be accretive to Amtech's FY2015 non-GAAP EPS**
- **Combined business is expected to generate \$4-5 million of annual operating expense savings within 12 months post-closing**

Combines Leaders in Innovation



Founded:	1981	1950
Headquarters:	Tempe, AZ	North Billerica, MA
Employees ⁽¹⁾ :	267 Employees	290 Employees
Intellectual Property ⁽²⁾ :	71 Patents	56 Patents
Financial:		
LTM Revenue:	\$43.6	\$51.1
LTM Gross Margin:	28.0%	34.5%

Overview:

- Global supplier of solar and semiconductor process equipment technology and automation systems
- Leading supplier of solar diffusion furnaces
- Platform driven by acquisition of technology and continuous innovation
- Proven leader in capital equipment for the electronics assembly / semiconductor packaging industry
- Strongly positioned as capital equipment and process provider to the alternative energy industry

(1) Latest Amtech and BTU 10K filings.
 (2) Includes issued and pending.
 Note: LTM financials are as of June 30, 2014.

Summary of Transaction Terms



Transaction

- Amtech Systems, Inc. (“Amtech”) to acquire 100% of BTU International, Inc. (“BTU”) common stock

Terms

- Each share of BTU will be exchanged for 0.3291 shares of Amtech

Consideration

- All stock acquisition valued at \$32.5 million or \$3.33 per BTU share⁽¹⁾

Pro Forma Ownership

- 76% Amtech shareholders; 24% BTU shareholders on a fully diluted basis

Anticipated Close

- Q1 2015

Conditions

- Amtech and BTU Boards have approved the transaction
- Customary closing conditions and regulatory approvals

Leadership

- J.S. Whang, Executive Chairman; Fokko Pentinga, CEO; Brad Anderson, CFO
- 1 additional new board member: Paul van der Wansem, current CEO of BTU
- Peter Tallian will be GM of BTU International division

⁽¹⁾ Based on Amtech's closing price of \$10.13 on 10/21/2014.

Transaction Rationale Detail



- ✓ Combination brings together two leaders in thermal processing equipment
- ✓ Consistent with Amtech's strategy of pursuing strategic acquisitions that complement the existing platform
- ✓ Broader product portfolio
 - Semi Reflow products critical to the electronics assembly and semi packaging market
 - Portfolio of solar and other complementary thermal-based products
- ✓ Expands Amtech's served available markets
- ✓ Stronger footprint in China
- ✓ Expected to be immediately accretive to gross and operating margins with significant operational synergies
- ✓ Accretive to Amtech's FY2015 non-GAAP EPS

Broad Portfolio of Thermal Process Technologies



Semiconductor



Solar

Other

Amtech Suite of Products

Furnace & Automation



Amtech Suite of Products

Diffusion, Annealing Furnace



PECVD Furnace



Ion Implanter



Amtech Polishing

LED Templates



Carriers



BTU Suite of Reflow Products

Semi Packaging



SMT



BTU Suite of Products

Inline Annealing Furnace



Metallization



BTU High Temp

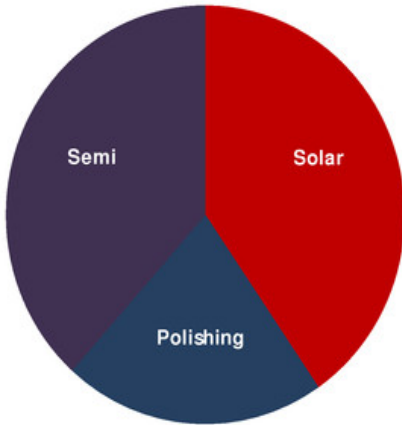
Custom and Belt Systems



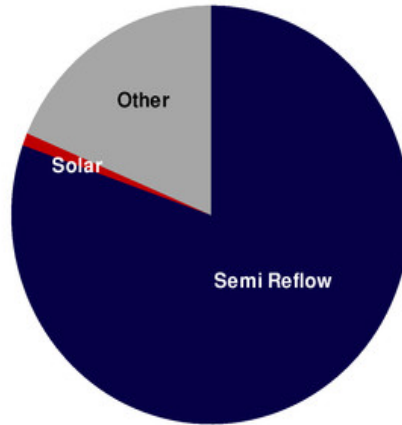
Walking Beam



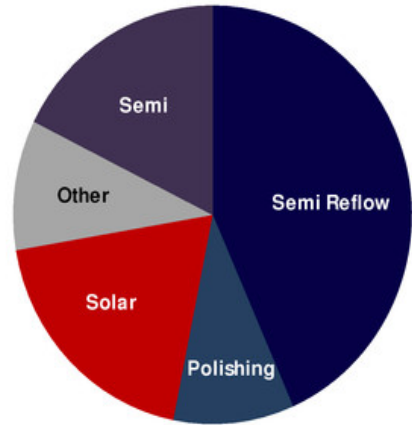
Diversified End-Markets



LTM Revenue
\$43.6M



LTM Revenue
\$51.1M



LTM Revenue
\$94.7M

Note: LTM financials are as of June 30, 2014.

