

# OPTOELECTRONICS

▲ R E P O R T ®

including Laser Report

September 1, 2008  
VOLUME 15 NO. 17

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## From the Editors

Optoelectronics is the technology of systems and devices that emit, modulate, transmit, or sense light. Optoelectronic devices include lasers and other light sources, optics, fiberoptic components, detectors, displays, and imaging devices.

*Optoelectronics Report*, now incorporating *Laser Report*, covers both national and international business news and market trends and tracks technology advances to interpret their business implications.

If you have news for *Optoelectronics Report* please contact Gail Overton at (603) 305-4756, or e-mail: [gailo@pennwell.com](mailto:gailo@pennwell.com).

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**LaserFocusWorld**



## Optics + Photonics continues nano, solar focus

**SAN DIEGO, CA**--Just like last year, SPIE's (Bellingham, WA) Optics + Photonics conference continued on the theme of a nano and solar future--perpetuating the idea that photonics can play a pivotal role in reducing the environmental and energy dependence problems of the 21st century. And judging by the record attendance, SPIE has found the right mix of topical areas by continuing again its NANO, SOLAR, PHOTONICS, and OPTICS emphasis (see [www.laserfocusworld.com/articles/308731](http://www.laserfocusworld.com/articles/308731) and [www.laserfocusworld.com/articles/305232](http://www.laserfocusworld.com/articles/305232)). The official 4812 attendee count was well above the 4400 attendees in 2006 (an apples-to-apples comparison considering that the 2008 even-year event does not include the SPIE Astronomical Telescopes and Instrumentation conference, held separately in June in Marseilles, France this

year). Judging by the growing momentum of the Optics + Photonics crowd, 2009 attendance should exceed the 5100 number recorded for 2007.

"It was interesting to note that while nanotechnology continues to be a hot area with the number of paper presentations increasing from 500 in 2007 to 700 in 2008, the solar energy conference saw overall larger percentage growth, increasing from 100 to 160 papers in the same time period," said SPIE manager of industry relations, exhibitions, and sales, Peter Hallett. The SPIE Optics + Photonics 2008 conference, held August 10-14 in San Diego, CA, was organized into the same four topical areas as last year: NanoScience + Engineering, Solar Energy + Applications, Photonic Devices + Applications, and Optical Engineering +

*continued on page 4*

## Economy gets blame for LASIK slippage

**WORLDWIDE**--The laser-assisted in situ keratomileusis (LASIK) eye-surgery market is experiencing a decline. While Advanced Medical Optics' (AMO; Santa Ana, CA) Q2 2008 financial results reported a 44% increase in international sales, the news was not all good. The equipment maker says weak U.S. economic conditions and corresponding significant declines in consumer discretionary spending drove down its U.S. excimer procedures nearly 40% in June. As a result, AMO now expects its 2008

U.S. excimer procedures to be approximately 25% below 2007 levels.

AMO holds approximately 64% of the excimer laser procedure share according to MarketScope data, and a recent Associated Press report noted that the laser vision correction franchise is a key revenue driver for the company, bringing in \$367.8 million in 2007.

Asked what the company foresees for 2009, AMO's manager of corporate communications Steve Chesterman told

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## NEWS BRIEFS

**Fiber license:** Arbor Photonics (Ann Arbor, MI) signed an exclusive license agreement for chirally coupled core optical fiber with the University of Michigan. The agreement grants Arbor Photonics rights to commercialize the fiber and devices enabled by the design for lasers, optical amplifiers, and laser-beam delivery. The chirally coupled core concept, dubbed CCC or 3C fiber, utilizes an internal structure to produce single-spatial-mode output from very large mode area fibers, and was invented by Almantas Galvanauskas at the University of Michigan Center for Ultrafast Optical Science. The technology will be used by Arbor Photonics to produce high-power, short-pulsed, single-mode fiber lasers for microelectronics, solar-cell manufacturing, and defense.

**Light up the World Foundation moves:** The Light up the World Foundation (LUTW; www.lutw.org), an international humanitarian organization dedicated to illuminating the lives of the world's poor, has moved to a new location in Calgary, AB, Canada. The LUTW is trying to bring ultra-efficient, durable, and near-permanent white light-emitting diode (WLED) lighting solutions powered by renewable energy to the poor in ecologically sensitive and remote rural areas. It is the first organization to utilize solid-state lighting technologies to bring affordable, safe, healthy, efficient, and environmentally responsible lighting to people currently without access to proper lighting. LUTW strives to be the leader in the advancement and diffusion of this technology for development purposes and remains globally active in setting standards in this field.

## OPTOmism announces call for papers

**NASHUA, NH and WASHINGTON, DC--** OPTOmism: Photonics for the Green Revolution, to be held jointly by Laser Focus World and the Optoelectronics Industry Development Association (OIDA) at the Santa Clara Convention Center in Santa Clara, CA, May 18–20, 2009, has announced its call for papers.

“OPTOmism Conference & Exhibition is the only event devoted to green photonics ... and more than a solar or lighting event,” says Michael Leppy, OIDA president and CEO. “The green photonic components market will exceed \$100 billion by 2010. No other event will include a collection of these technologies and the people who deploy them. This is a must-attend show for optoelectronics companies promoting a ‘green’ theme.”

From highly efficient solid-state lighting to clean manufacturing employing laser processing, and from new low-power display and communications technologies to photovoltaic energy generation, the conference will cover multiple segments of the photonics industry that will deliver solutions to enable greater efficiency, smaller carbon footprints while promoting economic growth.

### Benefits of presenting

At OPTOmism, you will have the opportunity to speak to senior industry executives, researchers, engineers, and investors as well as have an opportunity to examine ‘green’ technologies, explore their business implications, and review technology

roadmaps. In addition, your presentation will be included in our comprehensive pre-show direct marketing campaign and published in the OPTOmism Online Proceedings, a new source of influential, rapidly published, cutting-edge research.

We are seeking practical papers on the application of photonic technologies to sustainable development. In addition, we welcome presentations addressing key marketing developments in getting products to the green market space.

Abstracts are being accepted in the following areas:

- Solid-state lighting
- Solar photovoltaics
- High-efficiency displays
- High-efficiency communications and computing
- Photonic sensing for energy efficiency management (grid monitoring, smart building)
- Photonic sensing for energy resource management (oil recovery)
- Photonic sensing for energy efficient systems (combustion, turbines)
- Efficient manufacturing
- New and novel photonics developments for sustainable applications

To submit abstracts, go to [www.optomismshow.com](http://www.optomismshow.com) and click on Online Abstract Submittal Form in the left-hand navigational column. For more information or questions, please contact Jay Novack, event director, at [jayn@pennwell.com](mailto:jayn@pennwell.com) or call Jay at 603-891-9186.

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## Quantum-dot laser company gets Series C funding

**DORTMUND, GERMANY and SANTA CLARA, CA**--Innolume, a provider of quantum dot (QD) laser diodes and modules, secured a Series C round of financing for \$12.65 million to enhance production capabilities and marketing activities for their unique quantum-dot laser products for telecommunications, industrial, and medical applications, as well as to further develop its comb laser and related photonic integrated circuit technology. The funding round was led by S-Group Capital Management (SGCM) Limited, and joined by existing investors North Rhine-Westphalia (NRW) Bank, Peppermint Financial Partners, S-VentureCapital Dortmund, Robert A. Young, and Juergen Kurb. Applied Ventures, LLC joined as a new investor.

Innolume's quantum-dot laser technology covers the near-infrared wavelength range between 1000 and 1320 nm, beyond the conventional range of semiconductor lasers. The infrared part of the spectrum is of great interest in telecommunications, as well as in medical lasers, direct materials processing, and in frequency-doubling technology used in displays and projection systems. Compared to existing semiconductor lasers for telecom wavelengths, quantum dots offer precise wavelength control and high power efficiency at the same low cost that wafer fab processing enables. Among Innolume's QD products are epitaxial wafers, high-power lasers, gain chips, light-emitting diodes, single- and multimode laser bars, and semiconductor optical amplifiers.

The comb source, introduced in March 2008, is a single Fabry-Perot laser diode that provides hundreds of stable lasing lines for wavelength-division-multiplexing (WDM) optical interconnects in computer applications. It can reach power levels greater than 1 mW/channel over 100 channels, with channel spacing ranging from less than 50 GHz to 140 GHz centered at any wavelength between 1250 and 1320 nm. "The race is on to reduce the cost of optical solutions for short-reach interconnects to the level needed by high-volume,

mainstream computing applications," said Juergen Kurb, CEO of Innolume. "Our vision is to enable high-density, low-cost, WDM transmission by using a single light source for all wavelengths--Innolume's comb-laser." Kurb added, "This funding will also enable Innolume to rapidly introduce quantum-dot based devices aimed at specific high-value medical applications."

Innolume's preferred compound semiconductor material system is indium arsenide (InAs) quantum dots in gallium arsenide (GaAs) with aluminum gallium arsenide (AlGaAs) barriers on GaAs substrates. The lasing wavelength window for Innolume's quantum dot lasers is between 1064 nm and 1320 nm, controlled by the size and distribution of quantum dots, and indium concentration. This range fills the wavelength gap between quantum-well lasers based on either GaAs (less than 1100 nm) or indium phosphide (greater than 1300 nm).

Innolume is partnering with unnamed top-tier semiconductor companies on the QD comb laser and related products. "Since the computer industry has lately committed to merging silicon computing technology with laser-powered optical interconnects, we are excited that Innolume's innovation applies the silicon integration paradigm for the first time to these lasers, namely, increased functionality and higher performance at lower cost," said Ilia Dubinsky, SGCM Partner. Although company executives predict that optical interconnects will not dominate the computer landscape for at least another 10 years, in the short term, they see "ample opportunities in high-speed optical interconnects and proprietary high-performance computing applications."

Originally spun-out of the Ioffe Physico-Technical Institute (St. Petersburg, Russia), Innolume began with the name Nanosemiconductor in a fabrication facility in Dortmund, Germany in 2003. The company acquired Zia Lasers (Albuquerque, NM) in Dec. 2006, and subsequently became Innolume.

--Valerie C. Coffey

## NEWS BRIEFS

**iParenting media award:** The Optical Society of America's (OSA; Washington, DC) optics youth education Web site, OpticsForKids.org, won an iParenting Media Award for Outstanding Products of 2008. iParenting.com is an online community for parents and parents-to-be and is part of Disney's network of family-focused Web sites. The award recognizes exceptional products for parents and their families in 20 categories. Earlier this year, OSA re-designed the OpticsForKids.org site and added features such as an optics history timeline, a gallery of optical images, experiments students can conduct on their desktops and at home, tutorials, a career quiz, and much more. The Web site seeks to provide comprehensive optics resources for pre-college students, parents, and educators.

**Business Achievement Award:** Powerlase (Crawley, England), manufacturer of nanosecond Q-switched, diode-pumped solid-state (DPSS) lasers, was awarded The Business Achievement Award 2008 by Clarke Willmott for being the fastest-growing technology business. Powerlase's rapid growth rate is a reflection of its established global presence and success in plasma display screen manufacturing processes, says the company, and it has strengthened its position as a global laser supplier through the development of distribution channels in Europe, Korea, Japan, Taiwan, and China. In addition, Powerlase's new 100G and 200G lasers have been developed to benefit the solar-cell processing and AMOLED screen display markets.

## NEWS BRIEFS

### Healthy LCD forecast:

DisplaySearch (Austin, TX), display market research and consulting firm, reports in its *Quarterly TFT LCD Supply/Demand and Capital Spending Report* that 2008 is expected to see sales of equipment used to manufacture thin-film-transistor liquid-crystal displays (TFT LCDs) surge 58% to \$13 billion, reaching near-historic levels not seen since 2004. According to DisplaySearch VP of Manufacturing Research Charles Annis, "Reduced fab utilization in July by panel manufacturers combined with seasonal demand affects could lead to healthier supply/demand in September and October." Spurred by the large number of new fabs being built this year and ramping next, TFT LCD array capacity is expected to rise at a compound annual growth rate of 35% from 2000 to 2013.

**Must-have AMOLEDs:** According to an August 14 report from display consultant and forecasting firm Insight Media (Norwalk, CT), Nokia will only select panel suppliers who are able to develop amorphous organic light-emitting diode (AMOLED) displays. Although Nokia does not currently use AMOLED displays in its products, Nokia wants to have long-term partnerships with its suppliers and those suppliers must have development and volume production plans for AMOLED panels in place. AUO and TPO Display, two Nokia panel suppliers who have not been very active on the AMOLED front recently, are now re-instituting AMOLED development programs.

### Optics + Photonics continues nano, solar focus, continued from page 1

Applications. Hallett added, "The solar energy portion of the program also saw 33 papers in a new conference (7048) on reliability of photovoltaic (PV) components and systems--an indication that this technology is reaching a certain level of sophistication and maturity as commercial viability improves for PV technology."

### Solar emphasis

Pardon the pun, but solar technology is "hot, hot, hot" and it seems everyone is getting into the action. In fact, even Intersolar North America was co-located with SEMICON West for the first time--a strategic move on the part of conference organizer SEMI (San Jose, CA) to add PV to its roster as the global representative of the semiconductor, display, MEMS, and now PV, and related industries (see [www.laserfocusworld.com/articles/336193](http://www.laserfocusworld.com/articles/336193)). SPIE's Optics + Photonics 2008 was no exception. The Sunday evening All-Conference Plenary Session was appropriately focused on solar energy and sustainable technologies, with Richard King, director of the U.S. Department of Energy (DoE) Solar Decathlon, characterizing the Solar Decathlon program as "brain sport"--a challenge that occurs every two years in which 20 university teams from around the world compete in the building of zero-energy prototype homes temporarily installed on the Capitol Mall in Washington, DC.

In the Solar Decathlon (solardecathlon.org), teams are given \$100,000 each by the DoE to start the project and can then raise additional money independently. The houses are on display for 21 days on the Mall. Technische Universität Darmstadt won the 2007 competition, in which the constructed "sustainable" houses are evaluated for architecture, engineering, market viability, comfort, and six other factors.

There were five presentations in the Monday afternoon Solar Energy Plenary Session, each echoing the message from Harry A. Atwater, professor at the California Institute of Technology

(Pasadena, CA), who said in his opening Plenary, "We have a huge problem to solve." Atwater was of course referring to the energy crisis, and how PV technology doesn't matter unless efficiencies can be improved and it can actually impact the energy supply, which he described as a "terawatt problem." Focusing on the role of nanostructures in PV technology, Atwater recognizes that crystalline silicon structures have potentially reached power-conversion efficiency limits, while multiple-exciton-generation and plasmonic PVs that incorporate nanostructures and utilize earth-abundant semiconductors such as zinc phosphide could be the answer to improved conversion efficiencies.

Even though the crowd of approximately 500 thinned out as the Solar Energy Plenary progressed, Joseph J. Michalsky's (physical scientist at NOAA in Boulder, CO) presentation on "The Environment's Effects on Solar Radiation" took an interesting look at how surface PVs and concentrating PVs differ in performance as a function of environmental factors (atmospheric dust, clouds, proximity to green or paved surfaces--alfalfa good, blacktop bad). For example, the eruption of Mt. Pinotubo had little effect on surface PVs, while concentrating PV collection capability was reduced 15–20%.

And once again, that issue of earth-abundant semiconductors and metals came up in the Plenary by Craig Grimes, Pennsylvania State University professor, who discussed direct conversion of solar energy to hydrogen. The problem with obtaining hydrogen from water through electrolysis is the consumption of platinum, a non-renewable resource. Grimes sees photoelectrolysis as a route to effective hydrogen production, but notes that earth-abundant materials need to be developed to develop metal cathode materials that are likewise earth-friendly.

### It's a nano world

Technical sessions in the NanoScience category included tracks on metamaterials, plasmonics, spintronics, and carbon nanotubes and associated devices, while

the NanoEngineering tracks focused on optical trapping and manipulation, instrumentation and metrology, nanostructured thin films, and nanobiosystems.

These nanobiosystems were heavily emphasized throughout the five early Monday morning NanoScience + Engineering Plenary sessions, especially with the presentation "Applications of Biological Materials" from Rajesh Naik, technology advisor at the Air Force Research Lab (AFRL; Wright-Patterson AFB, OH). Naik explained how bio-nano interfaces (such as bacteria coated with nanoparticles) and biotemplates (such as the use of DNA structures to build complex multi-component nanomaterials; see also the September issue of Laser Focus World for a feature article on DNA Photonics) can improve the fabrication of nanomaterials--reducing toxicity in some cases and improving self-assembly of complex structures.

A more light-hearted Plenary from Kwang-Sup Lee, Dean of the College of Life Science and Nanotechnology at Hannam University in South Korea, focused on two-photon polymerization (TPP) and two-photon lithography for fabrication of three-dimensional nano/micro-scale objects. Lee described how it took three hours to fabricate a 10  $\mu\text{m}$ -sized figure of Rodin's Thinker using TPP. This presentation was followed with a more practical discussion on excimer-laser lithography for large-area nanoelectronics, aptly pointing out that it is extremely important in our industry not just whether something can be done, but how fast it can be accomplished in practical applications.

### Exhibition and new products

In addition to record overall attendance for SPIE's Optics + Photonics 2008, the exhibition also housed a record number of 279 exhibiting companies, compared to 266 exhibitors in 2007.

Reinforcing the solar-energy dream, the Optics + Photonics exhibit floor showcased (although it should have been more prominently displayed at the front or middle of the hall rather than the back) the Viking XX Solar Race Vehicle--a cre-

ation of the Vehicle Research Institute (VRI) at Western Washington University (Bellingham, WA).

If you didn't look carefully, the Viking XX looked more like a top-heavy light airplane or glider, with a tiny push-me-pull-you bidirectional cockpit that insured the car's huge, sloping solar panel would always be facing south for maximum solar exposure. Nathan Chapman, a VRI volunteer who helped build the vehicle, was able to provide Laser Focus World some interesting facts about the car in a video interview that will be posted to our online video player at [www.laserfocusworld.com/resourcecenter/video.html](http://www.laserfocusworld.com/resourcecenter/video.html).

The Viking XX--equipped with 10,324 space-grade monocrystalline silicon solar cells with 15% efficiency and peak power 1800 W, Eagle Picher silver-zinc batteries, and a 95% efficient 10 hp Unique Mobility permanent-magnet DC brushless motor--is able to achieve top speeds of 70 miles per hour (mph), 50 mph average highway speed, and 32 mph average in the city. The 19.7 x 6.5 x 5.3 cubic-foot car placed first in the California Clean Air Race from Sacramento to Los Angeles, and has a roster of other wins as well. While the design is definitely "prototypical," it nonetheless shows what is possible in an age where all possibilities are in dire need and must be embraced to eliminate our fossil-fuel dependence.

In addition to the solar car, Steven Nia, chairman and CEO of Digital Light (Los Angeles, CA) was demonstrating his light-emitting diode (LED) light-bulb and flood-light replacements for traditional incandescent fixtures. While the price seemed high at \$25 for a 4 W LED lamp to replace a conventional 40W bulb, these decades-lasting bulbs exemplify the role that solid-state photonics is playing in reducing worldwide energy consumption (and in reducing the material waste associated with "consumable" products).

I'll be eager to see if Optics + Photonics 2009 can exceed 5100 attendees; in the meantime, mark your calendars for next year's show--August 2--6 in San Diego, CA.

--Gail Overton

## NEWS BRIEFS

**ASAP software release:** Breault Research Organization (BRO; Tucson, AZ) released an enhanced version of its Advanced Systems Analysis Program, ASAP. The ASAP 2008 V2R1 release, a tool for virtual prototyping of optical systems and devices, includes the following enhancements: User-defined penalty functions have been added to help guide optimization routines toward ideal solutions; Realistic Retarder Models have been added to complement Realistic Polarizer Models; Poincare Sphere Enhancements; A larger set of roughness and scatter models that are grouped by manufacturer where appropriate; ASAP will now automatically detect and interactively manage duplicate geometry during the IGES import process, and an even wider range of CAD geometries may be imported; Improved system geometry for visualization in the 3-D Viewer.

**Organic grand opening:** On Thursday, October 30th 2008, the Fraunhofer Institute for Photonic Microsystems (IPMS; Dresden, Germany) will have a grand opening for the expansion of its Center for Organic Materials and Electronic Devices Dresden, or COMEDD. Fraunhofer IPMS is undergoing the conversion of its organics clean room along with the construction of a worldwide unique fabrication technology for the large-area deposition of organic light-emitting diodes (OLEDs). The grand opening will include a tour of the clean room and a press conference. Visitors are also asked to visit COMEDD's OLED showroom and participate in their symposium with a keynote speech by Stephen Forrest and representatives from notable lighting companies; contact [moritz.fleischer@ipms.fraunhofer.de](mailto:moritz.fleischer@ipms.fraunhofer.de).

## NEWS BRIEFS

### Nanopatterning system sales:

Nanopatterning equipment provider Molecular Imprints (Austin, TX) announced that Yamagata Fujitsu placed an order for its newly introduced Imprio HD2200 system to be used for patterned media development at the company's manufacturing facility in Japan. Molecular Imprints says that hard disk drive (HDD) companies, driven by the need to substantially enhance storage capacities and decrease cost, are turning to nanopatterning solutions for their high resolution and low cost of ownership. This sale represents the ninth Imprio system sold to the HDD industry in total, and the seventh sold to the HDD industry within the past 12 months.

### Gyro contract: Northrop

Grumman Corporation won a contract to supply high-accuracy inertial navigation systems (INS) for four new Buques de Accion Maritima (Maritime Action Ships) being built for the Spanish navy at the Navantia shipyard in Ferrol, northwest Spain. The contract, valued at more than \$1.5 million, was awarded by Navantia to Northrop Grumman's Sperry Marine business unit. Installation, commissioning, and trials will be overseen by Sperry Marine's sales and service representative in Spain. Each of the ships will be fitted with one MK 39 Mod 3A ring laser gyro (RLG) INS and one MK 27 fiber-optic gyrocompass. The MK 39 Mod 3A will provide both high-accuracy geographic positioning information and precise attitude and heading data for navigation and weapon systems.

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Company	Ticker	Aug. 13	Aug. 28	52-week	
				Low	High
Agilent	A	36.11	35.28	28.79	39.32
Avanex	AVNXD	10.00**	6.22	5.57	28.50
Bookham	BKHM	1.76	1.69	1.13	3.39
Ciena	CIEN	17.60	17.55	16.34	49.55
Clearfield	CLFD	1.09	1.30	0.79	2.00
Coherent	COHR	37.65	36.53	22.10	38.50
Corning	GLW	20.88	20.65	19.31	28.07
Cree	CREE	21.83	23.47	17.10	35.50
Cymer	CYMI	30.90	30.47	22.86	44.73
Dalsa*	DSA.TO	10.63	9.59	7.27	16.75
Data Translation	DATX	0.55	0.52	0.52	1.25
Eastman Kodak	EK	16.90	16.36	12.20	29.60
Electro Scientific	ESIO	16.00	14.50	13.61	25.64
Emcore	EMKR	5.18	5.73	3.90	15.90
Enablence Tech.	ENAFF.PK	1.13	1.08	1.06	1.59
Excel Tech.	XLTC	30.75	32.01	21.41	32.05
EXFO	EXFO	4.13	4.17	3.75	7.36
GSI Group	GSIG	5.32	5.00	4.65	11.71
II-VI	IIVI	46.85	43.95	26.53	48.26
Infineon	IFX	8.79	8.76	6.26	17.24
Infinera	INFN	10.94	11.12	7.79	27.12
IPG Photonics	IPGP	21.24	19.85	13.80	22.34
ITT Industries	ITT	65.17	65.02	50.94	69.96
JDS Uniphase	JDSU	11.06	10.27	9.49	16.05
JMAR Tech.	JMAR.OB	0.17	0.15	0.04	0.28
Lightpath Tech.	LPTH	1.45	1.60	1.04	5.01
LSI Industries	LSI	7.59	7.02	3.75	7.87
MRV Comm.	MRVC	1.42	1.38	0.96	3.38
Nanometrics	NANO	3.98	3.67	3.12	11.71
Newport	NEWP	9.76	9.50	9.24	16.15
Nortel Networks	NT	5.89	5.92	5.51	19.50
Omnivision	OVTI	12.41	10.88	10.72	25.17
PerkinElmer	PKI	28.83	28.67	21.88	30.00
QPC Laser	QPCI.OB	0.30	0.15	0.12	1.00
Rofin-Sinar	RSTI	41.46	41.63	28.48	48.83
Thermo Electron	TMO	61.45	61.46	46.63	62.77
Three-Five Systems	TFSI.PK	0.03	0.02	0.02	0.11
Universal Display	PANL	14.57	14.42	10.73	23.35
Veeco Instruments	VECO	17.95	17.17	12.04	20.50
Zygo	ZIGO	11.50	10.64	8.80	13.89

\*Figures quoted in Canadian dollars.

\*\*Avanex 15:1 reverse stock split 8/12/08.

N/A--Not available.

All information is believed to be accurate at the time of publication, but *Optoelectronics Report* is not responsible for errors.

**Economy gets blame for LASIK slippage, continued from page 1**

*Optoelectronics Report*, "We can't speculate but we're working to minimize the downside where we can, while ensuring that we're well positioned to capitalize when things turn around. This includes aggressively promoting the benefits of our proprietary iLASIK technology suite which combines the IntraLase and CustomVue procedures, to fortify our market leadership position, and to expand internationally reducing our exposure to any single market."

Primarily because of its revised outlook for U.S. refractive procedures, AMO reduced its adjusted 2008 earnings-per-share (EPS) guidance to a range of \$1.00 to \$1.15 (versus prior guidance of \$1.25 to \$1.45). This summer, the company's share price ran in the high teens to low 20s--about where it was at the start of 2004; in 2006, shares hit an all-time high of just over 50 dollars.

**The services side**

Similarly, TLC Vision Corp. (Mississauga, ON, Canada) announced a loss of \$2.2 million for its second quarter, which ended June 30. The \$300 million eye-care services company, which provides "eye doctors with the tools and technologies needed to deliver high-quality patient care" through nearly 60 centers across the U.S. and Canada, is likewise blaming its loss on the decline in vision-correction procedures. "Our results this quarter in our LASIK businesses were significantly impacted by the weak economy, as evidenced by a consumer confidence index that has declined to a level not seen since the early 1990s," said company president and CEO Jim Wachtman. A year earlier, the company reported a profit of \$876,000 for the same quarter. Q2 revenue was \$74.1 million for 2008, down 7.5% from \$80.1 million in 2007.

"Although our performance was ahead of the overall industry that experienced a decline estimated at 25% to 30%" in Q2, said Wachtman, "we experienced a significant weakening in procedure volume." In the first quarter of 2008,

the company reported strong growth and record results. Still, said Wachtman, "We continue to gain market share despite lower volumes, with our same-store, majority-owned centers posting a 6.2% procedure decline through the first half of 2008 compared to an industry that is estimated to have declined 20% during the same six month period."

**FDA, competition**

Neither of the companies blames for its declines the April U.S. Food and Drug Administration (FDA) hearing that took input from disgruntled patients and their families concerning failed LASIK procedures. "Recent consumer market research through Iconoculture indicated that less than 2% of those surveyed recalled seeing, hearing, or reading any news related to the FDA and LASIK. Therefore, we feel it had little to no affect on our business," Chesterman said. "AMO did not make a presentation at April's FDA meeting. However, the FDA reaffirmed yet again that LASIK is safe and effective and for the vast majority of people," added Chesterman. "The FDA panel was able to hear powerful public testimony from physicians and the military on more than a decade's worth of clinically sound data, which supported the procedure's safety and effectiveness."

According to the American Society of Cataract and Refractive Surgery, 95.4% of LASIK patients worldwide are satisfied with the results of their surgery. But for the minority that aren't, the resulting blurred vision and dry eyes can be devastating.

In any case, STAAR Surgical Company (Monrovia, CA) says Q2 U.S. sales for its Visian ICL (Implantable Collamer Lens) exceeded the total sales for both the first quarter of 2008 and the second quarter of 2007. STAAR markets Visian ICL as an alternative to LASIK. But AMO's Chesterman says, "We don't see this as competition. LASIK is the number one elective procedure for vision correction worldwide."

--Barbara Goode

**NEWS BRIEFS**

**POF to break records:** The 17 International Conference on Plastic Optical Fibers (POF 2008; pof2008.com) will be held August 25-28, 2008 in Santa Clara, CA. The event is organized by the International Committee on Plastic Optical Fibers (ICPOF) and Information Gatekeepers and is held yearly in Europe, the U.S., and Asia Pacific on a rotating basis. Pre-registration attendance at this year's event has already eclipsed all other events. Conference organizers say the increase in attendance can be attributed to the growing demand for low-cost, low-weight, and EMI-free optical links provided by POF.

**People in the news:** Effective July 1, 2008, Elke Eckstein assumed the post of COO at OSRAM Opto Semiconductors GmbH (Regensburg, Germany). Her predecessor, Jörg Thäle, who held the post from 2006 to April 2008, has moved to the parent company, OSRAM GmbH, where he holds the position of CEO of the Low Pressure Discharge Business Unit. Eckstein brings more than 25 years of experience in the semiconductor sector to her new position, as well as extensive specialist knowledge. Most recently, she was VP, manufacturing, at semiconductor factory AMD in Dresden. Before moving to AMD, she was CEO for three years at ALTIS Semiconductor, a joint venture between IBM and Infineon.