

May 2008

Valtronic View

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Company Currents



Valtronic Technologies Manufactures Miniaturized Medical Lasers

Valtronic Technologies now custom designs and manufactures semi-conductor diode lasers for medical applications. We have also developed a proprietary light delivery technology, which offers improved reliability, increased efficiency, and a longer product life than conventional fiber optic delivery systems.

We apply our expertise in miniaturization technologies to build medical lasers for OEM's. Combining these technologies allows us to build extremely compact and portable diode lasers. Valtronic Technologies can be your single source provider for engineering, sub-assemblies, as well as complete box builds for an integrated solution. Our lasers are compact, user-friendly, highly consistent, and adaptable to many medical applications.

We offer laser diode modules to complete turn-key laser systems. Valtronic Technologies provides expertise in using diode laser technology with a broad range of wavelengths and frequencies for applications such as:

- Photobiotherapy
- Surgery
- Medical
- Photodynamic Therapy
- Cosmetic Therapy

We offer custom packaging solutions. Please, contact us to discuss your requirements.

Industry Update

Microflex Circuit Applications for Medical Devices

The materials that Valtronic Technologies uses to create miniaturized circuits for implantable devices are an integral part of our ability to miniaturize to the extent that we do. Flex circuits are used in a majority of our implantable device projects. The ability to package more power and capability on small circuits can be limited by the technology of our materials. Read how new innovations in flex circuit technology are being developed to meet the growing demands for a miniaturized market.

[Microflex Circuit Applications for Medical Devices](#)

Conference Corner

Upcoming

IMAPS Meets at Valtronic Technologies on Tuesday, May 20, 2008

Registration: 5:30 to 5:45

Facility Tour: 5:45 to 6:30

Presentation by Don Styblo, VP of Technology: 6:30 to 8:00

Beverages and light sandwiches will be available during the presentation

Please RSVP on-line by Friday, May 16 at [IMAPS](#).

International Meeting on Chemical Sensors July 13-16, 2008

Don Styblo, VP of Technology will be speaking at the IMCS meeting in Columbus. The focus of Don's talk will be on Manufacturing Extremely Miniaturized Electronic Circuits and Sensors for Medical Devices. For registration information go to [IMCS](#)

Recap

OAI (Ohio Aerospace Institute)

Valtronic Technologies participated in a collaborative meeting with Ohio State University (OSU) representatives and other OAI members to learn more about OSU's Institute for Sensor Systems and the research and technology partnership opportunities.

MDM West

Valtronic Technologies exhibited at MDM West for the first time in January. We had the opportunity to meet many new people as well as connect with customers. Don Styblo, VP of Technology spoke about the complexities of Miniaturized Medical Devices and Sensors to an enthusiastic audience who had the opportunity to get a more in-depth look at Valtronic Technologies capabilities in working with sensors.

Meet the Staff

Joe Horvath - Project Engineer

What is the most important part of your job?

There are several aspects of my job that are very important. Attention to detail is very important, as is making sure that our manufacturing documents are in agreement with our customer's specifications and satisfying the end customer's requirements.

What is a typical day like for you?

There is no typical day, my tasks are widely varied from meeting with customers, creating manufacturing documents, designing circuit boards, finding replacements for obsolete components or troubleshooting and correcting problems.

How did you get into Engineering?

When I was about six years old, I remember my father was changing the engine in his car and he had the engine hanging from rafters in my grandfather's barn. I thought that was really cool. Being around tools and all kinds of machinery while I was growing up made majoring in engineering a natural choice in college.

What is the most important lesson you have learned in your career?

I've learned that I still have a lot to learn.

Lastly, what do you look forward to doing that is not work related?

When I'm not splitting wood or working on a project around the house like re-roofing the garage, I am training for the Cleveland Marathon which I am running on May 18. This also requires that I eat a lot of food, so I spend a lot of time in the kitchen cooking; fettuccini alfredo with chicken and apple pie are two of my specialties.



Contract Manufacturing and the Medical Device Industry

On the go? Download our newest podcast discussing the opportunities and benefits of contract manufacturing in the medical device industry.

[Contract Manufacturing for the Medical Device Industry](#)

Tech Check

What has 432 stud bumps with only 60x60 micron pads on the die with 150 micron pitch? A Valtronic Technologies substrate for a miniaturized portable ultrasound. A new challenge for Valtronic Technologies was to stud bump ASIC die pads of such a small size and flip chip them on a substrate with space between the die being only 200 micron. Previously the largest number of stud bumps on an individual die Valtronic bumped was 250, and for comparison 60 micron pads are thinner than a human hair. The developers of the product came to us with this immense challenge for which they previously couldn't find a manufacturer capable of doing...until they came to Valtronic Technologies. Do you need a solution that you haven't been able to find? Contact us to see if we can help.

Academic Relations



Valtronic Technologies is proud of the work we have done with academic institutions to date and look forward to what the future holds as we continue to engage students and faculty to discover and share knowledge about miniaturized electronic technologies through collaboration and information exchange.

The beginning of the year has brought many interesting opportunities thus far. We had the opportunity to meet with members of IEEE clubs at the University of California Riverside, Rochester Institute of Technology and also Case Western Reserve University. In addition, because Case Western Reserve is in our own backyard we have hosted several factory tours for a number of Electrical Engineering graduate students. It was a great opportunity for the graduate students to access the expertise our engineers have in electronic miniaturization! We look forward to hosting additional events at our facility.

We are actively setting up lectures for 2008. This year we will continue focusing on forming relationships with IEEE (Institute of Electrical and Electronics Engineers) and BMES (Biomedical Engineering Society) clubs and providing them the opportunity to see how what they are learning can be applied to miniaturized electronics and how they can be used in developing products. Valtronic can provide a speaker for chapter meetings or even host local chapters at our manufacturing facility in Solon, Ohio.

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