



# *BMDO Update*

Linking American Businesses to Ballistic Missile Defense Technology

This article is reprinted from the *BMDO Update* newsletter, a publication of the BMDO Technology Applications program.

SPRING 2001  
ISSUE #37

## ELECTRONICS

### NEW PATTERNING TECHNOLOGY MAKES FASTER ELECTRONICS, SHARPER DISPLAY

Attention microelectronics manufacturers: Frustrated by the limited size of substrates that lithography systems can

handle or by the slow throughputs of large area patterning systems? If so, take a good look at the product line of the small but rapidly growing Anvik Corporation (Hawthorne, NY). With the help of BMDO SBIR-

funded research, Anvik has developed a line of large-area excimer-laser patterning systems that offers higher resolution and higher throughput than other units now used—at a fraction of the price.

By placing the lithography mask on the same planar stage as the substrate, Anvik's system design allows the mask and substrate to scan in unison, thereby eliminating the

difficult and costly synchronization of separate stages. In addition, Anvik's hexagonal scanning technique eliminates the stitching errors that plague conventional projection and step-and-repeat imaging techniques. This capability allows substrates as large as 24 x 24 in. (610 x 610 mm) with a variety of thicknesses and flexibilities that are seamlessly produced at uniform exposure. Minimum image resolutions as low as 0.5 to 0.7 microns are possible at a throughput rate as high as 240 12 x 12-in. (305 x 305 mm) panels per hour. Anvik's simplified design is more affordable as well: Systems cost between \$600,000 and \$1.5 million, as compared to \$5 to \$7 million for traditional stepper units.

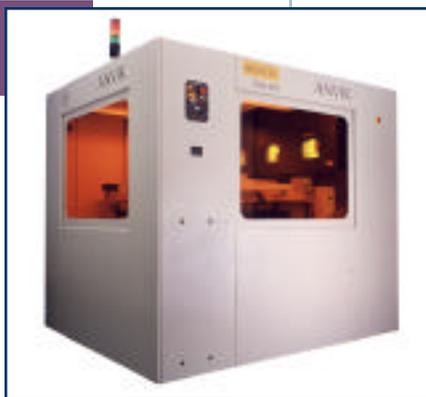
Anvik's patterning systems can pattern lithographic features and form vias for production of a variety of electronic devices, such as flat-panel displays, multichip modules,

printed circuit boards, and microelectromechanical systems. They can be used in a variety of fields. Circuitry manufacturer Sheldahl, Inc., has acquired an Anvik system to manufacture flexible circuits for cell phone and automotive applications. And, the Swedish industrial research company ACREO is developing the next generation of large-area optoelectronic modules for high-speed communication applications with an Anvik system. Anvik Corporation welcomes sales inquiries from interested companies.

☑ Contact Marc Zemel of Anvik Corporation at (914) 345-2442.

Web site: [www.anvik.com](http://www.anvik.com)

E-mail: [mzemel@anvik.com](mailto:mzemel@anvik.com)



**Affordable lithography.** Anvik's microelectronics patterning systems offer higher resolution and higher throughput than competing systems—at a fraction of the cost.