

Market III-V Compounds

Here is a short article to the market for **III-V** compound semiconductors as it appeared in "Solid State Technology in Jan. 2003.

Illustration

Consumables in compound semiconductors top **\$1B** in **2002**

- The global market for critical consumables utilized in the fabrication of compound semiconductor-based devices such as laser diodes, light-emitting diodes, and **ICs** reached almost **\$1.1** billion in **2002**, according to a study recently by Kline & Co. Overall, Kline projects the global market for these materials to double from **\$1.1** to **\$2.2** billion over the next five years.
- The continued growth of this industry sector and the need for high-value-added chemicals and materials are forcing many companies to reevaluate their market strategies in this industry, according to Michael Corbett, director of Kline's electronic chemicals and materials practice. "This market is much more than a niche opportunity, and several companies are actively pursuing aggressive growth strategies here." Many of the suppliers of chemicals and materials to the compound semiconductor industry, including Air Products, Honeywell, Matheson Tri-Gas, and Shipley are also suppliers to the CMOS semiconductor industry," says Corbett. "These companies feel that they can take lessons learned in CMOS and apply them here to develop new business models to better meet customer needs."
- Growth for compound semiconductors will continue to be fueled by the continued use in mobile wireless communications, especially for power amplifiers in handsets such as cellular telephones, pagers, and global positioning systems, the research firm said.
- Superior performance in photonics, however, explains most of the excitement over the future of compound semiconductors. Markets for laser diodes and high-brightness **LEDs** appear favorable in the short term as new products are developed for outdoor signage, optical storage, automobiles, and new lighting systems. In the medium term, the market for infrared lasers and detectors is likely to show significant growth from a base that has been severely depressed by overstocking and low demand, said Kline and Co. In the long term, there is the hope that **LEDs** will become commonplace as substitutes for indoor lighting. If this happens, sales could suddenly skyrocket, but the cost of making **LEDs** from compound semiconductors would have to come down significantly. Major lighting companies such as Philips are currently investing **R&D** resources to that end.