

2009 Optoelectronics

Semiconductor Product Markets – Worldwide



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Publication Number: 09SemiProd-Optoelectronics

June 2009

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www.databeans.net

Abstract

Controlling and detecting light in electronics has never been more integrated into common electronic applications. Image sensors and LEDs have been incorporated into very high volume application designs and the opportunity for growth continues to surpass many digital IC product markets.

Optoelectronics include both integrated and discrete products that source, detect, or otherwise control light. Image sensors convert light into an electrical signal, LEDs illuminate, couplers use optics to isolate transmission signals, and laser transmitters and pick-up are used in CD and DVD applications. This product category's revenue is growing at a compound annual growth rate of 15 percent each year, well above the average revenue growth for semiconductors.

The current market for optoelectronics worldwide is valued at \$16.7 billion. This is a decrease of 6 percent for worldwide revenue from 2008. Unit shipments are expected to increase this year as demand for LEDs and OLEDs drives a shift in share from higher priced image sensors to these energy efficient lamps that are now backlighting televisions, mobile phones, and other displays.

The major application markets for optoelectronics are mobile phones, digital cameras, LCD televisions, communications infrastructure, and DVD. Emerging application markets are driving growth and include lighting fixtures and OLED displays in the near term. Longer term advancements in optoelectronic technology will be driven by more “green” photonic applications, advancements in medical applications, and security. Also advancements in manufacturing technology for optoelectronics will benefit other markets such as alternative energy. Most of this technology will benefit demand for LEDs, optocouplers, and image sensors.

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