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## CMOS Image Sensors Regaining Growth Momentum

*The once-hot product category will benefit from new imaging applications beyond cellphones*

Less than five years ago, CMOS image sensors were one of the fastest growing segments in semiconductors, but since the middle of the last decade, this optoelectronics category has struggled with price erosion resulting from increasing competition by suppliers, slowing growth rates in camera-phone applications, and the last recession. After dropping 16% in 2009, CMOS image sensor sales rebounded by just 17% in 2010 to \$4.5 billion compared to the semiconductor industry's much stronger growth of 32% last year. Beginning in 2011, however, CMOS image sensor sales are expected to gain new momentum and consistency in growth from new systems applications beyond camera phones and stand-alone digital still cameras, concludes IC Insights' new *2011 Optoelectronics, Sensors, and Discretets (O-S-D) Report*.

### MORE INFORMATION CONTACT

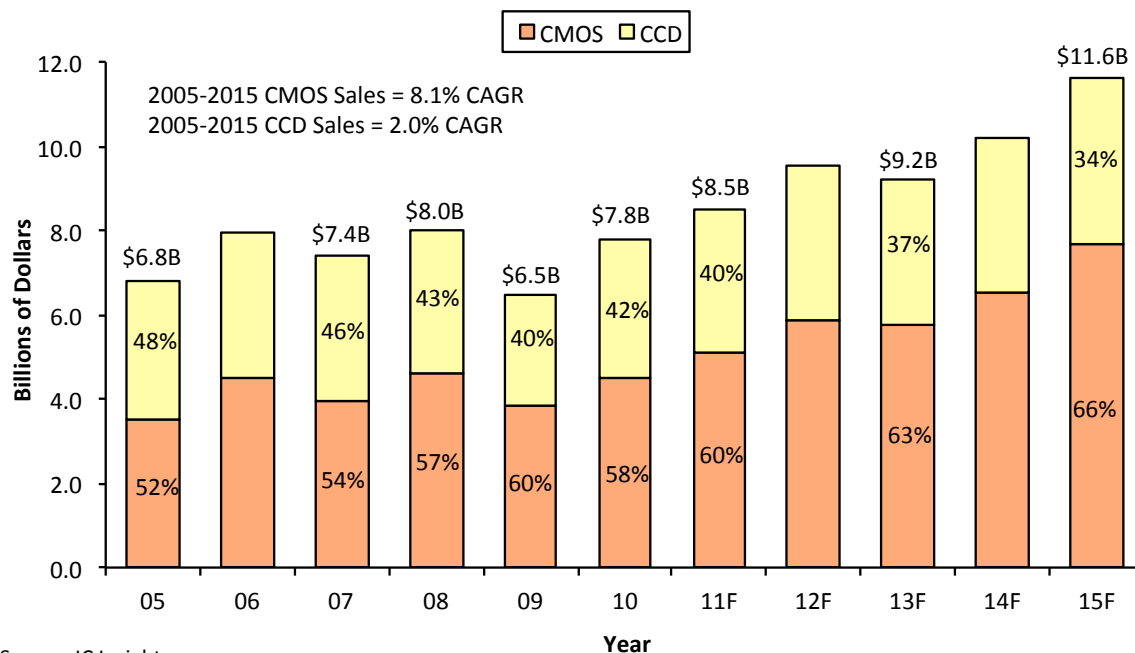
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The 350-page *O-S-D Report* shows CMOS imager sensor sales growing 13% in 2011 to a new record high of \$5.1 billion, topping the previous peak of \$4.6 billion set in 2008. CMOS image sensor revenues are forecast to increase at a compound annual growth rate (CAGR) of 11.2% in the next five years, reaching \$7.6 billion in 2015. CMOS imaging devices are expected to account for 66% of the total image sensor market in 2015, compared to about 58% in 2010. Charge-coupled devices (CCDs), which still dominate consumer digital camera applications, video camcorders, scanners, and copiers, account for most of the remaining sales—42% in 2010 and a projected 34% in 2015 (Figure 1).

Between 2003 and 2008, CMOS image sensor dollar volumes increased at a CAGR of about 27%, with unit volume shipments climbing by an annual average of 42%, but those rates of growth slowed significantly in the 2005-2010 period (5.1% for sales and 14.4% for units), according to the *O-S-D Report's* analysis. While there has been some consolidation in the image sensor segment, more than 35 suppliers worldwide continue to pursue CMOS imager design wins—with most still concentrating on camera phones, consumer cameras, and embedded webcams for portable PCs and tablet computers. Furthermore, CMOS image sensor production capacity at IDMs and foundries has been moving from 200mm to 300mm wafers, driving up unit volumes and adding more pricing pressure to the marketplace.

With more production capacity coming online, minimum feature sizes reaching 65nm, and resolutions pushing beyond 16 megapixels on devices, CMOS image sensor suppliers will need new high-volume applications to sustain double-digit annual growth rates in the next five years. IC Insights' forecast of 11.2% CAGR for sales in the 2010-2015 period is predicated on strong new growth in automotive safety systems, intelligent video cameras for surveillance networks, medical imaging, toys and games, and other emerging applications. Camera phones accounted for 62% of CMOS image sensor sales in 2010 and are forecast to drop to about 49% in 2015, says the new *O-S-D Report*.

### CMOS versus CCD Image Sensor Dollar Volumes



Source: IC Insights

Figure 1

### Report Details

The *2011 O-S-D Report* continues to expand IC Insights' coverage of the semiconductor industry with detailed analysis of trends and growth rates in optoelectronics, sensors/actuators (including MEMS-based devices), and discretes. The report (with 234 charts and figures) contains a detailed forecast of sales, unit shipments and prices for more than 30 individual device types and categories through 2015. A single-user subscription to the *2011 O-S-D Report* is priced at \$2,890 and includes an Internet password. The subscription is also available under a multi-user worldwide corporate license for \$6,090.

#### About IC Insights

IC Insights, Inc., based in Scottsdale, Arizona USA, is dedicated to providing high-quality, cost-effective market research for the semiconductor industry. Founded in 1997, IC Insights offers coverage of global economic trends, the semiconductor market forecast, capital spending and fab capacity trends, product market details, and technology trends, as well as complete IC company profiles and evaluations of end-use applications driving demand for ICs.

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