

# RESEARCH BULLETIN

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## CMOS Image Sensors See Higher Growth from Greater Diversity of Uses

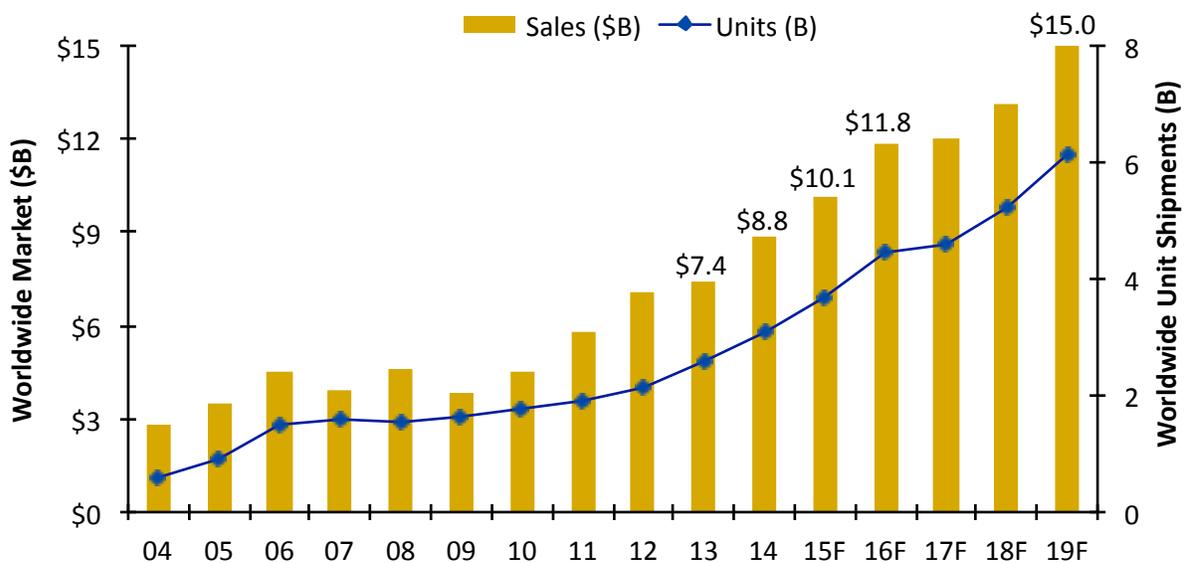
*Dependency on camera phones lessens as imaging technology moves into a wider range of systems—from automotive and machine vision to surveillance and sensors for Internet of Things.*

After leveling off in the second half of the last decade, CMOS image sensors are in the midst of a strong new wave of growth, which is being driven by a broad range of applications and promises to lift worldwide sales to record-high levels each year through 2019, according to IC Insights' *2015 O-S-D Report—A Market Analysis and Forecast for Optoelectronics, Sensors/Actuators, and Discretets*. The *O-S-D Report's* forecast shows CMOS image sensor sales climbing 15% in 2015 to reach an all-time high of \$10.1 billion after a strong 19% increase in 2014 and subpar 4% growth in 2013 that primarily resulted from steep price erosion and inventory corrections in camera phones. CMOS image sensor unit shipments are now projected to grow 19% in 2015 to a record-high 3.7 billion after rising 20% in 2014 and 2013 (Figure 1).

### MORE INFORMATION CONTACT

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### CMOS Image Sensors Resume Growth After Leveling Off



Source: IC Insights

Figure 1

For about 15 years, digital cameras in cellphone handsets have been the dominant system application in CMOS image sensors and that will continue to be the case in the second half of this decade, but growth rates in this optoelectronics semiconductor category are expected to be pushed higher by new automotive and machine-vision applications, security and surveillance systems (including body cameras), medical imaging, and a wide assortment of optical-sensing nodes tied to the Internet of Things (IoT). In 2014, about 70% of CMOS image sensor sales (\$6.2 billion) were for embedded cameras in cellphones, but that percentage is expected to fall to 49% in 2019 (\$7.3 billion), which represents a compound annual growth rate (CAGR) of just 3.4%, based on the forecast in the 2015 *O-S-D Report*. In comparison, total CMOS image sensor sales are projected to grow by a CAGR of 11.1% in the five-year forecast period to reach \$15.0 billion in 2019.

The 2015 *O-S-D Report* forecasts sales of CMOS image sensor sales for automotive safety systems will climb by a CAGR of 57.4% to \$2.1 billion in 2019 and represent 14% of the market's total dollar volume that year compared to just 3% in 2014. CMOS image sensor sales for security systems and surveillance applications are expected to grow by a CAGR of 38.4% in the five-year forecast period to \$899 million in 2019, which will represent 6% of the market's total sales that year versus 2% in 2014. The *O-S-D Report* shows medical and scientific instrument applications driving up CMOS image sensors sales by a CAGR of 36.0% to \$824 million in 2019 or about 6% of the total market compared to about 2% in 2014. Toys and video game applications are expected to increase sales of CMOS image sensors by a CAGR of 32.7% to \$255 million by 2019, which will represent 2% of the market's total revenue compared to 1% in 2014.

Major suppliers of CMOS image sensors are responding to the shift in what's driving sales growth. For instance, CMOS image sensor leader Sony now aims to become the largest supplier of imaging solutions for automotive systems by the middle of the next decade after it accomplished its goal of taking the top spot in camera phones in the past few years. Sony's CMOS image sensor sales grew 31% in 2014 to about \$2.8 billion, which represented a 32% share of the market's total revenues, based on the supplier ranking in the 2015 *O-S-D Report*. After Sony, U.S.-based OmniVision was second in CMOS image sensor sales (\$1.4 billion in 2014) followed by Samsung (\$1.2 billion), Sharp (\$720 million), SK Hynix (\$488 million), and China's GalaxyCore (\$360 million), according to IC Insights' supplier ranking.

## **Report Details: *The 2015 O-S-D Report***

In a one-of-a-kind study, IC Insights expands its coverage of the semiconductor industry with detailed analysis of trends and growth rates in the optoelectronics, sensors/actuators, and discrete market segments in its 360-page *O-S-D Report—A Market Analysis and Forecast for the Optoelectronics, Sensors/Actuators, and Discretes*.

Now in its 10th annual edition, the 2015 *O-S-D Report* contains a detailed forecast of sales, unit shipments, and selling prices for more than 30 individual product types and categories through 2019. Also

included is a review of technology trends for each of the segments. The 2015 *O-S-D Report*, with more than 240 charts and figures, is priced at \$3,290 for an individual-user license and \$6,390 for a multi-user corporate license. To review additional information about IC Insights' new and existing market research reports and services please visit our website: [www.icinsights.com](http://www.icinsights.com).

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#### **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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