

# RESEARCH BULLETIN

**NOVEMBER 3, 2020**

## Optoelectronics, Sensors/Actuators, Discretes Stabilize in Covid-19 Crisis Some O-S-D products are recovering ahead of modest 2021 rebound, says new updated forecast

About eight months after the Covid-19 virus pandemic accelerated around the world—causing lockdowns in many countries and driving the global economy into a deep recession—sales of optoelectronics, sensors and actuators, and discrete semiconductors have stabilized, and in some cases, revenues have begun showing signs of a slight recovery in the second half of 2020, which is remarkable considering how bad it looked at the start of 2Q20. A new update of IC Insights’ forecast for optoelectronics, sensors/actuators, and discretes (O-S-D) shows combined sales in these three semiconductor market segments falling 4.4% in 2020 to \$82.3 billion versus the projection of a 6.1% drop in the 2020 edition of the *O-S-D Report*, which was released in April).

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The updated forecast also shows a modest 7.7% rebound in 2021, which will lift total O-S-D sales in the three markets to a new record high of \$88.6 billion (Figure 1). The last time O-S-D sales fell was in 2009, when revenues dropped 10.0% during a semiconductor downturn that occurred in the last major global economic recession, caused by the 2008 financial crisis.

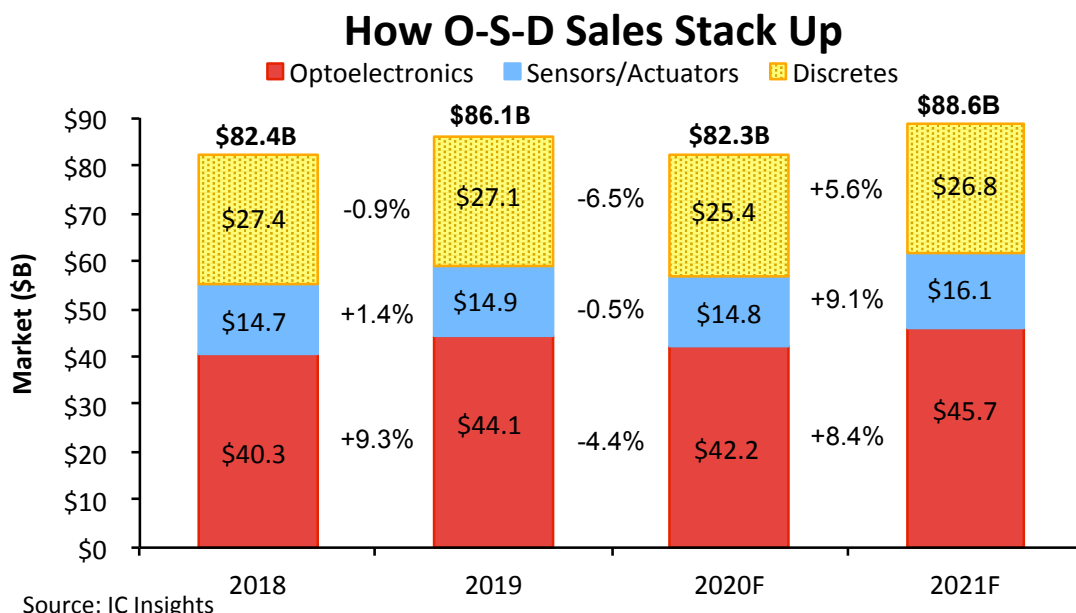


Figure 1

IC Insights expects the strength of the 2021 O-S-D rebound will be held in check by ongoing concerns about health threats from the Covid-19 coronavirus until new vaccines are developed, fully tested, and available worldwide—probably beginning in the second half of next year. In October 2020, new waves of Covid-19 infections were hitting Europe, the U.S., and other regions, causing governments to begin reinstating measures to slow the spread of the virus. The return of lockdowns—even at reduced levels compared to the widespread businesses closures in 2Q20—could slow the momentum of the tenuous market recovery that began in the summer of 2020. Many countries are bracing for higher cases of the Covid-19 virus between 4Q20 and 2Q21.

The updated O-S-D forecast shows only three of the 20 main product categories in optoelectronics, sensors/actuators, and discretes achieving sales growth in 2020 (+6.0% for laser transmitters, +0.5% for total image sensors—which will be driven by +0.9% in CMOS image sensors—and +1.4% for actuators). No discretes product categories are expected to register sales increases in 2020. Growth in laser transmitters, total image sensors (and CMOS designs), and actuators is expected to lift these product categories to new record-high sales in 2020. In 2021, a sales rebound is forecast to occur in all 20 main O-S-D product categories, with seven of them reaching record-high revenues next year (Figure 2).

### Expected Record-Setting Sales by Product Categories in 2020 & 2021

Market	Product Category	2020F Growth	Projected New Record	Current Record (Year)
Optoelectronics	Total Image Sensors	1%	\$19.9 billion	\$19.7 billion (2019)
	CMOS Image Sensors*	1%	\$18.6 billion	\$18.4 billion (2019)
	Laser Transmitters	6%	\$2.1 billion	\$2.0 billion (2019)
Sensors & Actuators	Actuators	1.4%	\$5.54 billion	\$5.46 billion (2019)

Market	Product Category	2021F Growth	Projected New Record	Previous Record (Year)
Optoelectronics	Total Image Sensors	11%	\$22.0 billion	\$19.9 billion (2020F)
	CMOS Image Sensors*	12%	\$20.9 billion	\$18.6 billion (2020F)
	Laser Transmitters	10%	\$2.3 billion	\$2.1 billion (2020F)
Sensors & Actuators	Pressure Sensors**	10%	\$3.8 billion	\$3.5 billion (2019)
	Accelerometers/Gyroscopes	9%	\$3.6 billion	\$3.4 billion (2019)
	Magnetic-Field Sensors***	9%	\$2.2 billion	\$2.0 billion (2018)
	Actuators	8%	\$6.0 billion	\$5.5 billion (2020F)
Discretes	Power Transistors****	6%	\$17.1 billion	\$17.1 billion (2019)

\* A subsegment of the total image sensors category, which also includes CCDs and other technologies.

\*\*Includes MEMS microphone chips \*\*\* Includes compass chips. \*\*\*\*Ties 2019 record.

Source: IC Insights

Figure 2

## **Report Details: *The 2020 O-S-D Report***

In a one-of-a-kind study, IC Insights continues to expand its coverage of the semiconductor industry with detailed analysis of trends and growth rates in the optoelectronics, sensors/actuators, and discretes market segments in its newly revised 350-page *O-S-D Report—A Market Analysis and Forecast for the Optoelectronics, Sensors/Actuators, and Discretes*.

Now in its 15th annual edition, the 2020 *O-S-D Report* contains a detailed forecast of sales, unit shipments, and selling prices for more than 40 individual product types and categories through 2024. Also included is a review of technology trends for each of the segments. The 2020 *O-S-D Report*, with more than 240 charts and figures, is attractively priced at \$4,190 for an individual-user license and \$7,290 for a multi-user corporate license.

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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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