

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): November 03, 2021

DIODES INC

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

002-25577
(Commission File Number)

95-2039518
(IRS Employer
Identification No.)

4949 Hedgcoxe Road, Suite 200
Plano, Texas
(Address of Principal Executive Offices)

75024
(Zip Code)

Registrant's Telephone Number, Including Area Code: 972 987-3900

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, Par Value \$0.66 2/3	DIOD	The NASDAQ Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 2.02 Results of Operations and Financial Condition.

On November 3, 2021, Dr. Keh-Shew Lu, Chairman, President and Chief Executive Officer of Diodes Incorporated, (the “Company”), as well as Brett R. Whitmire, Chief Financial Officer, Emily Yang, Senior Vice President, Worldwide Sales and Marketing, Gary Yu, Senior Vice President, Business Groups and Gurmeet Dhaliwal, Director of Investor Relations, participated in a conference call to discuss the Company’s third quarter 2021 financial results. A recording of the conference call has been posted on the Company’s website at www.diodes.com, and copy of a transcript of the conference call is furnished as Exhibit 99.1 to this report.

In the earnings conference call, the Company utilizes financial measures and terms not calculated in accordance with generally accepted accounting principles in the United States (“GAAP”) in order to provide investors with an alternative method for assessing the Company’s operating results in a manner that enables investors to more thoroughly evaluate its current performance as compared to past performance. The Company also believes these non-GAAP measures provide investors with a more informed baseline for modeling the Company’s future financial performance. Management uses these non-GAAP measures for the same purpose. The Company believes that investors should have access to the same set of tools that management uses in analyzing results. These non-GAAP measures should be considered in addition to results prepared in accordance with GAAP, but should not be considered a substitute for or superior to GAAP results and may differ from similar measures used by other companies. For a description, and reconciliation with GAAP, of these non-GAAP measures see the Company’s press release dated November 3, 2021, announcing the Company’s third quarter 2021 financial results, a copy of which was furnished as Exhibit 99.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on November 3, 2021. The information furnished in this Item 2.02, including the exhibit incorporated by reference, will not be treated as “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that section. This information will not be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended (the “Securities Act”), or into another filing under the Exchange Act, unless that filing expressly refers to specific information in this Report.

Item 7.01 Regulation FD Disclosure.

The transcript of the earnings conference call furnished as Exhibit 99.1 also provides an update on the Company’s business outlook, that is intended to be within the safe harbor provided by the Private Securities Litigation Reform Act of 1995 (the “Act”) as comprising forward looking statements within the meaning of the Act.

The information furnished in this Item 7.01, including the exhibit incorporated by reference, will not be treated as “filed” for the purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section. This information will not be deemed incorporated by reference into any filing under the Securities Act, or into another filing under the Exchange Act, unless that filing expressly refers to specific information in this Report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit Number</u>	<u>Description</u>
99.1	Transcript of earnings conference call held on November 3, 2021.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

DIODES INCORPORATED

Date: November 5, 2021

By: /s/Brett R. Whitmire
Brett R. Whitmire
Chief Financial Officer

REFINITIV STREETEVENTS

EDITED TRANSCRIPT

DIOD.OQ - Q3 2021 Diodes Inc Earnings Call

EVENT DATE/TIME: NOVEMBER 03, 2021 / 9:00PM GMT

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C O R P O R A T E P A R T I C I P A N T S

Brett R. Whitmire Diodes Incorporated - CFO

Emily Yang Diodes Incorporated - SVP of Worldwide Sales & Marketing

Gary Yu Diodes Incorporated - SVP of Business Groups

Keh-Shew Lu Diodes Incorporated - Chairman, CEO & President

C O N F E R E N C E C A L L P A R T I C I P A N T S

David Neil Williams The Benchmark Company, LLC, Research Division - Senior Equity Analyst

Matthew D. Ramsay Cowen and Company, LLC, Research Division - MD & Senior Technology Analyst

Tristan Gerra Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst

William Stein Truist Securities, Inc., Research Division - MD

Leanne Sievers

P R E S E N T A T I O N

Operator

Good afternoon, and welcome to Diodes Incorporated Third Quarter 2021 Financial Results Conference Call. (Operator Instructions) As a reminder, this conference call is being recorded today, Wednesday, November 3, 2021. I would now like to turn the call over to Leanne Sievers of Shelton Group Investor Relations. Leanne, please go ahead.

Leanne Sievers

Good afternoon, and welcome to Diodes Third Quarter 2021 Financial Results Conference Call. I'm Leanne Sievers, President of Shelton Group, Diodes' Investor Relations firm. Joining us today are Diodes' Chairman, President and CEO, Dr. Keh-Shew Lu; Chief Financial Officer, Brett Whitmire; Senior Vice President of Worldwide Sales and Marketing, Emily Yang; Senior Vice President of Business Groups, Gary Yu; and Director of Investor Relations, Gurmeet Dhaliwal.

Before I turn the call over to Dr. Lu, I'd like to remind our listeners that the results announced today are preliminary as they are subject to the company finalizing its closing procedures and customary quarterly review by the company's independent registered public accounting firm. As such, these results are unaudited and subject to revision until the company files its Form 10-Q for its third quarter 2021 ending September 30, 2021. In addition, the management's prepared remarks contain forward-looking statements, which are subject to risks and uncertainties, and management may make additional forward-looking statements in response to your questions. Therefore, the company claims the protection of the safe harbor for forward-looking statements that is contained in the Private Securities Litigation Reform Act of 1995. Actual results may differ from those discussed today, and therefore, we refer you to a more detailed discussion of the risks and uncertainties in the company's filings with the Securities and Exchange Commission, including Forms 10-K and 10-Q.

In addition, any projections as to the company's future performance represent management's estimates as of today, November 3, 2021. Diodes assumes no obligation to update those projections in the future as market conditions may or may not change, except to the extent required by applicable law.

Additionally, the company's press release and management statements during this conference call will include discussions of certain measures and financial information in GAAP and non-GAAP terms. Included in the company's press release are definitions and reconciliations of GAAP to non-GAAP items which provide additional details. Also, throughout the company's press release and management statements during this conference call, we refer to net income attributable to common stockholders as GAAP net income.

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For those of you unable to listen to the entire call at this time, a recording will be available via webcast for 90 days in the Investor Relations section of Diodes' website at www.diodes.com.

And now I'll turn the call over to Diodes' Chairman, President and CEO, Dr. Keh-Shew Lu. Dr. Lu, please go ahead.

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Thank you, Leanne. Welcome, everyone, and thank you for joining us today.

This quarter represented the fourth consecutive quarter of record revenue and our second consecutive quarter of gross margin expansion, over 210 basis points, resulting in record gross margin and profits. Underpinning our growth has been the success of our content expansion initiatives, in particular in the automotive market, where revenue grew over 65% year-over-year and 7% sequentially, contributing to an 8-year CAGR of 30%. Additionally, our Pericom products continued to set new revenue records, achieving 4 consecutive quarters of growth primarily driven by traction in high-end computing and server applications.

Our growth in these higher-margin end markets, combined with increased loading at our LITE-ON Semiconductor facilities have enabled us to increase our topline revenue and margins even in the midst of this supply-constrained environment. Diodes is favorably positioned with a global manufacturing footprint that provides the flexibility to strategically expand our capacity and reduce costs, either by adding equipment to existing lines or converting equipment to larger wafers. These ongoing actions are expected to support our continued growth and margin improvement into next year and toward our 2025 target of \$1 billion in gross profit on \$2.5 billion in revenue, and a 40% gross margin.

With that, let me now hand the call over to Brett to discuss our third quarter financial results and our fourth quarter 2021 guidance in more detail.

Brett R. Whitmire - Diodes Incorporated - CFO

Thanks, Dr. Lu, and good afternoon, everyone. As part of my financial review today, I will focus my comments on the sequential change for each of the line items and would refer you to our press release for a more detailed review of our results as well as the year-over-year comparisons.

Revenue for the third quarter 2021 was a record \$471.4 million, an increase of 7% from \$440.4 million in the second quarter 2021.

Gross profit for the third quarter was also a record at \$181.2 million or a record 38.4% of revenue, increasing 13% or 210 basis points from \$159.8 million or 36.3% of revenue in the second quarter of 2021. I would also like to point out that our gross profit increased 63% or 250 basis points from \$111.1 million or 35.9% of revenue in the third quarter 2020.

GAAP operating expenses for the third quarter of 2021 were \$104 million or 22.1% of revenue and on a non-GAAP basis, were \$99.6 million or 21.1% of revenue, which excludes \$4.1 million of amortization of acquisition-related intangible asset expenses. This compares to non-GAAP operating expenses in the prior quarter of \$90.4 million or 20.5% of revenue.

Total other income amounted to approximately \$8.3 million for the quarter, consisting of \$5.9 million of unrealized gain on investments, \$2.2 million of other income, \$765,000 of interest income, \$800,000 in foreign currency gain, partially offset by \$1.4 million in interest expense.

Income before taxes and noncontrolling interest in the third quarter 2021 was \$85.6 million compared to \$70.7 million in the previous quarter.

Turning to income taxes, our effective income tax rate for the third quarter was approximately 17.3%.

GAAP net income for the third quarter of 2021 was a record \$68.4 million or \$1.50 per diluted share, a 23% increase compared to GAAP net income of \$1.22 per diluted share or \$55.4 million in second quarter of 2021. This represents a 194% improvement from \$0.51 per diluted share or \$27.2 million in the third quarter 2020. The share count used to compute GAAP diluted EPS for the third quarter 2021 was 45.6 million shares.

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Non-GAAP adjusted net income in the third quarter was a record \$67.3 million or \$1.47 per diluted share which excluded, net of tax, \$3.3 million of acquisition-related intangible asset costs, \$0.3 million of acquisition-related and restructuring costs, and a \$4.7 million gain in value on certain LSC investments. This represents a 23% improvement from the second quarter of 2021 of \$1.20 per diluted share or \$54.6 million and 137% improvement from \$0.62 per diluted share or \$32.8 million in the third quarter of 2020.

Included in third quarter 2021 GAAP net income and non-GAAP adjusted net income was approximately \$8 million, net of tax, of non-cash share-based compensation expense. Excluding share-based compensation expense, both GAAP earnings per share, EPS, and non-GAAP adjusted EPS would have increased by \$0.18 per diluted share for the third quarter 2021 and \$0.15 for second quarter 2021.

EBITDA for the third quarter was a record \$114.5 million or 24.3% of revenue compared to \$99.4 million or 22.6% of revenue in the prior quarter. On a year-over-year basis, EBITDA increased 81% from \$63.3 million in the third quarter of 2020, further highlighting our significant operating improvements over the past year.

We have included in our earnings release a reconciliation of GAAP net income to non-GAAP adjusted net income and GAAP net income to EBITDA, which provides additional details.

Cash flow generated from operations was \$98.9 million for the third quarter 2021. Free cash flow was \$57.8 million for the third quarter, which included \$41.1 million for capital expenditures. Net cash flow in the third quarter was a negative \$10.1 million, which included a paydown of \$49.7 million of total debt.

Turning to the balance sheet, at the end of third quarter, cash, cash equivalents, restricted cash plus short-term investments totaled approximately \$292 million. Working capital was \$619 million and total debt, including long-term and short term, was \$252 million. Our net cash position demonstrates our significant cash generation and earnings power.

In terms of inventory, at the end of third quarter, total inventory days increased to approximately 99 in the quarter as compared to 96 last quarter. Finished goods inventory days were 27 compared to 26 last quarter. Total inventory dollars increased \$18 million to approximately \$322.1 million. Total inventory in the quarter consisted of \$8.9 million increase in finished goods, a \$5.2 million increase in raw materials, and a \$3.8 million increase in work in process.

Capital expenditures on a cash basis for the third quarter 2021 were \$41.1 million or 8.7% of revenue. We expect to remain within our target model of 5% to 9% for the full year.

Now turning to our outlook ...

For the fourth quarter 2021, we expect revenue to increase to approximately \$476 million, plus or minus 3%, which represents a record on both an organic and a consolidated basis for a combined increase of about 1% sequentially at the midpoint, which is better than typical seasonality of down 5%. We expect GAAP gross margin on a consolidated basis to be 38.7%, plus or minus 1%. Non-GAAP operating expenses, which are GAAP operating expenses adjusted for amortization of acquisition-related intangible assets, are expected to be approximately 21% of revenue, plus or minus 1%. We expect net interest expense to be approximately \$1.2 billion. Our income tax rate is expected to be 18%, plus or minus 3%, and shares used to calculate diluted EPS for the fourth quarter are anticipated to be approximately 46.2 million shares.

Please note that purchasing accounting adjustments of \$3.4 million after-tax for previous acquisitions is not included in these non-GAAP estimates. With that said, I now turn the call over to Emily Yang.

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Thank you, Brett, and good afternoon. In the third quarter, revenue increased 7% sequentially, which is above the midpoint of our guidance and better than typical seasonality, driven by record revenue, market share gains and strong demand across all regions. Worldwide POS revenue was

another record, driven by record POS revenue in Asia and Europe. Distributor inventory in terms of weeks was flat quarter-over-quarter, which remains below our defined normal range of 11 to 14 weeks.

Looking at Global Sales in the third quarter, Asia represented 80% of revenue, Europe 12% and Americas 8%.

In terms of our end markets, computing represents 30% of revenue, industrial 24%, consumer 18%, communication 16%, and automotive 12% of revenue. We achieved record revenue in the automotive, industrial, computing and consumer end markets.

Now let me review the end market in greater detail

Starting with Automotive market, revenue grew over 65% year-over-year and 7% sequentially to add a quarterly record to revenues even in a supply-constrained environment. Since launching our entrance into the automotive market in 2013, we have achieved a 30% CAGR. Our ongoing success can be contributed to our content expansion initiatives that have resulted in Diodes' content opportunity increasing to almost \$100 per vehicle. As part of this initiative, we have also expanded our product portfolio for a broader set of automotive applications that has resulted in increased design-ins and design wins.

As evidence of our traction to cover more applications, during the quarter we had strong design-in momentum for gate drivers, high-voltage regulators, Hall-effect sensors and MOSFET in the brushless DC motors, electric power steering, cooling fans, water pumps, power windows, door locks, infotainment, battery managed systems and Advanced Driving Assistance Systems. Wireless charging USB Type-C charging and 40V battery systems continued to drive demand for MOSFETs and protected low switches.

We also saw strong demand for automotive-grade rectifiers in wiring harness applications as well as our bipolar transistors and LED linear drivers in various lighting applications, including rear brake lights, turning lights, fog lights and carpet lighting. DC-DC Buck converters also received strong demand in infotainment, forward lighting, taillights, instrument clusters, telematics and ADAS.

During the quarter, our Pericom products for the automotive space also continued to gain strong momentum with increasing design-ins for USB Type-A charging controllers, I/O expanders and crystal prism oscillators in the infotainment. Our broad portfolios of high-temperature crystal oscillators led the growth in the automotive business, contributing to the strong performance of the Pericom product line during the quarter.

In the Industrial market, revenue also reached a quarterly record, growing 66% over the prior year and 17% sequentially across a diverse set of applications, including power supplies, power tools, smart metering, power distribution systems, machine automated systems and security systems. Bipolar transistors and synchronized controllers are gaining traction in power supply applications and PCI Express packet switch from the Pericom product [line] (corrected by company after the call) are gaining momentum in embedded applications.

Newly introduced stepdown LED drivers in a compound package won several new design-ins for LED lighting applications. Additionally, our gate driver IC's Trench MOS technology and voltage regulators are seeing continued success in the brushless DC motor, cooling fans and blowers, stepper motors, garage door controls and LED strip lighting.

Diodes also continues to support environmental sustainability through the efficiency improvement with our rectifiers in green factory automation control equipment and high-speed robotics. Additionally, we gained increasing market share in inverter and Power-over-Ethernet applications with our MOSFET and SBR products. We also secured increasing design wins for applications such as programmable logic controllers, IoT, security, servo motor, power supplies, smart grip and energy. Also, we have been securing the new design wins from our Lite-On Semiconductor Image Sensor product line in industrial automation machines including scanners, banknote detectors, check receipt and PCB inspection.

In the Consumer market, DC-DC converters and bipolar transistors have been gaining strong growth in monitors, TVs, set-top boxes and cable modems. Similarly, demand for our low power audio amplifier increased significantly along with new design wins for Schottky and SBR products in smart speakers, wearable devices, smart routers and virtual reality applications.

With the integration of LSC manufacturing facilities, Diodes is now well positioned to support the strong demand for our bridge rectifier product family in the consumer applications such as home theaters as well as smoke and carbon monoxide detectors.

Additionally, USB power delivery decoders and MOSFETs gained an increasing number of design wins in the wireless power charging solutions. Our industrial smallest MOSFET fab is ramping up to meet the most critical demand in small footprint applications. We also experienced further growth and new design wins for our USB MUX devices with high-voltage protection and ultra-high bandwidth features in the IoT applications.

Turning to Communication, we continue to drive increasing demand for our Pericom products in the 5G market. Our SPDT switch has been designed into 5G Active Antenna Units with major a 5G equipment supplier. We're also seeing demand for PMOS to protect the 5G RF amplifier in the Remote [Radio] (added by company after the call) Unit and NMOS in 5G-based power stations to reduce the power consumption.

Also, during the quarter we achieved significant traction for our high PSSR performance LDOs, battery FETs and SBR products in smartphone applications. Diodes also saw increased revenue from optical applications for fiber optic equipment, including CWDM and DWDM modules as well as switchgear and switchboard applications. Building on the success of our high-performance crystal oscillators from Pericom, our ultra-low jitter crystal oscillator family also experienced tremendous growth in the optical modules.

Lastly, in the Computing market, revenue grew over 140% year-over-year to a record, driven by record Pericom revenue and the fourth consecutive quarter of growth.

The energy conservation trend continues in the commercial PC market, which requires our signal integrity Re-Drivers. We are seeing USB Type-C and display port Re-Drivers, PMOS, USB-Power Delivery, buck converters and Omnipolar Hall sensor design wins in the notebook, motherboards and AIO platforms. Additionally, strong demand for high-resolution displays propelled our HDMI/Display Re-Driver product to another volume peak. HDMI 2.1 redrivers are designed in applications by mobile stations, gaming PCs and notebooks. And our newly released dual-channel LED driver for infrared LEDs has been winning designs with major PC manufacturers.

Along with Pericom products, Schottky and SBR products are also increasing our new design wins in cloud platforms and data center applications. LSC's image sensor products have also been gaining new design-ins in scanners and multifunction printers.

In summary, we are very pleased to have achieved our fourth consecutive quarter of record revenue, coupled with record performance across all financial metrics. The continued success of our content expansion initiatives is evidenced by our record revenue in key targeted markets like automotive, industrial, and computing, which has also served as a key contributor to our margin expansion. With our expectations for another quarter of above seasonality results and record performance, we look forward to reporting our continuous progress.

With that, we now open the floor to questions. Operator?

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from the line of Tristan Gerra from Baird.

Tristan Gerra - Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst

You've mentioned market share gains in the quarter. Is that the ongoing share gains notably driven by Pericom? Or are you seeing a change or an acceleration in those share gains due to some of your competitors deemphasizing lower margin product, which presumably would be an opportunity for you to go and get some additional share there?

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Right. So Tristan, this is Emily. I think the market share gain, that's really across the board, across all the product lines, right, not only just the Pericom. I think with our content expansion and our total solution sales strategy, driving additional design-ins and design wins, of course with the current market situation, also accelerated some of the design-in activities. So I would say it's a combination of everything.

Tristan Gerra - Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst

Okay. Thanks for the feedback. And as a follow-up, how are the shortages potentially waiting on your ability to ship either at your level or at the customer level, meaning customers are waiting for other parts and might be doing some inventory rebalancing? There was a large another company that talked about it earlier this earnings season. How do you see generally the supply potentially constraining you, not necessarily this quarter, but over the next few quarters?

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Right. So I mean, first of all, we definitely are constrained, because overall, the situation for this run is quite dynamic. So what we have been doing is actually working with customers, understanding their true demand, and overcome different bottlenecks. So overall, we've seen the backlog is still extremely strong. We haven't really seen any significant changes from the behavior from customers rebalancing their inventory at this moment.

Operator

Our next question comes from the line of William Stein from Truist Securities.

William Stein - Truist Securities, Inc., Research Division - MD

First, I want to ask about the above seasonal guide. I wonder if there's one of the end markets that we should think about more prominently representing this above seasonal expectation, or is it spread across more than one?

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Right. So let me address that question first. I think overall, we've seen strength across all the markets. So let me just break it down a little bit. In the automotive, we're still seeing it very, very strong. Industrial is also very strong. On the computing area, we're seeing a lot of the strong demand driven by the cloud-based applications. Server, datacenter are extremely strong. Enterprise I feel is very strong. The only area we've seen a little bit I would say maybe soft, is actually consumer related, low-end PCs. But for Diodes, that was never really a big focus for us. And then if we look at the communication, I think overall the backlog is still strong, especially driven by 5G-related stuff, including the smartphones. All the other, I would say wireless phones we're definitely seeing a little bit I wouldn't say slow, but stable demand in general. And then -- so yes, so that's communication, computing, industrial, automotive, yes, that's about the 5 segments that we have seen.

William Stein - Truist Securities, Inc., Research Division - MD

Sounds like pretty broad-based. I wonder if you could give us an update on lead times, maybe characterize what portion of the portfolio perhaps is approximating 52 weeks or more, how that's changed, and maybe backlog if you can provide it. Thank you.

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Right. So overall, there's no significant change in terms of lead times. Like I mentioned before, what we do is working with customers, especially the Tier 1, Tier 2 customers, understanding their true demand. Backlog is still very strong. Book-to-bill ratio really strong as well. And we also had record revenue, POS revenue, for the second quarter, and the strength is really across all regions as well. So as you can see, based on a lot of this kind of information, we did provide a strong guidance for Q4, which is 1% quarter-over-quarter growth. And compared to the usual seasonality of 5%, we see that as a strong guidance as well.

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

In addition, we implemented this non-cancellable, 6-month backlog. And from there, we still have very strong bookings and our backlog did not really get canceled. And we are almost all booked for the next 6 months capacities. So you can see the business still very strong.

Operator

Our next question comes from the line of David Williams from Benchmark.

David Neil Williams - The Benchmark Company, LLC, Research Division - Senior Equity Analyst

Congrats on the excellent results here. So maybe first, Dr. Lu, you had mentioned in your prepared remarks of the expanding capacity by adding equipment or converting to larger wafers. And just wondering if you can maybe provide some color as it relates to those remarks and if this is currently in motion or how we should think about the capacity expansion efforts in the intermediate term?

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Okay. This -- there's several of them. When we acquired LSC, they -- some of their GPP product is at the 3-inch. We will convert to 4-inch. Then some of the 4-inch wafer fab, we converted into 6-inch. And from there, you can see the capacity and the cost. Both will be -- capacity will be increased and the costs will go down. Then on our S-Fab 2, we expand all this. We are half at 6-inch and the other half is 8-inch. We are actually ramping up all the 8-inch capacity. And so we are supposed to be fully loaded by end of fourth quarters. Then, you remember, we bought the GFAB from Texas Instruments. And at GFAB, we have foundry service, but it went down 10% a year. And because of that, we are ramping up our own demand into that 8-inch GFAB and even some of the 6-inch fab. So from there, we do have more capacity to support ourself by TI, Texas Instruments, in the contract, they reduce their foundry support, our foundry support to them, 10% a year. And so due to all those actions, we are able to increase our capacity. And at the same time, some of our own facilities, for example, the Pericom crystal line and oscillator line, we are full so we actually implemented -- installed two lines, one in April this year and one going to be start to ramp by end of this year. So those is all here and there, we are able to increase our capacity to support future expected revenue expansion.

David Neil Williams - The Benchmark Company, LLC, Research Division - Senior Equity Analyst

Great. Excellent color. Certainly appreciate that. I think you're one of the few that's had that kind of capacity coming into the shortage, so it's good to see. I guess maybe from a component shortage perspective, are there areas where you're maybe seeing any type of inventory excesses or where the visibility is less clear? And the reason I ask is, a few others have spoken to potential builds in maybe preparation of scarce components becoming available, and just it made me think about the production numbers and the builds that aren't yet in the production numbers. Do you think there's any part of the demand trends that you're seeing now, maybe that are pulled forward because of those production builds that haven't been -- that aren't in the numbers yet?

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Yes. David, this is Emily. Overall, we're still seeing constraints really across all the product lines. We haven't really seen any specific pockets of product lines. I've seen some of the I wouldn't say drop, but it's really relaxed. So we definitely don't see that at this moment. So like Dr. Lu mentioned, we are pretty much booked with our noncancellation policy. And with our visibility on the backlog, we are pretty well positioned for the next few months.

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Well, I think it's fortunately because we are gaining the market share. And because our solution sales, we are able to participate more in the customer design. Therefore, our revenue growth is really very balanced. It's not just one here or there. Another thing is, we target in the product mix, like Emily just mentioned, automotive. We are CAGR 30%. That gives us the potential growth in the future. And like we focus on high-end PC, data center and those servers. And those is really coming from our Pericom product, and we continue setting the new revenue record for the fourth consecutive quarter now. And so those is the growth, the support for our growth. And even on consumer, we focus on IoT type of activity, and therefore, those are still growing, continue growing in consumer and communication. 5G-related either docking station or cellphone or high-end phone, those will continue growth for in the future. Therefore, I am not concerned, even the capacity may start to loosen up, but I don't concern. Our growth will continue.

David Neil Williams - The Benchmark Company, LLC, Research Division - Senior Equity Analyst

That's fantastic color. And one more, if I can just squeeze in here real quick, just on the gross margin side. Do you have a sense of maybe what the magnitude of margin improvement has been for maybe the volume and pricing versus just the value optimization? How sustainable are the margin trends do you think?

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Our principle is we only raise the price to reflect our cost increase. Okay? So when our vendor raised the price for wafer fab or building material, we increased our ASP to reflect that cost increase. But majority of our gross margin improvement is not coming from the ASP increase. It is coming from our manufacturing efficiency and our product mix. And when you look at the manufacturing efficiency, when we consolidated LSC at 1Q this year, our GP went down 300 basis points. And this is because the manufacturing efficiency is not as great as Diodes. But then after we take over, you can see our second quarter growth 270% basis points, our third quarter grew 210 basis points. It's all due to manufacturing efficiency and product mix. Because from a product mix point of view, is that we grow much more in automotive area. And I already mentioned, 30% -- 30% CAGR, and that gives you a much better gross margin. But manufacturing efficiency, I think even though the LSC manufacturing, we half loaded, and we are now get to about the LSC, one of the fabs, is 91% in the fourth, in the third quarter. So those is really adding to the improvement of the gross margin?

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Yes. I think on top of that, we talk about LSC synergies, right? Besides the manufacturing synergy, we still have 3 other areas, which is product, customer base, as well as the market segments. There's still a lot of room for us to continue to grow. We're also seeing a new wave of opportunities especially open up a lot of new doors, new sockets at a lot of strategic customers. So we believe this is the beginning of it. And with our total solution sales strategy, our content expansion focus, that will continue to help us drive the margin improvement in the near future.

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Our strategy is, even this shortage, capacity constraint, we have not raised the ASP crazy. We only reflect the ASP increase by our cost increase. So our customer can understand why we need to raise the ASP. But we take this opportunity to develop the deeper relationship with our key customers.

We are able to open the door for the area which we are not able to participate in the past. Now the customers really welcome us to support them. But this strategy of not raising ASP too aggressively, we develop a long-term partnership relationship. At the same time, we are able to sell our total solution into the customers' hands. So those, I believe, is a better strategy than just raise the ASP and hurt our customers' relationship.

Operator

(Operator Instructions) Our next question comes from the line of Matt Ramsay from Cowen & Company.

Matthew D. Ramsay - Cowen and Company, LLC, Research Division - MD & Senior Technology Analyst

This is Ethan Petazni actually on for Matt Ramsay. Congrats on a nice set of results here. Just wanted to follow-up on a previous question. In understanding I guess the utilization of the Lite-On fabs, given already high levels, how much incremental utilization is to come? And then from like a margin revenue perspective, if the fabs are getting close to full, how much of the older lower margin, lower ASP products are running through the facility that can be replaced by higher margin, higher ASP products? And what impact that might have on the P&L going forward?

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Well, let me answer some, and then I'll get Gary to answer the rest of it. If you look at the making function of LSC, then some of the areas which could not use Diodes, then that portion is one we're talking about, one of their analog fabs, which we call JKFab, and that's one in which is half loaded now to almost 91%. But there's another fab which I mentioned, convert from 3-inch to 4-inch, convert from 4-inch to 6-inch. Those, it's just -- we're going to put in the equipment in -- we purchased equipment in September this year, and we will install and convert it to 6-inch. Then we ramp it up in 1Q, then we fully ramp by second quarter. So that kind of support for the capacity is going to support the growth of the LSC in the future. Because like I said, the LSC synergy, other than making function, the product synergy, the market synergy and the customer synergy, it takes time. So I prepare for that. It takes 1 to 2 years to be able to ramp it. And so we get the capacity ready to prepare for the mature of those synergies. Now you are asking how much percent. We are not focused on that. We know that's an area we're going to enhance, we're going to improve, but we do not put in forecast of how much percent going to be. It's ongoing productivity improvement, ongoing capacity increase, ongoing to gain that synergy for LSC. So we are not separating that item from LSC.

Gary Yu - Diodes Incorporated - SVP of Business Groups

Right, right. Let me put more color on Dr. Lu's statement on that. And it's really difficult for us to break it out what's at low-margin LSC before and what is it now. But as Dr. Lu mentioned about at the very beginning about the JKFab loading, from 50% at first quarter this year, up to 91%. It does increase the capacity utilization, but also reduce the idle cost of each item, no matter Diodes product and the second source moving from subcom, or existing line product or products. They do have a much better cost structure than like 3 quarters before. So that does help us to bring up the competition of those devices no matter if it is Lite-On product or Diodes product.

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

Right. So maybe let me add one more comment. Your question regarding lower ASP margin replaced by higher ASP or better margin product, that is actually part of our product mix strategy that we continue to drive. And there's still a lot of room for us to continue to improve. And this will also include -- I mean, Lite-On semiconductor is a part of our overall portfolio, so we'll continue to execute this strategy.

Matthew D. Ramsay - Cowen and Company, LLC, Research Division - MD & Senior Technology Analyst

Totally understand. Thank you for that. And then just a quick follow-up. If you could give us a little color maybe on what you expect from the different segments sequentially given the guide?

Emily Yang - Diodes Incorporated - SVP of Worldwide Sales & Marketing

So I think I did when I went over the segments, right? So automotive is going to be strong. Industrial is going to be strong. PC, higher end stuff, cloud driven data center, surface will be strong. Consumer focused more on the IoT area and then communication is really 5G-driven. We don't really break down and provide guidance down to each of the segments, but that's what we've seen in the market nowadays.

Operator

Thank you. This does conclude the question-and-answer session of today's program. I'd like to hand the program back to Dr. Lu for any further remarks.

Keh-Shew Lu - Diodes Incorporated - Chairman, CEO & President

Thank you for your participation on today's call. Operator, you may now disconnect.

Operator

Thank you. And thank you, ladies and gentlemen, for your participation in today's conference. This does conclude the program. You may now disconnect. Good day.

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