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DIOD - Q4 2017 Diodes Inc Earnings Call

EVENT DATE/TIME: FEBRUARY 07, 2018 / 10:00PM GMT



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## CORPORATE PARTICIPANTS

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**Leanne K. Sievers** *Shelton Group - EVP IR*

**Richard D. White** *Diodes Incorporated - CFO and Secretary*

## CONFERENCE CALL PARTICIPANTS

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**Gary Wade Mobley** *The Benchmark Company, LLC, Research Division - Research Analyst*

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## PRESENTATION

### Operator

Good afternoon, and welcome to Diodes Incorporated's Fourth Quarter and Full Year 2017 Financial Results Conference Call. (Operator Instructions) As a reminder, this conference call is being recorded today, Wednesday, February 7, 2018. I would now like to turn the call over to Leanne Sievers of Shelton Group, Investor Relations. Leanne, please go ahead.

### Leanne K. Sievers - Shelton Group - EVP IR

Good afternoon, and welcome to Diodes' Fourth Quarter and Full Year 2017 Financial Results Conference Call. I'm Leanne Sievers, President of Shelton Group, Diodes' Investor Relations firm. Joining us today from Taiwan are Diodes' President and CEO, Dr. Keh-Shew Lu; Chief Financial Officer, Rick White; Vice President of Worldwide Sales and Marketing, Emily Yang; and Director of Investor Relations, Laura Mehr.

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 completion of the annual audit by the company's independent registered public accounting firm. As such, these results are subject to revision until the company files its annual report on Form 10-K in the fiscal year 2017.

In addition, 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, February 7, 2018. Diodes assumes no obligation to update these projections in the future as market conditions may or may not change.

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 to GAAP and non-GAAP items, which provide additional details. Also, throughout the company's press release and management's statements during this conference call, we will refer to net income attributable to common stockholders as GAAP net income.

For those of you unable to listen to the entire call at this time, a recording will be available via webcast for 60 days in the Investor Relations section of Diodes' website at [www.diodes.com](http://www.diodes.com).



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

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Thank you, Leanne. Welcome, everyone, and thank you for joining us today. 2017 was a milestone year for Diodes in which we reached our goal of achieving \$1 billion in annual revenue, commanded with achievement of record revenue and gross profit as well as increased market share.

Our solid results reflect continued strength across all of our geographies in the target end market as well as growth from Pericom. In fact, we reached record revenue levels in our automotive, industrial and communication end markets, which served as primary growth driver in 2017. We also ended the fourth quarter achieving a 210 basis point sequential increase in GAAP gross margin to 35.9%, demonstrating the ability to expand margins above our prior model of 35% and toward our next target of 40%.

For the past several years, we have been highlighting our continued investment and focus on new products as well as process and packaging technologies to expand our customer content and gross margin opportunities. Today, we continue to accelerate the pace at which we are transitioning old generation products to new higher margin products that provide higher value to our customers.

In terms of our manufacturing operations, we complete the shutdown of the KFAB facility in mid-November, as planned. As we stated in the past, this action should result in annual savings of between \$10 million and \$15 million beginning this year. Also, during the quarter, we completed the needed KFAB wafer fab process in SFAB 1 and are starting to ramp production. We also completed the 8-inch wafer fab qualification in SFAB 2 and expect ramping to 3,000 wafer per month by the end of this quarter and to 8,000 to 10,000 wafers per month by the end of this year. This capacity expansion aligns with our gross projection for 2018 and the overall favorable market environment.

With our achievement of \$1 billion in annual revenue in 2017, we recently established our next long-term goal of \$1 billion in gross profit. In support of this objective, we are increasingly focused on key end market opportunities, that including automotive, industrial, high-end smartphones, IoT and high-end computing with our Pericom products. Further, we continue to expand market share with our higher-value new products and remain committed to increase profitability as we benefit from solid operating leverage to drive earnings expansion and cash flow for the company and our shareholders.

Before I turn the call over to Rick, I would like to take this time to welcome Emily Yang, who was appointed Vice President of Worldwide Sales and Marketing in mid-December and is joining us on today's call. Emily has been with Diodes since acquisition of Pericom in November 2015, where she was Vice President of Global Sales and also held a number of sales managing positions covering Asia, North America and Europe since 1998.

With that, let me now turn the call over to Rick to discuss our fourth quarter financial results and our first quarter 2018 guidance in more detail.

**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

Thanks, Dr. Lu, and good afternoon, everyone. Let me first mention that as stated in today's press release, the impact on Diodes of the Tax Cuts and Jobs Act enacted in December 2017, is estimated to be an approximately \$46 million increase in GAAP tax expense, which has been excluded from the fourth quarter and full year 2017 non-GAAP results. We do not anticipate that this increased tax expense as a result of the tax bill will have a cash impact.

Revenue for fourth quarter 2017 was \$268.4 million, a decrease of 5.9% from the \$285.2 million in the third quarter 2017 and an increase of 15.7% from the \$232.1 million in the fourth quarter 2016. Revenue in the quarter decreased sequentially, reflecting typical seasonality, and increased year-over-year due to continued strength across all of the company's target end markets and geographies. For the full year 2017, revenue was \$1.05 billion, an increase of 11.9% over the \$942.2 million in 2016.

Gross profit for the fourth quarter was \$96.4 million or 35.9% of revenue, compared to \$96.3 million or 33.8% of revenue in the third quarter 2017 and \$67.3 million or 29% of revenue in the prior year quarter. The 210 basis point increase in gross profit margin was due primarily to continued



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improvements in product mix, combined with strong margin contribution from our Pericom business as well as the reduced impact of the KFAB closure. For the full year, gross profit was a record \$356.8 million or 33.8% of revenue as compared to the \$286.9 million or 30.5% in the prior year.

GAAP operating expenses for the fourth quarter 2017 were \$72.9 million or 27.2% of revenue and \$64.3 million or 24% of revenue on a non-GAAP basis, which excludes \$4.7 million of amortization of acquisition-related intangible asset expenses and \$4 million of restructuring charges. This compares to GAAP operating expenses in the third quarter 2017 of \$72.6 million or 25.5% of revenue and \$63.9 million or 22.4% of revenue on a non-GAAP basis.

Looking specifically at selling, general and administrative expenses for the fourth quarter, SG&A was approximately \$44.7 million or 16.7% of revenue. This compares to \$43.5 million or 15.3% of revenue in the previous quarter and \$39.1 million or 16.8% of revenue for the fourth quarter 2016. Investment in research and development for the fourth quarter was approximately \$19.7 million or 7.3% of revenue. This compares to \$20.4 million or 7.1% of revenue last quarter and \$17.7 million or 7.6% of revenue in the fourth quarter 2016. Combined, SG&A plus R&D for the fourth quarter 2017, was \$64.4 million or 24% of revenue, compared to \$63.9 million or 22.4% of revenue in the previous quarter and \$56.8 million or 24.5% of revenue in the fourth quarter 2016.

Total other income and expense amounted to approximately \$2.7 million for the quarter, including a \$1.3 million negative currency impact. Income before taxes and noncontrolling interest in the fourth quarter 2017 amounted to \$20.8 million compared to \$19.8 million last quarter and \$2.6 million in the fourth quarter 2016.

Turning to income taxes. Our effective income tax rates for the fourth quarter and full year 2017 were approximately 243.7% and 99.6%, respectively. Excluding the new tax reform impact of \$45.9 million, our effective income tax rate would have been approximately 23% for the fourth quarter 2017 and approximately 26% for 2017.

GAAP net loss for the fourth quarter 2017 was \$30.7 million or a loss of \$0.62 per diluted share. The GAAP net loss included \$45.9 million or a loss of \$0.93 per diluted share in tax-related expenses not in our original guidance due to the recently passed Tax Reform Act. Excluding the tax law impact, net income would have been \$15.2 million or \$0.31 per share compared to GAAP net income of \$14.5 million or \$0.29 per diluted share in the third quarter 2017 and net income of \$1.3 million or \$0.03 per share in the fourth quarter 2016. The share count used to compute GAAP diluted EPS for the fourth quarter 2017 was 49.4 million shares. GAAP net loss for the full year 2017 was \$1.8 million or a loss of \$0.04 per diluted share, compared with net income of \$15.9 million or \$0.32 per diluted share in 2016. Excluding the tax law reform impact, 2017 represented our 27th consecutive year of profitability.

Fourth quarter 2017 non-GAAP adjusted net income was \$21.6 million or \$0.42 per diluted share, which excluded, net of tax, \$3.8 million of noncash acquisition-related intangible asset amortization cost; \$2.6 million of restructuring charges; and \$45.9 million tax expense due to the tax law reform impact. This compares to non-GAAP adjusted net income of \$22.6 million or \$0.45 per diluted share last quarter, and \$7.7 million or \$0.15 per diluted share in the fourth quarter 2016. Non-GAAP adjusted net income for the full year 2017 was \$69.1 million or \$1.37 per diluted share compared to \$38.4 million and \$0.77 per diluted share in 2016.

We have included in our earnings release a reconciliation of GAAP net income to non-GAAP adjusted net income, which provides additional details. Included in the fourth quarter 2017 GAAP net income and non-GAAP adjusted net income was approximately \$3 million, net of tax, of noncash share-based compensation expense. Excluding share-based compensation expense, both GAAP diluted EPS and non-GAAP adjusted diluted EPS would have increased by an additional \$0.06 per diluted share in the fourth quarter and \$0.24 for the full year.

Cash flow generated from operations was \$74.8 million for the fourth quarter and \$181.1 million for the full year 2017. Both were at record levels. Free cash flow was \$45.5 million for the fourth quarter, which included \$29.3 million of capital expenditures and \$70 million for the full year 2017, which included \$111 million of CapEx. Net cash flow was a positive \$2.6 million, including the paydown of approximately \$57.8 million of long-term debt and \$8.7 million for the share repurchase. Net cash flow for the full year 2017 was a negative \$44 million, including the paydown of \$159.9 million of long-term debt and the share repurchase.



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Turning to the balance sheet. At the end of the fourth quarter, cash and cash equivalents plus short-term investments totaled approximately \$208.4 million. Working capital was approximately \$415.2 million. And long-term debt, including the current portion, was \$268.1 million.

At the end of the fourth quarter, inventory increased by approximately \$5.1 million from the third quarter 2017 to approximately \$217 million. The increase in inventory reflects a \$21.8 million increase in finished goods, a \$1.7 million increase in work in process and an \$18.4 million decrease in raw materials. The increase in finished goods inventory is due to preparation for the Chinese New Year slowdown. Inventory days were 114 in the quarter compared to 102 days last quarter. At the end of the quarter, cash receivables were approximately \$200 million, a decrease of \$30.3 million from last quarter. AR days were 74 compared to 73 last quarter.

Capital expenditures for the fourth quarter were \$29.3 million or 10.9% of revenue, and \$111.2 million or 10.5% of revenue for the full year. As we projected, full year 2017 CapEx was above our target model of 5% to 9% of revenue, with the majority of expenditures related to newer, advanced packaging capacity expansion in our assembly test operations in China and to support the KFAB process transferred to SFAB 1, as well as our 8-inch capacity expansion in SFAB 2. We expect CapEx for 2018 to return to our target model of 5% to 9% of revenue. Depreciation and amortization expense for the fourth quarter was \$24.5 million and \$95.7 million for the full year 2017.

Now turning to our outlook. For the first quarter of 2018, we expect better than typical seasonal results due to continued strength in our target end markets. Revenue is expected to range between \$261 million and \$277 million or down 2.8% to up 3.2%. At the midpoint, this is flat to fourth quarter and represents a 13.8% increase year-over-year. We expect GAAP gross margin to be 36%, 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 23.2% of revenue, plus or minus 1%. We expect interest expense to be approximately \$3 million. Our income tax rate is expected to be 31%, plus or minus 3%. And shares used to calculate diluted EPS for the first quarter are anticipated to be approximately 51 million. Not included in these non-GAAP estimates are purchase accounting adjustments of \$3.8 million, after tax, for Pericom and previous acquisitions.

With that said, I will now turn the call over to Emily Yang.

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**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

Thank you, Rick, and good afternoon. It's a pleasure to be joining you all today as Diodes' Vice President of Worldwide Sales and Marketing, and I look forward to meeting some of you in the coming months and quarters.

Let me begin my comments with a summary of the quarter. Fourth quarter revenue was down 5.9%, reflecting typical seasonality following 2 quarters of strong sequential growth of 8% last quarter and 12% in the second quarter. Due to tight supply, we focused on supporting immediate demand, resulting in our distributor POP being down 4.8%. We had record POS globally, up 3.7%, was record high both in Asia and North America. Channel inventory dropped by 2% quarter-over-quarter and is very clean and healthy.

Customer and design activity remained strong across all regions, positioning Diodes for continued growth in 2018. We also gained further traction with the Pericom product line, in particular in the computing market. We set revenue record in 5 product categories during the quarter, including MOSFET, battery management, digital power, interface and switch, while also continue our strong design win momentum in CMOS LDO, LED driver, hall sensors and connect ASIC. Going forward, we expect to make continued progress with design wins, new product introductions and margin expansion with new higher-value products.

Turning to global sales in the fourth quarter. Asia represented 80% of the revenue; Europe, 11%; and North America, 9%. In term of our end markets, consumer represented 26% of the revenue; communication, 26%; industrial, 22%; computing, 18%; and automotive, 8% of the revenue.

Let me now provide more detail within each of the end markets. In the consumer market, we continue to gain strong traction from our hall sensor, CMOS LDO and switching products, as well as increasing design wins for AC/DC power supply controllers for battery chargers and adapter applications in the smart devices, including voice-enabled speakers. We've also secured a number of wins for our low dropout voltage regulators in highly integrated battery chargers for IoT applications. Ultra low IQ CMOS LDO are also gaining design-in momentum in IoT applications, like trackers.



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In the communication market, we also have another quarter of solid design-in activity with our logic, TVS, MOSFET, CMOS LDO, switching, timing and connectivity products across multiple applications, including telecom gateways, routers, switches, set-top boxes, wireless devices and chargers especially in new wireless charging solutions. As a key focus for the coming year, we are working to expand our customer contact in high-end smartphones specifically. As an example, during the quarter, our 12-gigabit per second differential MUX with MIPI switches are being designed into smartphones to help multiplex MIPI port. Our chip offers extremely low insertion loss and minimal skew between the channels to enable fast switching between the ports.

For mobile communication applications, including charging of portable devices and wearables, Diodes launched several new TVS products for general panel surge protections. One in particular was a general protector from an active secure transmission for some major mobile devices, which resulted in an immediate design-in. Our low-voltage MOSFET product were also featured in this market space with two new CSP products for the applications, such as battery protection featuring high-power density in small footprint. Also new were a range of 6 new single-phase bridge rectifier devices, ranging from 1 amp to 3 amp. These innovative devices feature operate in ranges up to 1,000 volts in a very low profile, small footprint package and are also suitable for consumer and industrial LED lighting applications.

For computing applications, we continue to see new design win activity for our signal integrity, interface, logic and LDO products. Signal integrity activity was led by our new ReDrivers for USB Type C connectors, combo ReDrivers of PCIe3, SATA3 and USB 3.0 in server and storage applications as well as ReDrivers for Display Port 1.4 applications. We secured several new wins for our CMOS LDO products, along with multiple new designs for our new interface products in server market. We also introduced our translating transceiver targeted at server and storage systems to provide level translation and buffer needs in the system.

Also, for computing applications, Diodes launched several TVS products, including a surge protector for Type C connectors, a quick charging application, as well as a low CJ TVS for USB 3.x and Thunderbolt 3.0 applications. In addition, we launched 13 100-volt to 150-volt Trench Schottky parts aimed at power supply applications in notebooks and servers that are also suitable for consumer application.

For industrial applications, during the quarter, Diodes launched 12 60-volt to 100-volt MOSFET based on our Shielded Gate technology for applications such as power supply, charging and brushless DC motor applications. We also introduced 4 new additional devices in Diodes' recently-launched range of gate drivers ranging from 50 volts to 600 volts aimed at industrial motor driving. Industrial trend increasingly favor brushless DC motor due to their superior efficiency and compact size, and Diodes' small form factor products are ideally suited for this market. Complementing the 600-volt gate driver portfolio was Diodes' first 650-volt IGBT device, enabling Diodes to provide evaluation port and present a complete power stage for motor driving applications.

Additionally, during the quarter, we continued to expand our LED lighting portfolio for the industrial market by adding a universal PWM dimmable buck converter for the connected and tunable LED lighting applications. In fact, key LED lighting consumers have realigned effort toward connected lighting, where our newly released parts are being used.

And lastly, in the automotive market, Diodes launched a number of new products for this fast-growing market segment from several significant product families, including MOSFET, bipolar, pre-biased transistors as well as linear LED drivers. Our focus and momentum in this market continues as we design in new products for applications such as infotainment, motor drive, advanced driving assistance systems. Additionally, our recently released family of Hall sensors are being designed-in for several motor drive applications. We also released a unipolar Hall sensor switch family for proximity and precision spacing for applications such as seat position, seatbelt detection, gearshift position and tailgate door positions. Once again, Diodes showed that gate MOSFET technology with a class-leading power packaging capability and 175-degree-C temperature rating drove significant customer qualifications and design-in activity across major automotive customers in Europe, U.S. and Asia. Finally, we also began sampling our first high-side IntellifET device that is generating large consumer interest.

In summary, Diodes closed out 2017 with record results, setting the stage for continued revenue growth and margin expansion in 2018. Our new product initiatives, combined with additional Pericom products, have proven to be consistent contributors to our strong results. As Dr. Lu mentioned, our focus going forward would be on key end market opportunities that includes automotive, industrial, high-end smartphones, IoT and high-end computing.



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With that, I'm opening the floor to questions. Operator?

## QUESTIONS AND ANSWERS

### Operator

(Operator Instructions) Our first question comes from Tristan Gerra with Baird.

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

Could you talk about the inventory outlook for Diodes into the first half of this year? Do you expect to further increase internal inventory days? And also, when should we expect the POP to exceed POS as you start replenishing some of the larger OEM demand as you undershipped real end demand in Q4?

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

This is Emily Yang. I think overall, we're seeing strong POS results, as I reported earlier. So we actually see a year-to-year significant growth from our POS result. For the inventory point of view -- and we'll continue to really focus on supporting the immediate needs from the customers and we are strategically expanding our capacity as well. So for the inventory position, the number of days, we'll definitely monitor very closely.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

I mentioned before is we're going to have the Chinese New Year in 1Q. In this Chinese New Year, we have no choice but a lot of the workers in China are going to go home. And therefore, we're strategically building up some inventory. We actually start our Chinese New Year action, which is changing 4-shift to 2-shift operation, start from December last year. And 4-shift operation means they're working 12 hours and 4 day a week and then rest 3 days. Another operation will be working 3 day and 4 days alternate. And 4 -- 2-shift operation means working 6 days, rest 1 day, every -- all the teams. So this is the way we gear up to prepare for the Chinese New Year. Typically, it was done during the Chinese New Year when we don't have enough people. But this time, because the market is tight -- or the market is good, capacity is tight, I decided to take in portion of a very bottleneck operation to this 2-shift operation, start from December 1 last year. And therefore, we prepare and build us some inventory, finish good inventory, prepare for Chinese shutdown and to stock for (inaudible) customer who really face very tight support issues. So -- and -- so anyway, the key themes are POS is very, very strong and POP -- POS is actually better than POP, and we do have some inventory prepared for the Chinese New Year to support the customer need.

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

Okay. And then given the tightness that you're experiencing currently and, as you've mentioned, the Chinese New Year's impact on production, what's the time frame in 2018 where you expect lead times to stop coming down and where you're expecting to have supply catch up with demand?

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Well, I think I mentioned that before. I see this time, the tight situation is not going to loosen up in near futures, okay. And so far, we still see very tight in first half of this year. And now, visibility for the second half is not clear, but we do work in on putting up some needed capacity to support the growth of this year. And -- but that really -- majority of the -- we need to put the capacity is really because we'll continue gaining the market share. I think during the speech, you notice we gained the market share in all the regions, Asia, North America and Europe. And we actually have the record revenue again this year for all our end markets, especially for automotive. You can see now we continue 2 quarters now at 8% of our revenue. So we are working, continue toward to our goal this year to 9% of our revenue. So all the market gain and all the growth, we do need to





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prepare the capacity for it, okay. So we -- I don't think that capacity expansion from us going to be overcapacity because I -- so far, I still see a very strong market growth at least for Diodes.

**Operator**

Our next question comes from Gary Mobley with Benchmark.

**Gary Wade Mobley** - *The Benchmark Company, LLC, Research Division - Research Analyst*

Hope it's not too early for you over there in Taiwan.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Yes.

**Gary Wade Mobley** - *The Benchmark Company, LLC, Research Division - Research Analyst*

So I'm curious to know if we should think of the 36% gross margin you're predicting for Q1 as the new base of which you can further expand gross margin as you get into your seasonally strong second and third quarters of fiscal year '18.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Well, I typically don't get the forecast beyond the current -- the first quarter or beyond the current quarter. But so far, we see the market, at least the first half, is still very strong. And therefore, you can assume that. You can assume that but you can see now, right, in 4Q, we were running 35.9%, which is almost 36%; and 1Q, we guide 36%. And actually, if we continue the seasonality of 2Q and -- which typically, seasonality to growth, then if we have even -- if we have the growth, then yes, the GP will increase. And second thing is we are ramping up SFAB 1 to support the KFAB shutdown. And you remember, we shut down KFAB November -- mid of November on schedule. And we are now installing the equipment from KFAB, and the schedule is everything should be -- start to qualify online all of the equipment from KFAB install in SFAB 1 should be by end of the -- end of this month, we should be -- everything ready and we start to ramp. And I think we said if we start to ramp, then we have more output, lower cost from SFAB 1 and that at the same time, I think the 8-inch fab in the -- well, okay. I'll stop. Just the KFAB shutdown, we all state that synergy will be \$10 million to \$15 million, start of 1Q. So you -- if you see it continue that area, yes, the GP will continue to improve. And then the 8-inch fab, I think we had mentioned we'll ramp it to 3,000 wafers by end of this quarter and, by the end of the year, go to about 8,000 to 10,000. And that ramp will improve the GP, too. So overall, if the market continues the strength, Diodes will continue gaining the market share, our assembly cost for underloaded shipping not exist and that GP will be good. And then with the SFAB 1 synergy and with SFAB 2 8-inch ramp, I feel, okay -- like I said, I'm not making the forecast here, but 36%, and it should be continue and improve, too.

**Gary Wade Mobley** - *The Benchmark Company, LLC, Research Division - Research Analyst*

Okay, all right. And Rick, can you share with us your goal in reducing debt for 2018 based on your cash flow assumptions and whatnot? And can you share with us your outlook for the tax rate for the year under the new tax plan?

**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

Sure. So from a debt perspective, since we bought Pericom, we paid down about \$200 million. We paid \$160 million last year. And so I don't have a detailed forecast of how much we're going to pay down. It depends on the investment we need to make in certain assembly test and wafer fab places. So it's going to be in the \$100 million range, would be my guess. From a tax perspective, we guided 31%. The issue here is not the lower





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tax rate. The issue has to do with 3 parts of the tax code. There's a part of the code called guilty and it's basically -- if a non-U.S. sub earns over 10% of its assets, the U.S. government taxes it anyway. There's a disallowance of interest deduction. And then Taiwan adjusted their tax rate from 17% to 20%. So those 3 pieces are included in that 31%. So we're going to have to go do some things, make some changes in the structure and also the way we do business processes to make it go down. And so we're in the process of doing that. I'm not going to give you a rate for the rest of the year because we're still studying it and we're still looking at what impact we can have.

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**Gary Wade Mobley** - *The Benchmark Company, LLC, Research Division - Research Analyst*

Got you, okay, all right, appreciate that.

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**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Let me add on this one. If you look at our debt, \$250 million...

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**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

\$268 million.

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**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

\$268 million, and our cash is at almost \$200 million.

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**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

\$200 million.

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**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Okay. So we should be able to bring more money back plus the money we make for operations to pay off the debt, okay. So my aggressive plan is hoping by end of next year, try to pay off our debt. Now we may not be able to do it, but if this will go down to -- the cash needs to be much more than the debt. That's the point.

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**Gary Wade Mobley** - *The Benchmark Company, LLC, Research Division - Research Analyst*

All right, okay, don't make any more acquisitions.

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**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Well, that's a different story, right. Gary, if our net operating -- acquisition...

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**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

All bets are off.



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**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Then whatever we talk -- are talking about is off. But I'm still -- today, I don't have very obvious one under the radar screen yet, okay. So -- but the goal is really try to use that tax to a very minimum and have more cash against the debt.

**Operator**

Our next question comes from Shawn Harrison with Longbow Research.

**Gausia Fatima Chowdhury** - *Longbow Research LLC - Associate Analyst*

This is Gausia Chowdhury on behalf of Shawn. Can you remind us of what the normal seasonality is for the first quarter with Pericom? And then any color that you could provide regarding the end markets. Which ones would be the best in the first quarter and 2018 aside from automotive, please?

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Okay. Let me give the answer first, okay. This seasonality, we call it, is 1Q, we were down from 4Q previous year, about 5% to 10%. That is a typical. And then second quarter typically grow 5% to 10%; and then third quarter, another 5%; and then fourth quarter, typically down 3% to 5%. That is the typical seasonality. But this year, really, there are 2 things. One is we really continue gaining the market share. Second, the market is still very good for us, at least the markets we participate. Therefore, we are able to guide the -- our 1Q from (inaudible) period is spread from the 4Q. And so that is better than seasonality these quarters, okay. Now if you are asking which market, for us, we almost see each market is very good; for example, computing, due to the Pericom acquisition and Pericom products, very strong, and we -- Diodes products, actually, one notch higher. And therefore, their computing for us started getting quite good. And automotive, I don't [have many to say]. Industrial, we're still quite strong. And even the communication, since we focus on high-end form of smartphones and -- that actually give us a very good growth in that area okay. And that's on communication. On consumer, we focus on IoT and different IoT pop up in different applications. So if you look at Diodes, we almost -- that's one. We're saying we gain the market share. We grow at record revenue on all different market segments. It is because the growth for Diodes in all the end markets. So if you see we grow in record revenue in all the regions and markets, then all the end markets will participate.

**Gausia Fatima Chowdhury** - *Longbow Research LLC - Associate Analyst*

Okay. And then can you break down the components behind the gross margin improvement? Just roughly how much was it between Pericom versus mix versus the KC fab?

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

The gross margin contribution?

**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

No, with the impact, which of those individual pieces was, Pericom (inaudible). We don't have that. We don't disclose that.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Yes, we don't disclose. But we do know that before we acquired Pericom, Pericom gross margin is very high. There are 2 market segments, okay. One is a crystal, an oscillator called (inaudible) called FCP, frequency controlled product. That is slightly to do margin somewhere around 30-something



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percent. And their IC portion of the Pericom business is very good. It's in 50%, 60% GPs. And when Diodes take over, we put a lot of effort to increase the market share in that IC area. And IC, I think if you're reading through Emily's speech, like ReDrivers and like...

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

(inaudible) MUX.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

(inaudible) MUX. And those, it's really going up quite well, and USB Type C area. So if you look at -- Pericom had very strong product portfolio, bring us one step higher from PC to server to data center. And those is -- are very good, high GP type of products, and their growth is better than other areas. And so this is how we helped Diodes to improve the GP and in the computing area to gain the market share, okay. Emily, you can...

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

I think on top of that, we continue to focus expanding our customer contacts, gaining the market share, focused really on the higher-value products and provide a higher value to the customers. So we believe this strategy and focus will continue to enable Diodes' growth in the margin expansion area.

**Gausia Fatima Chowdhury** - *Longbow Research LLC - Associate Analyst*

Okay, great. And one last clarification, if I may. The KFAB closure synergy, did I hear correctly that you said you'll start seeing it at the end of this quarter? And would it be back-half-weighted? Or how should we think about the weighting through the year?

**Richard D. White** - *Diodes Incorporated - CFO and Secretary*

Yes. So the -- we've said all along that the impact is going to be between \$10 million and \$15 million, and that's based on the lower cost associated with SFAB 1 output versus KFAB. And so you're going to see that impact as KFAB -- as SFAB 1 ramps up. And as Dr. Lu said, we're just going to start that in March. So it will be moved through the quarters as they increase production.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Yes, that's synergy -- actually, let me put this. Number one, SFAB has better yield, better performance than KFAB. Number two, the cost is low. And number three, now, it's capacity is actually increased, okay, because originally, you have KFAB -- SFAB capacity is limited. But now, we put in KFAB equipment in SFAB and boost SFAB capacity one notch higher. And the last one is when you combine 2 fabs into 1, that utilization actually -- because before we shut it down, those are running 70%, 80%. Now after one go away, the other one, even at higher capacity due to in stock KFAB equipment, we still worked at running somewhere around 95% utilization in SFAB with higher capacities. So based on that, we're confident our synergy from the combined 2 fabs should be \$10 million to \$15 million.

**Operator**

Our next question comes from Edgar Roesch with Sidoti & Company.



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**Edgar Burling Roesch** - *Sidoti & Company, LLC - Research Analyst*

So I joined a little late. I know you gave some commentary about automotive, but I wanted to understand something about that end market. As you have success there, does the qualification process get shorter or, in any way, easier for Diodes?

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

The qualification is not going to be shorter, okay, especially the new spend they put it up for the copper wires. The qualification is even tougher, okay. But don't forget we started this investment or this focus back to 2013. And I think I make that statement several times in different -- with the different investors we're talking about. In 2013, I started to focus on automotive drive, and 3% of our revenue in 2013 coming from automotive; and 4%, 2014; 5%, 2015, and going up. And it's the reason we are able to grow like 20%, 30% a year. It's due to gradually (inaudible) automotive part ramping up to production. So you are going to see an even higher speed of the growth later on because more and more product is ready to ramp, okay. So that we can time the ramp to not getting shorter. And many fab is more copper, especially for the 30 type of product -- for the 30 type of system, it is making tougher. But virtually, we take this action, where it was before to where is now. And therefore, it enable us to continue a very fast speed of the growth.

**Edgar Burling Roesch** - *Sidoti & Company, LLC - Research Analyst*

And as a follow-up, Dr. Lu, how intensive are packing innovations in winning business there? Is that -- I know, obviously, quality is a big factor, but you guys use packaging innovations to win a lot of business. Is that as intense on the automotive side? Or is it more standardized?

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Yes, especially the power package. I feel like I've been talking about Diodes' focus on 2 directions. One is power packaging have smaller but have higher energy delivery, power efficiency. So power package is one direction area. Another area is small geometry getting smaller and smaller and -- like CSP, like DDFN in both direction. And so for the powertrain area of automotive, yes, it's that area we get in our power packaging, our assembly. We're getting there. And obviously, like you said, Diodes is -- have a very good packaging capability. Therefore, our quality can -- our own manufacturing can pass the audit of all the automotive company. All the automotive company, before they're really using high volume of your product, they need to audit our facility. And our packaging site, our CIP SAP and even at Neuhaus which is in Europe, they all pass automotive audit. So those is the one enable us to enter into automotive and highly grow in the market.

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

And on top of that, I think we're also driving our technology improvement. And also, with connected cars, we're definitely seeing a compact expansion crossing to higher technology level. So we see significantly Pericom contacts with a higher technology expanding into this area. So I think what Dr. Lu mentioned over the years, we feel a very strong pipeline from the demand creation point of view. We believe with our technology, our packaging technology improvement will really enable us to continue to grow in the segment.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Yes. This connected car or infotainment, all those Pericom products can bring Diodes products into that area.

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

Yes.



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**Edgar Burling Roesch** - *Sidoti & Company, LLC - Research Analyst*

Okay. And then one other question. I know you don't give a lot on products category, whether power semis or connectivity and timing or where your strength is coming from, but could you -- ostensibly, power semis was a good business in 2017. And do you see that as a strength again in '18? Could you -- could you give us a little bit of color on categories?

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

Yes, definitely. Connectivity product, it really covers a lot of PCI Express, we call the package switch, basically expanding PCIe ports for different applications. We're definitely seeing a very strong adoption rate, which we just mentioned a little bit earlier, even into the automotive segment, right. PCIe, which covers a lot of high-speed muxing technologies from Pericom, we're also seeing that being adapted in multiple market segments. I think the other strong area is actually timing, and timing really covers both from the clock IC point of view as well as frequency controls, which usually people are familiar with crystals and crystal oscillators. And we believe with the leverage that we have with the strong Diodes leading position across multiple segments that we can actually leverage and cross-selling this kind of product into our key customers' area and key end market focus, including automotive, industrial, IoT applications, high-end computing as well as high-end smartphone areas. So we do see a lot of synergies to leverage between the product lines within Diodes' product families.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Well, as well as -- for example, USB Type C and power delivery, we actually, from different group, chose this area. Pericom is leading in the USB Type C type of product. But if you look at Diodes portion from BCD acquisition, AC-to-DC, they are focused on the power -- Type C. With Diodes, we have our product in the Type C. And from the power delivery point of view, our MOSFET is very strong in that area. So now when you combine BCD's tech knowledge, AC-to-DC charger, that technology, one side of the cable, then you're talking about how Pericom is in the other side of the cable. And the -- those MOSFETs is old, those side of the cables. We spend on very strong position to address the Type C power delivery, that kind of thing. So...

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

Right. One of the product actually also extremely strong in this kind of application or protocol is actually our signal integrity product lines. So we do see very strong momentums in Type C, in PCIe, infotainment, different areas that we see picking up activities. So we're very happy with that and we (inaudible) believe that will support our future growth.

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Yes. (inaudible) too much detail on the product portfolio is because Diodes plus Pericom, we have so much -- so many products, so very difficult to just talking about one area. So I'll typically just say we gain the market share. But if you (inaudible), we do have a lot of product portfolio to cover different end market and different system solutions.

**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

Did we answer your question?

**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

Did that answer your question?



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**Emily Yang** - *Diodes Incorporated - VP of Worldwide Sales and Marketing*

I don't see any (inaudible)

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**Operator**

Thank you. And I'm showing no further questions at this time. I'd like to turn the call back over to Dr. Lu for closing remarks.

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**Keh-Shew Lu** - *Diodes Incorporated - CEO, President and Director*

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

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**Operator**

Thank you. Ladies and gentlemen, this concludes today's conference. Thanks for your participation. Have a wonderful day.

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