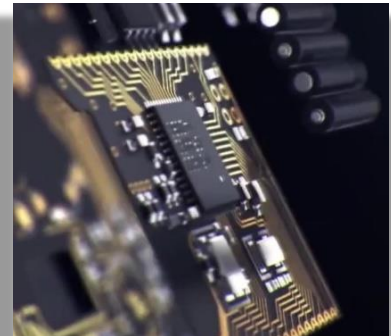
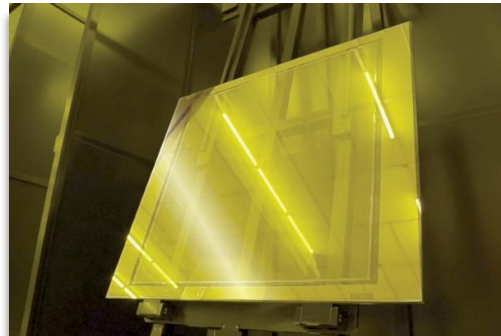
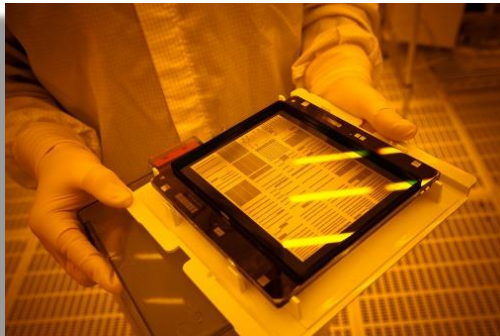


Global Merchant Photomask Leader

Virtual Analyst and Investor Day
December 14, 2020



Safe Harbor Statement

This presentation and some of our comments may contain projections or other forward-looking statements regarding future events, our future financial performance, and/or the future performance of the industry. These statements are predictions, and contain risks and uncertainties. Actual events or results may differ materially from those presented. These statements include words like “anticipate”, “believe”, “estimate”, “expect”, “forecast”, “may”, “plan”, “project”, “in our view” or the negative thereto. We cannot guarantee the accuracy of any forecasts or estimates, and we are not obligated to update any forward-looking statements if our expectations change. If you would like more information on the risks involved in forward-looking statements, please see the documents we file from time to time with the Securities and Exchange Commission.

Overview & Strategy

Peter Kirlin, CEO

Today's objectives

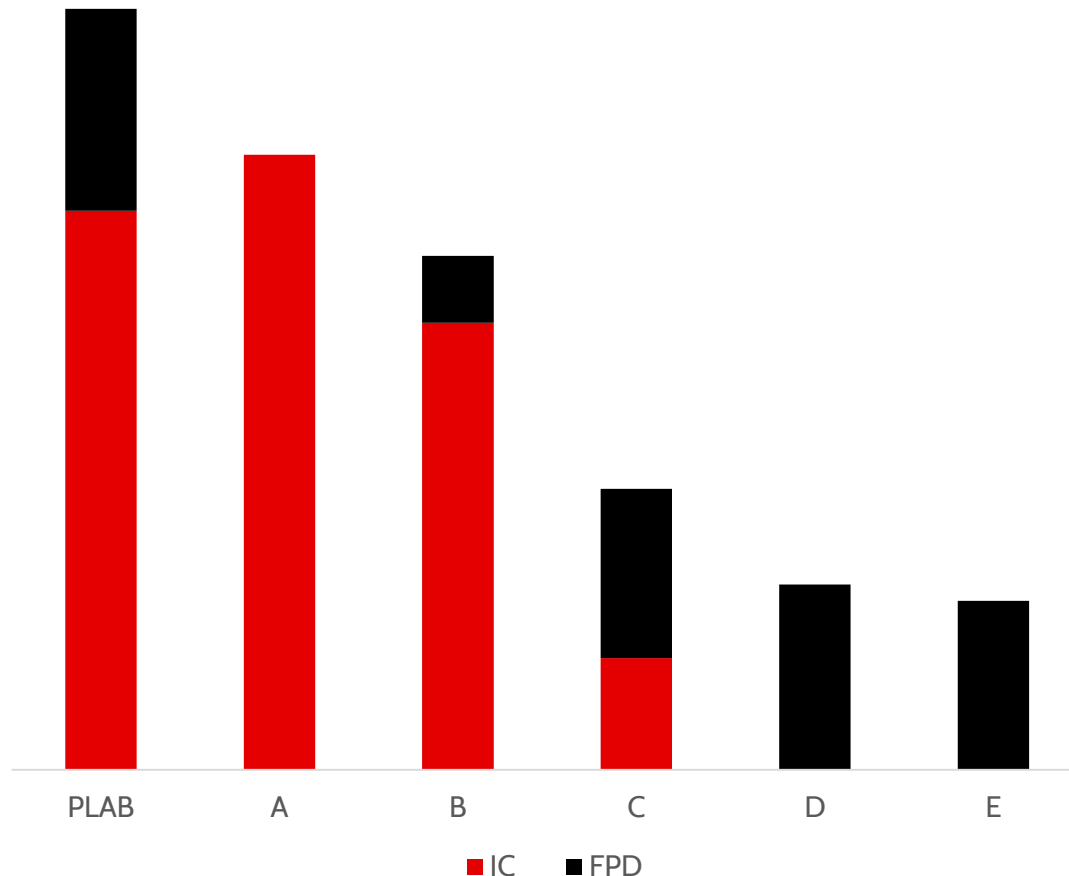
- Present PLAB investment thesis
- Review progress since 2018 investor day
- Describe next growth phase
- Demonstrate alignment with market trends
- Provide long-term financial targets
- Answer your questions

A Compelling Investment Thesis

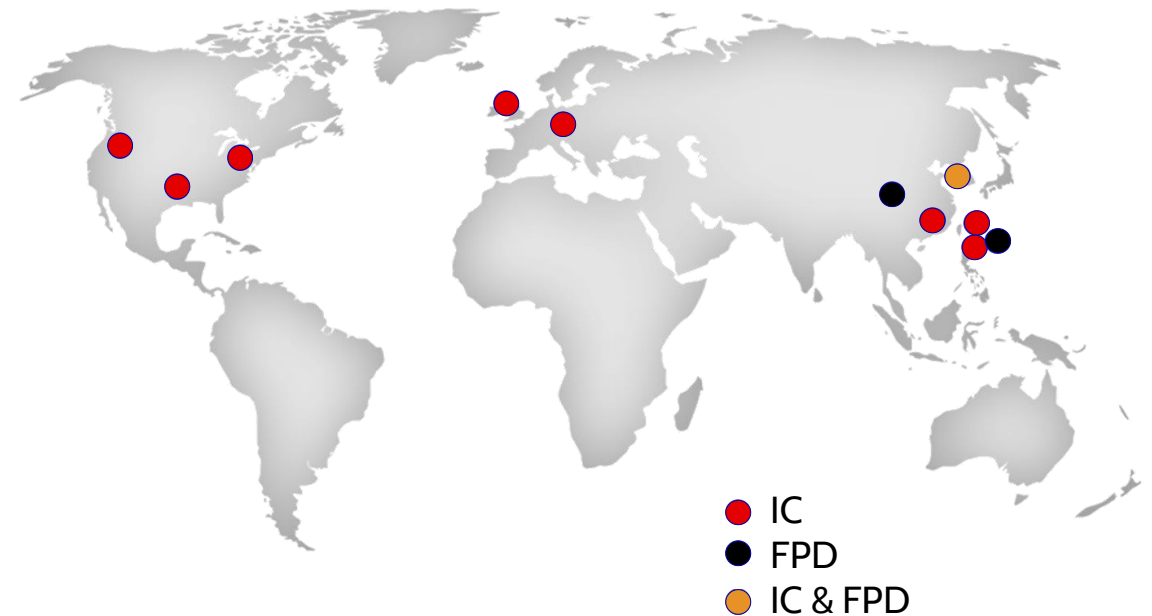
- Global leader in merchant photomask industry
 - Delivering growth by leveraging core competencies
 - Growing more quickly than the market
- Technology aligned with secular growth trends
 - China industry expansion (IC & FPD) – Made in China 2025
 - Display technology inflections
- Investment growth strategy to double EPS
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Leading merchant with unmatched global presence

Largest Merchant Photomask Manufacturer (\$M)

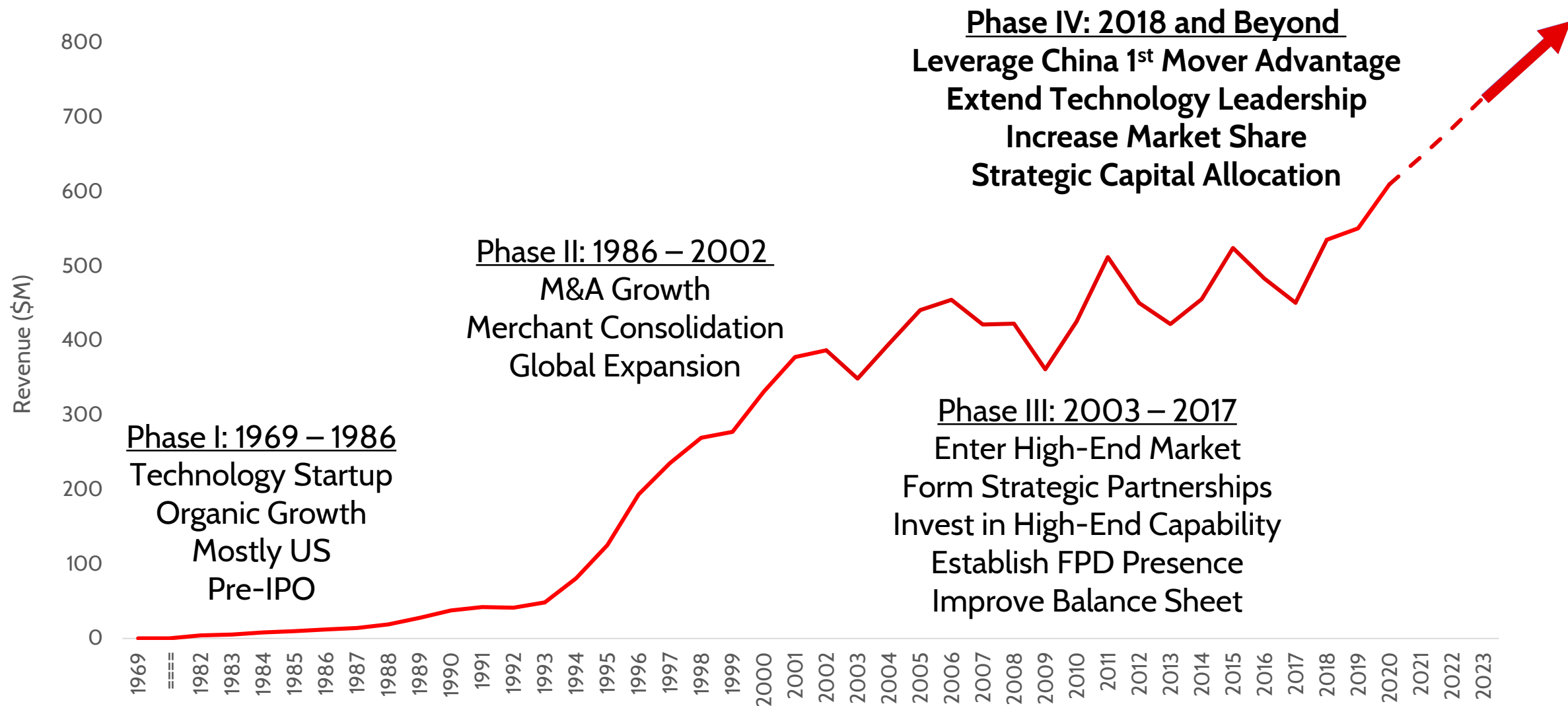


Unmatched Global Footprint
11 Strategically Located Manufacturing Facilities

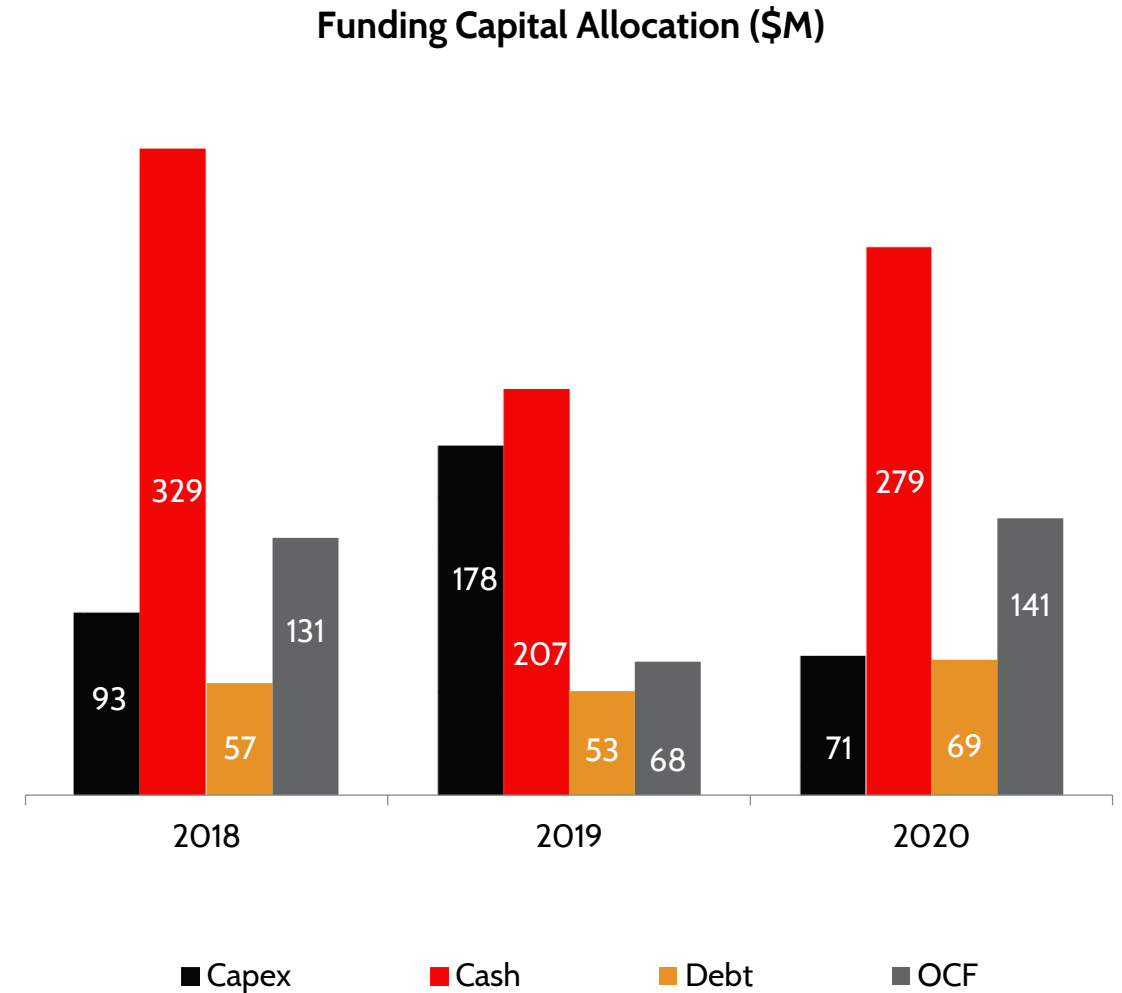
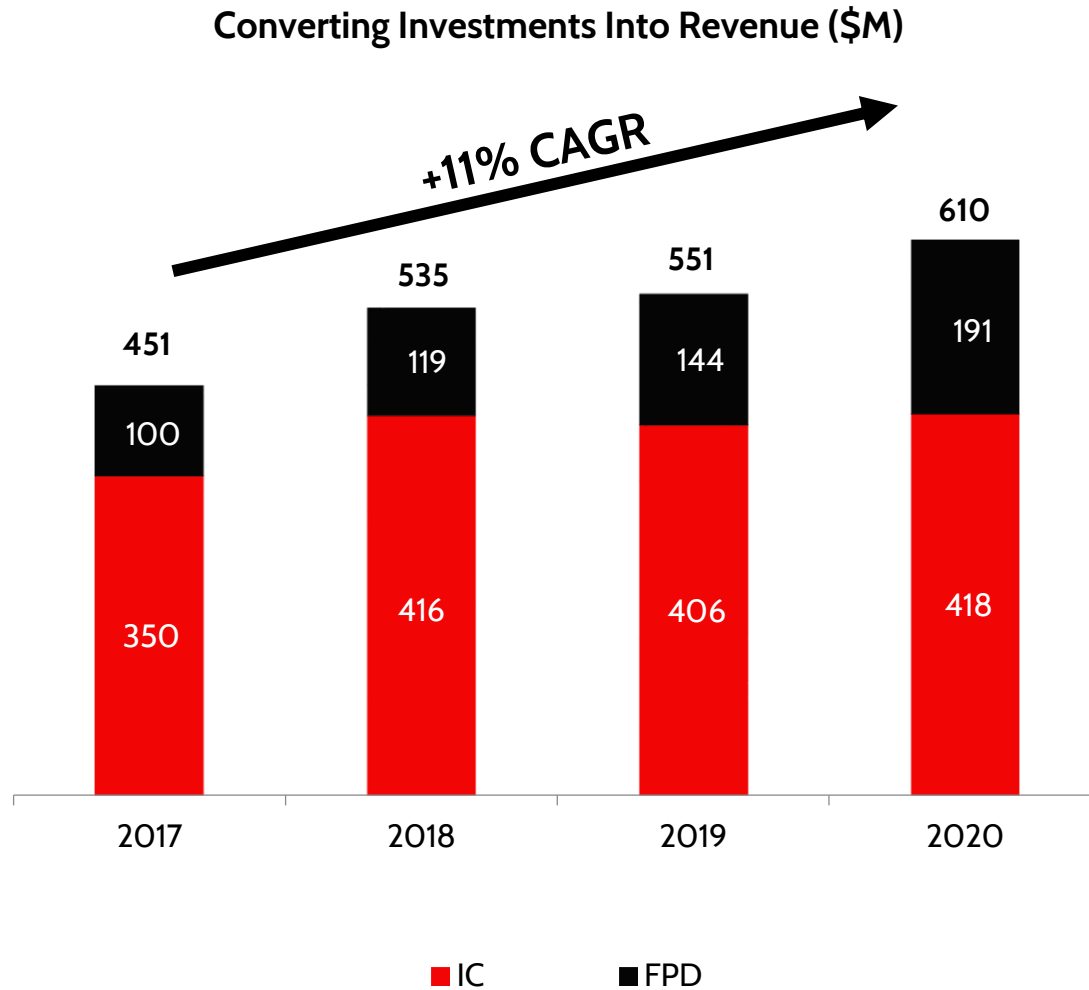


Sources: SEMI 2019 Photomask Characterization Study; internal estimates

Phases of Photonics revenue growth



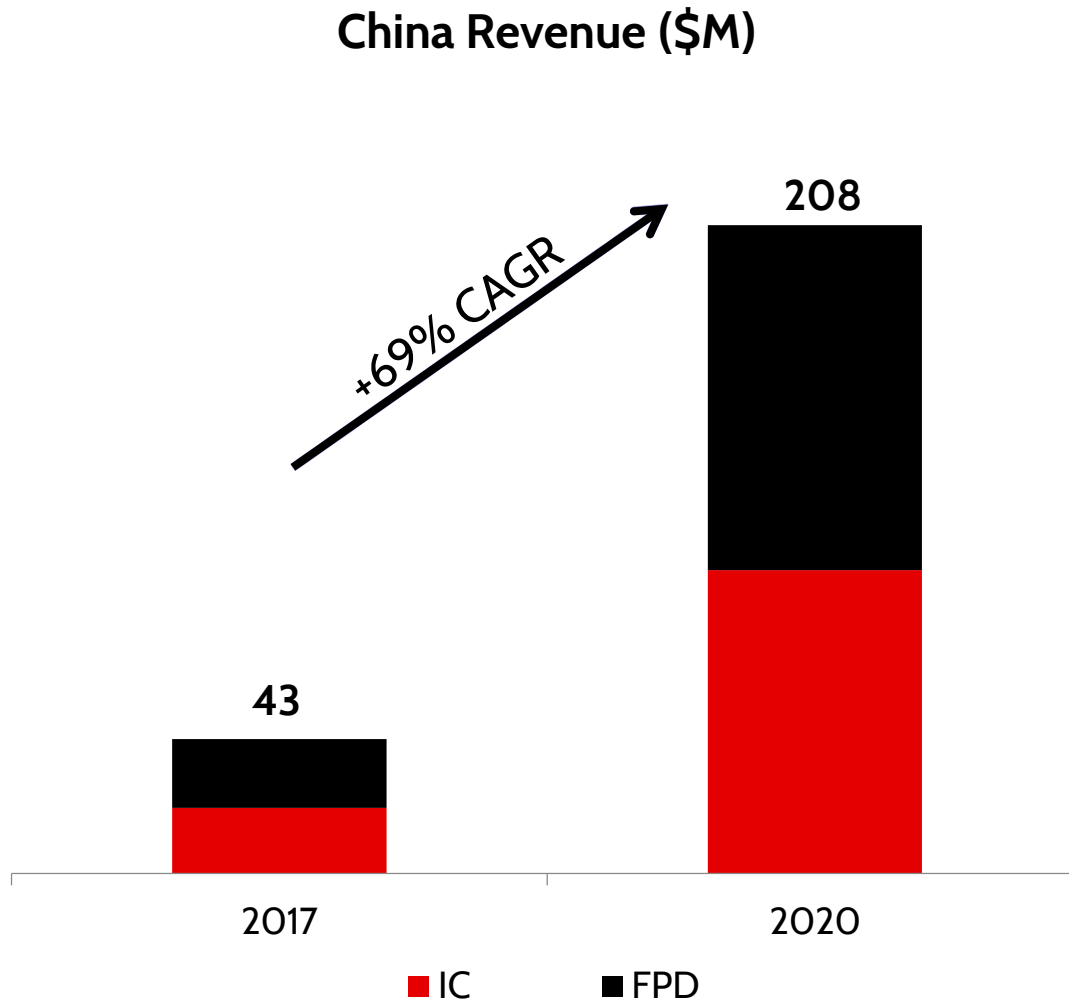
Investment focus driving financial results



Delivering on commitments

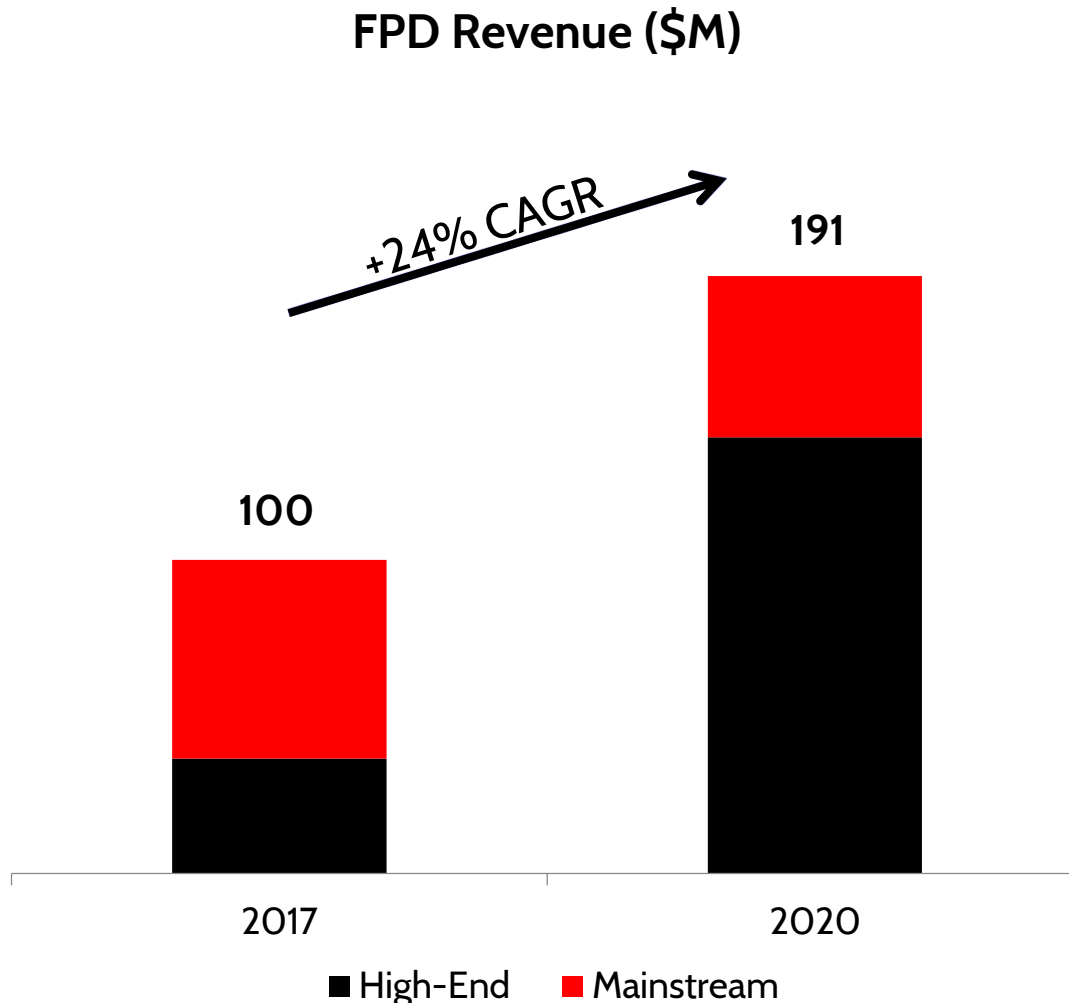
	2018 Investor Day Commitment	Results
Growth	\$630M revenues and \$0.80 EPS	\$610M and \$0.52, impacted by COVID lockdowns & trade war
Market Position	China production to start H119	Hefei delivered; Xiamen plan modified
	Enter G10.5+ market	Market leader
	Grow market share	Delivered
Financial Strength	Cash / net cash equal to pre-investment	2017: cash = \$308M; net cash = \$246M 2020: cash = \$279M; net cash = \$210M plus \$79M in share repurchases since 2018
	Improve ROIC	2017 = 1.4% 2020 = 3.9%

Growing China business



- We have growing business in China
 - 34% of total revenue in 2020
 - 23% of IC revenue
 - 58% of FPD revenue
 - Growing strong since 2017
 - IC +67% CAGR
 - FPD +71% CAGR
- Local manufacturing accelerates growth
- Customer contracts fosters sustainable results
- IC JV enables us to compete more effectively

FPD nearly doubled over 3 years



- Targeted high-end investments
 - G10.5+
 - AMOLED & LTPS for mobile
- Partner with largest panel makers
- Runway left for advance display growth
 - Mobile platforms
 - Advanced TV
 - Mini & Micro LED
- 2021 investments aligned with market trends

Evolving investment focus

2018 Strategic Targets	2020 Strategic Targets
G10.5+	Complete
AMOLED inflection point	Advanced display technologies: AMOLED for mobile; OLED for TV/IT; emerging Micro and Mini LED
China geographic expansion	Continues, driven by Made In China 2025 industrial policy and growing nationalism

2021-2023 Targets

- Double industry growth rates: 5-7%
- Expanding gross and operating margins, reaching high twenties and high teens, respectively
- More than doubling EPS to well in excess of \$1 / share

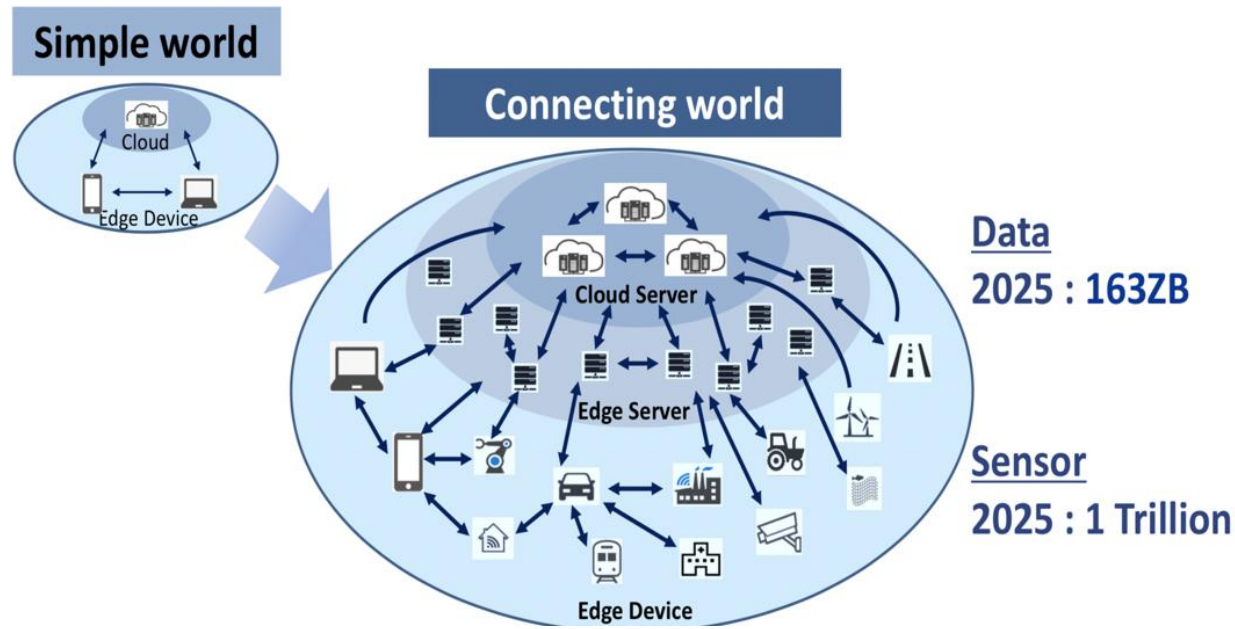
Summary

- We have sustained double digit growth in a very challenging environment over the past 3 years
- Our leadership position is expanding
- Moving forward our investment focus is narrowing to drive accretive growth
- With a business model demonstrated to deliver increasing shareholder value

Delivering Technology to the Market

Chris Progler, CTO

Photomasks help enable the connected world

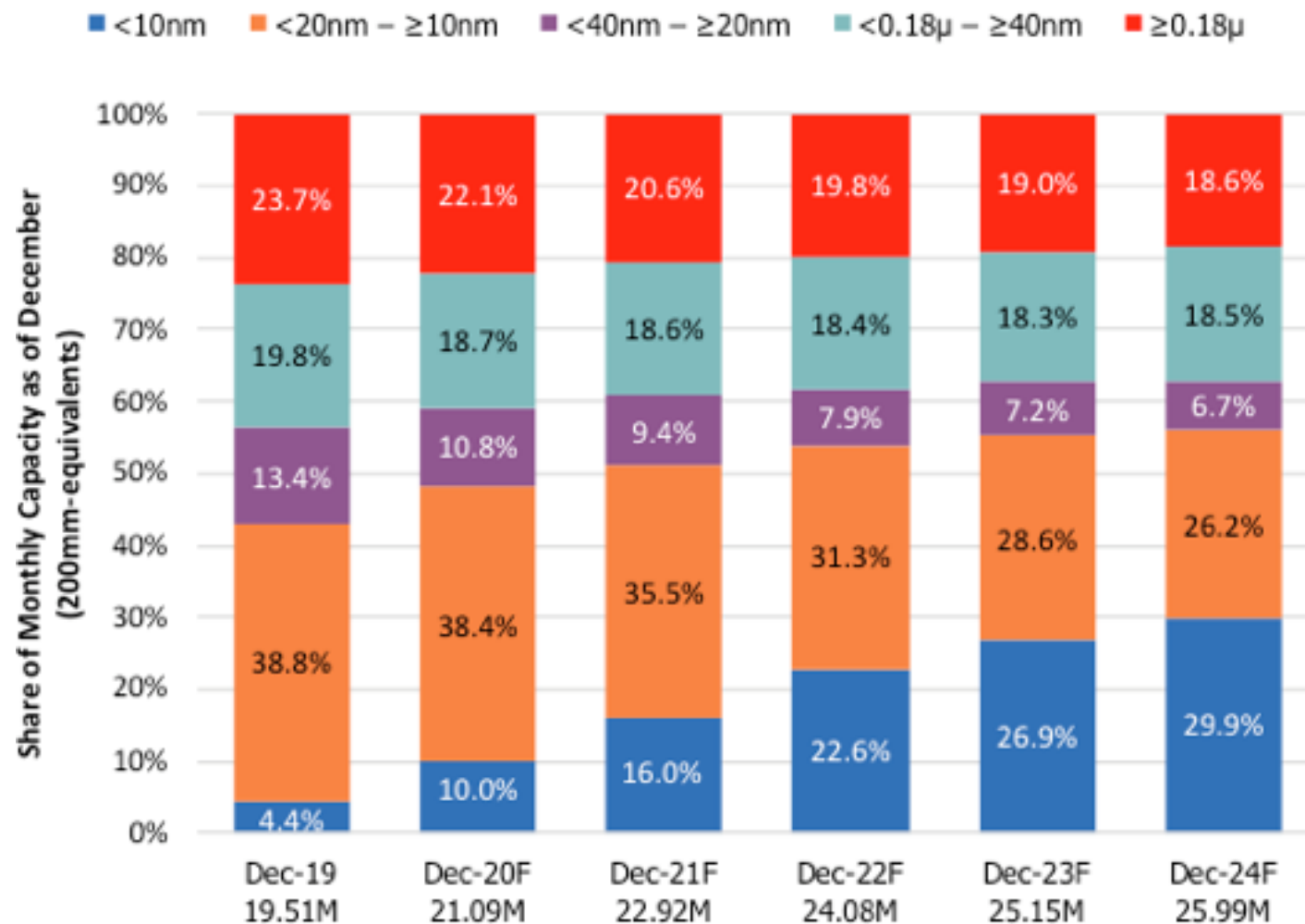


Mask Enables Robust Design → Market Win for Customer

- Golden age of design and integration as differentiators
- Global dynamics enhance mask value: technology, yield, cost, speed, security, trust
- Increasing barriers to entry
- Leadership through partnership: Process of Record, Long-Term Purchase Agreement, Joint Development Projects
- Market pushing more technology into masks: customization, design activity
- Multi-node supply and demand trends favorable
- Focused and opportunity driven investments: region, customer, technology

Photomask opportunity transcends lithography design nodes

Forecast Monthly Installed Capacity Shares – by Min. Geom.



Source: IC Insights

High-End
Chip enablement
Design integration
New fab ramp

Mid-Range
Time to market
Design flexibility
Yield

Legacy
Cost
Capacity
Continuity

High-tech photomask demand drivers

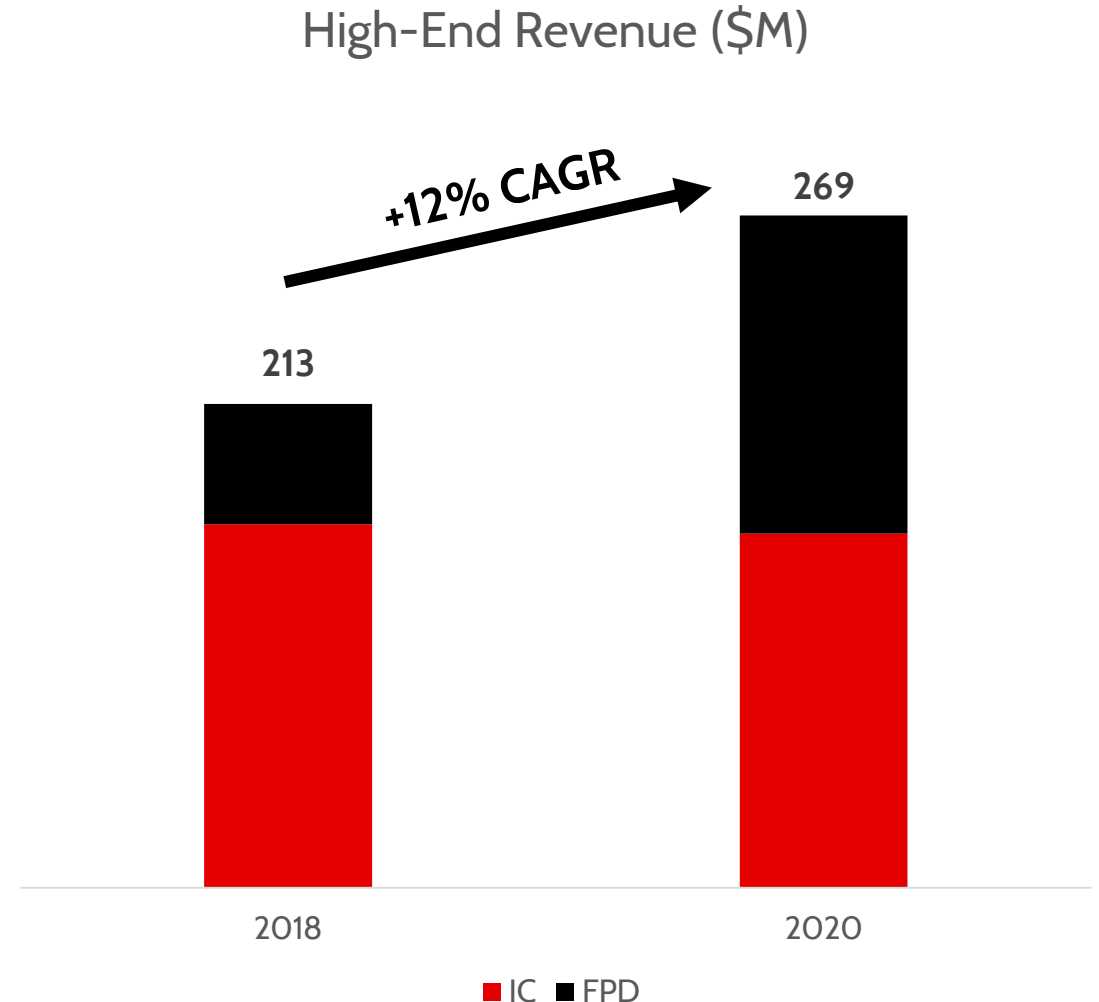
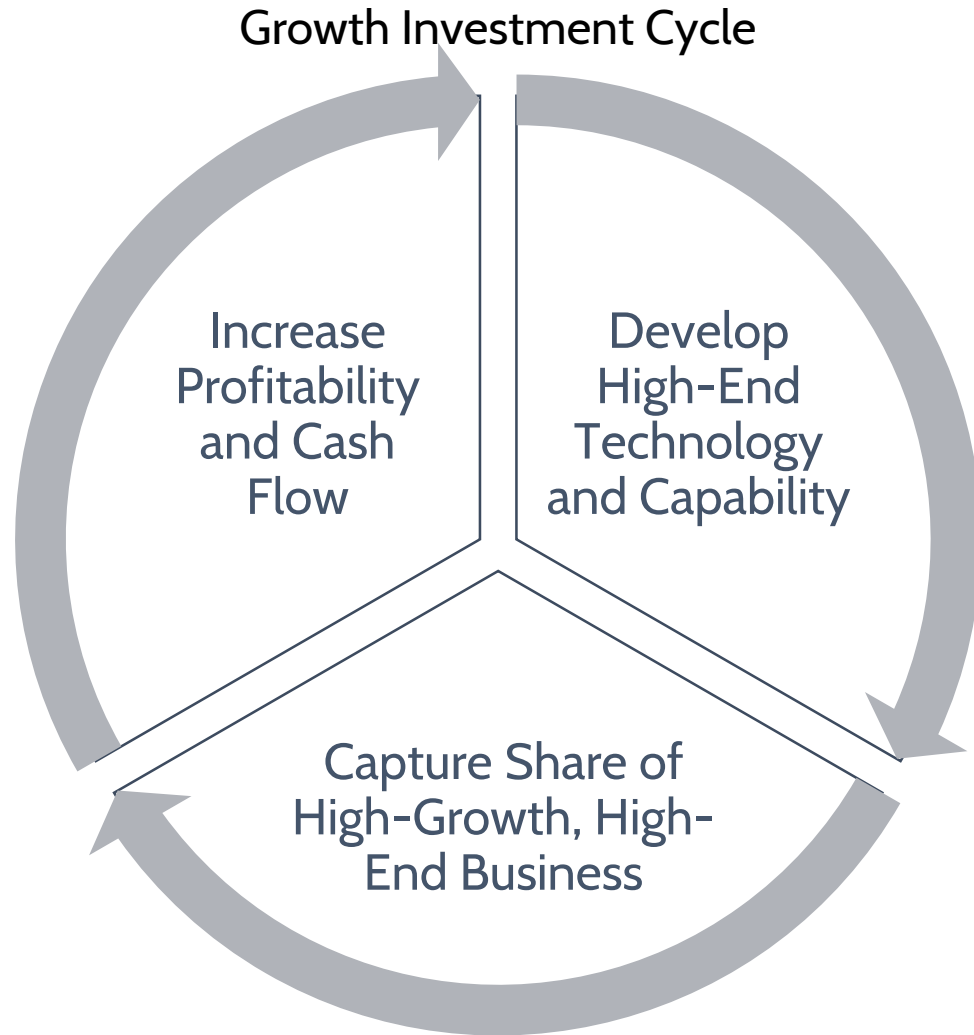
- IC
 - EUV – mask and litho tech still maturing, consumes heavy writing resource
 - Mask complexity and count needed for advanced designs
 - SoC trends – multi-function customization alongside SoC disaggregation
 - Cloud to edge computing migration and design activity
- FPD
 - Mask carrying more of lithography load
 - AMOLED migrating down from premium smartphones
 - TV display innovation: lighting, size, resolution, compensations
 - Gaming, remote work and learning driving demand

Photomask velocity: A key differentiator

- Speed of design turns takes center stage across the landscape
 - Advanced mask complexity, level count and yield
 - Capacity constraints at mid and legacy nodes
- Technologies that enable our photomask velocity
 - Customer collaboration tools to streamline process development
 - High yielding, self-correcting and efficient mask processes
 - Rapid mask tuning connected to device and panel performance
 - Process fan out and nanometer scale harmonization for tech localization
- Technology investments for IC are targeted at delivering world class mask velocity
 - We are developing technology to transform the speed at which first time right photomasks can be delivered to customers



Technology as a tool to support our business growth

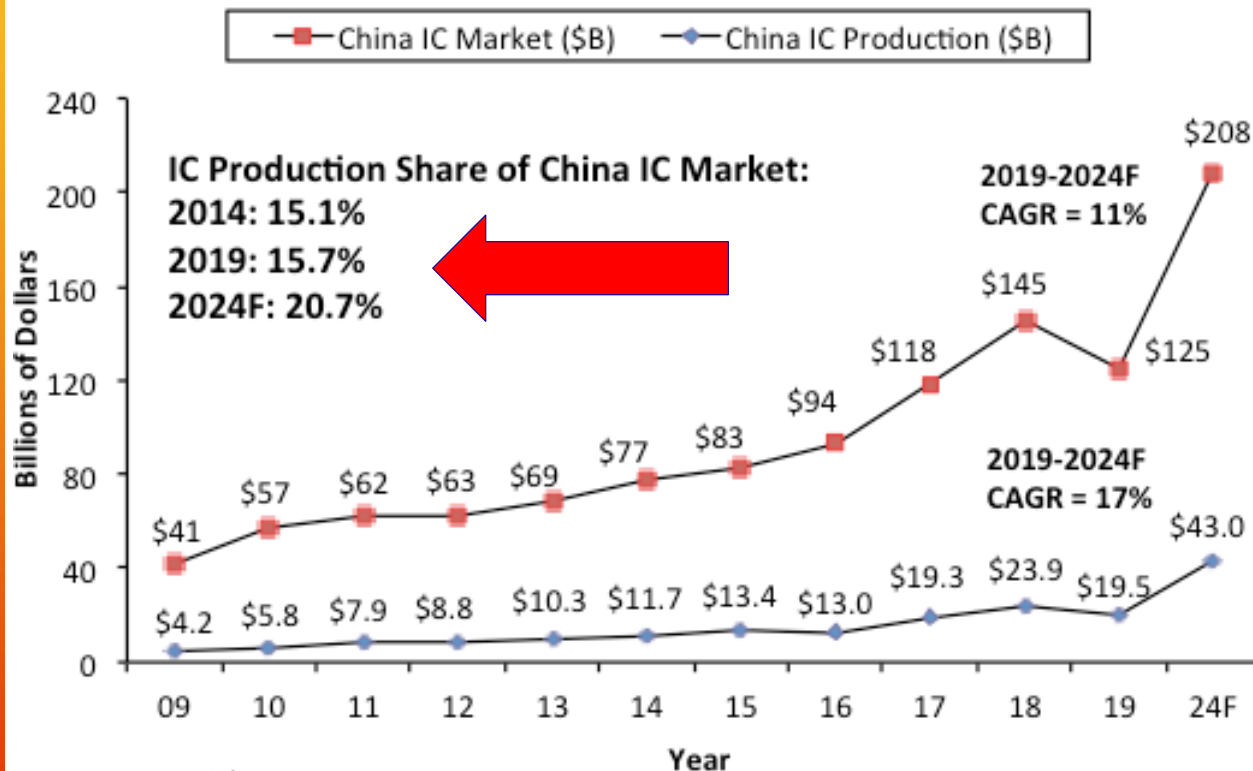


How has China's strategy energized served markets for growth?

- Domestic investments add local capacity to win share and support national agenda
- Foreign competition must improve product innovation to sustain advantage and share
- Integrated circuits and displays elevated to center stage in economic and security landscape
- **Photomasks** stand at crossroad of design and manufacturing enablement
- Examples:
 - 70% of LCD and 50% of AMOLED capacity to China by 2021
 - Advanced TV shipments to double by 2024. Mask count per advanced TV on path to doubling.
 - Foundry capital spending increased >35% in 2020

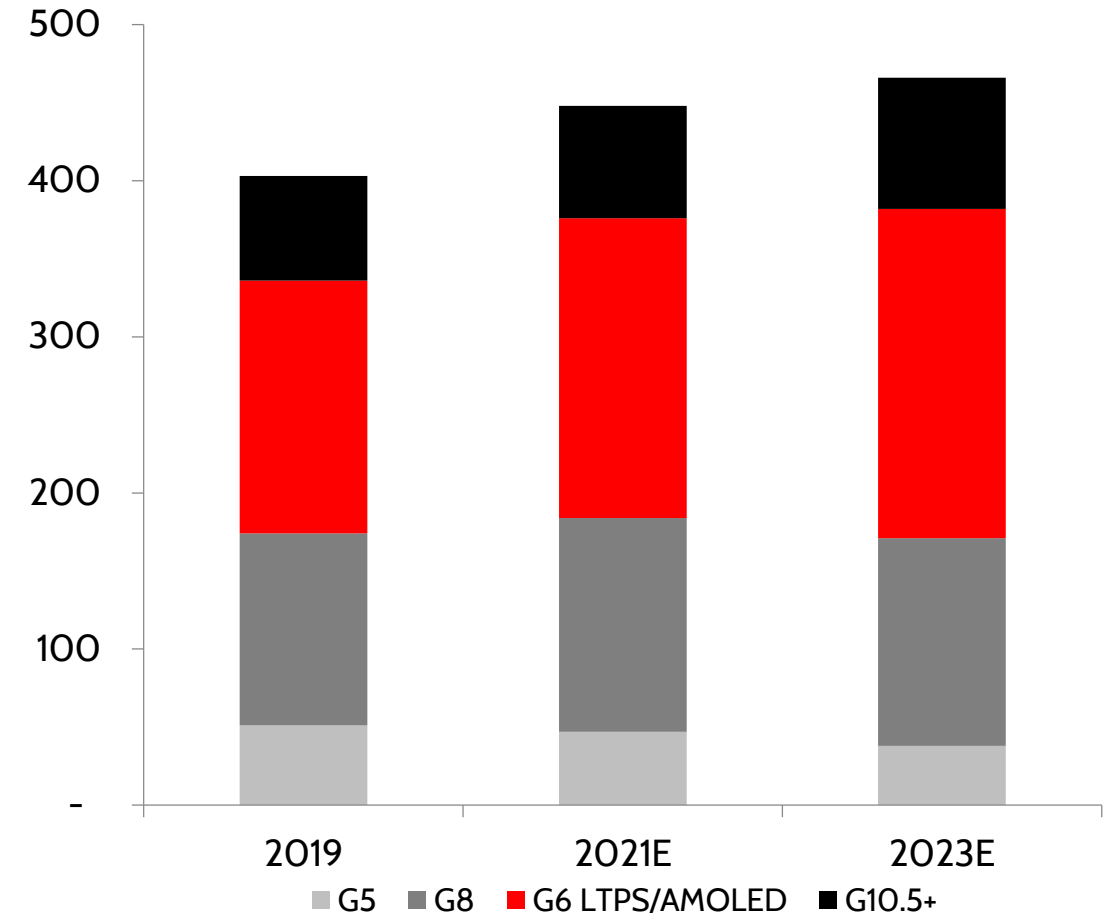
“Made in China 2025” driving growth

China IC Market vs. China IC Production Trends



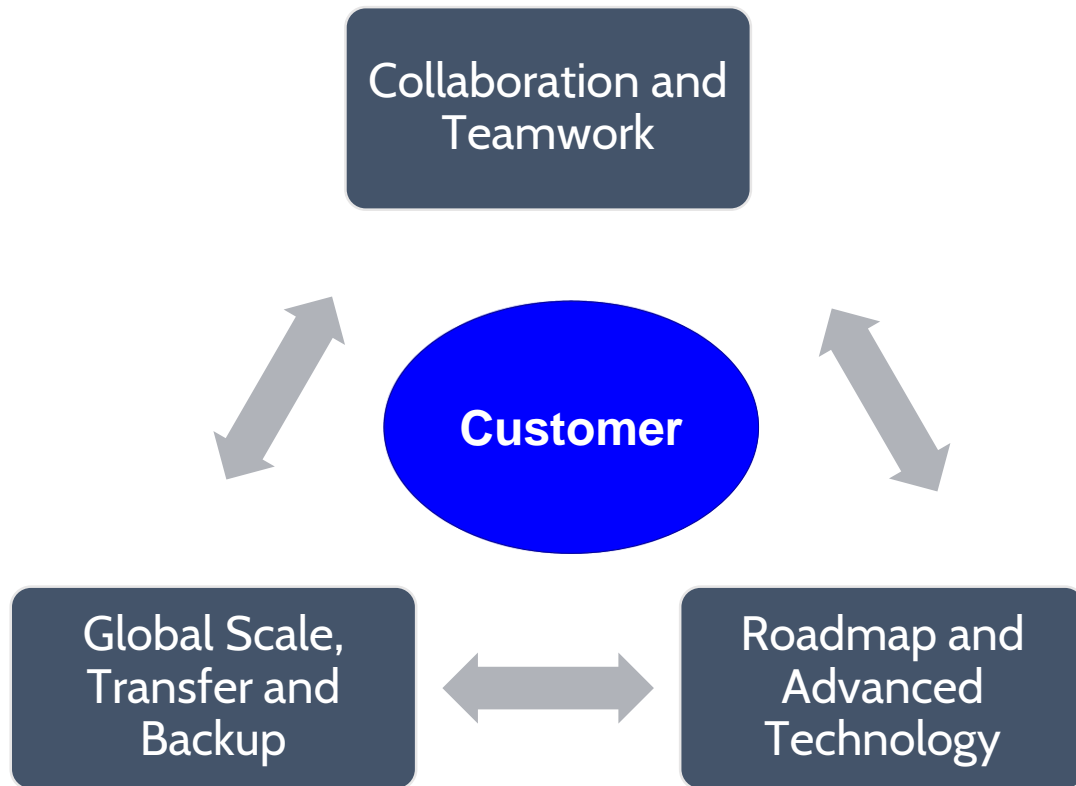
Source: IC Insights

China FPD Mask TAM (\$M)



Source: Internal Estimates

Summary



- Photomasks are enabling technology for IC and display in the connected world
- Key tech inflections driving growth
 - China investment and global share goals in IC and FPD: LCD to mobile pivot, multi-node IC design activity
 - Sweet spot mid-range IC nodes to support pervasive chip implementation. Capacity constraints.
 - Leaders continue innovation driving advanced mask complexity and outsourcing
 - IC and display take center stage for global economic and security independence
- Our investment strategy is aligned with these market trends
- We develop focused processes and products to enhance customer yield and time to market
- We are the leading trusted partner in the marketplace

Financial Model & Outlook

John Jordan, CFO

2020 Summary

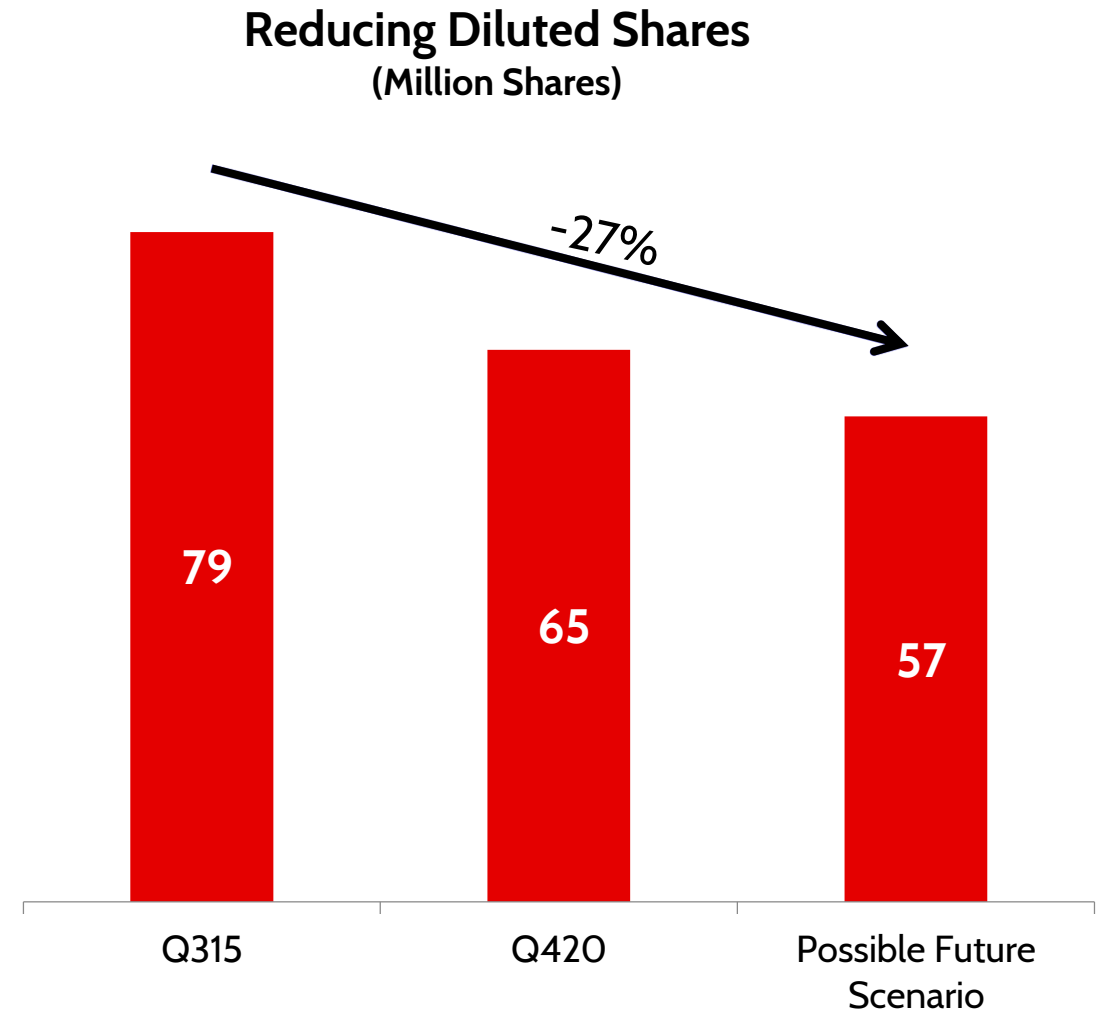
- Several revenue records established
 - Revenue of \$609.7M
 - FPD revenue of \$191.3M
 - China revenue of \$207.5M (IC = \$97.1M; FPD = \$110.5M)
- Operating income improved 23% Y/Y
- Generated \$143M in cash from operating activities, invested \$71M in capex, and returned \$34M in cash to shareholders
- China facilities contributed \$79M in revenue with operating loss of \$2M; Hefei was profitable for the year

Illustrative Target Model

	2018	2019	2020	Illustrative Target Model 3-Year Horizon		
Revenue	\$535	\$551	\$610	\$700 <i>5% CAGR</i>	\$725 <i>6% CAGR</i>	\$750 <i>7% CAGR</i>
Gross Margin	25%	22%	22%	24-26%	26-28%	27-29%
Operating Margin	12%	9%	10%	13-15%	15-17%	17-19%
Operating Cash Flow	\$131	\$68	\$143	\$150-160	\$160-170	\$175-185
Free Cash Flow	\$39	(\$83)	\$77	\$80-90	\$90-100	\$100-110
EPS	\$0.59	\$0.44	\$0.52	\$1.00-1.05	\$1.15-1.25	\$1.25-1.35

Clear capital deployment priorities

- Fund organic growth
 - Geographic expansion into China
 - Investments to maintain technical leadership
 - Capacity expansion when reciprocated by customer commitment
 - Financial discipline to improve ROIC
- Explore strategic M&A
 - Photomask industry – IC & FPD
 - Adjacencies to increase revenue diversification
- Share repurchase
 - Repurchased 7.9M shares (\$79M) since 2018
 - Redeemed \$115M in convertible debt since 2016, eliminating 10.3M potentially dilutive shares



Financial discipline improves shareholder value

- Targeted investments drive top-line growth in excess of market
- Operating leverage and cost reductions expand margins
 - Target operating margins mid- to high-teens
 - Target incremental margins 50%
- Strong cash flow generation fortifies balance sheet
- Capital deployment priorities to improve ROIC

Summary

- Recent performance on upward trend
- Growing more quickly than markets
- Margin expansion creates earnings power
- Strong cash flow generation
- Strategic use of cash to fund growth and enhance shareholder returns

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Questions?

Thank you for your interest!

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