

Photronics, Inc.

Global Leader in the Merchant Photomask Industry

Stifel 2020 Cross Sector Insight Conference
June 8, 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.

Response to COVID-19: Four Key Focus Areas

▶ **Employee health**

- Health monitoring
- Adoption of best practices
- Global visitor policy

▶ **Raw material supply**

- Weekly meetings to monitor global supply chain
- Constant contact with suppliers

▶ **Tool maintenance**

- Engagement with virtual service technicians where feasible
- Reliance on self-service expertise

▶ **Customer support**

- Open communications with customers to understand needs
- Constant contact with logistic partners

A Compelling Investment Thesis

▶ Global leader in merchant photomask industry

- *Delivering growth by leveraging core competencies: Operational Excellence, Low Cost Producer, Technology Leadership, Customer Intimacy*
- *Growing more quickly than the market*

▶ Technology aligned with secular growth trends

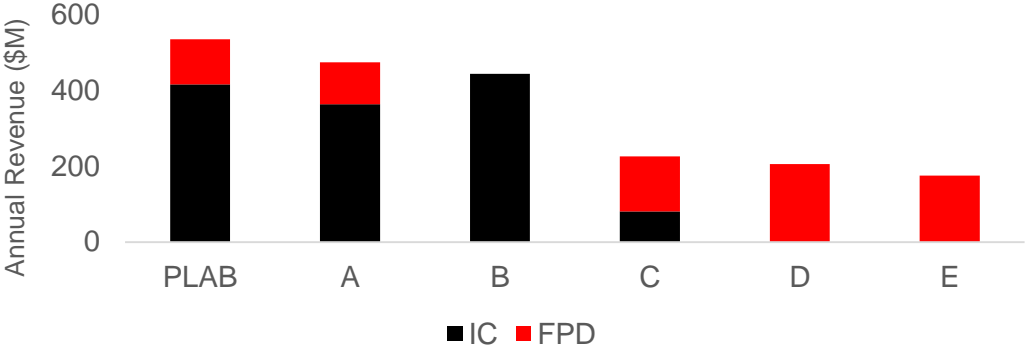
- *China industry expansion (IC & FPD) – Made in China 2025*
- *Technology inflection from LCD to AMOLED*
- *Rapid expansion of G10.5+ panel capacity*

▶ Investment strategy drives earnings growth

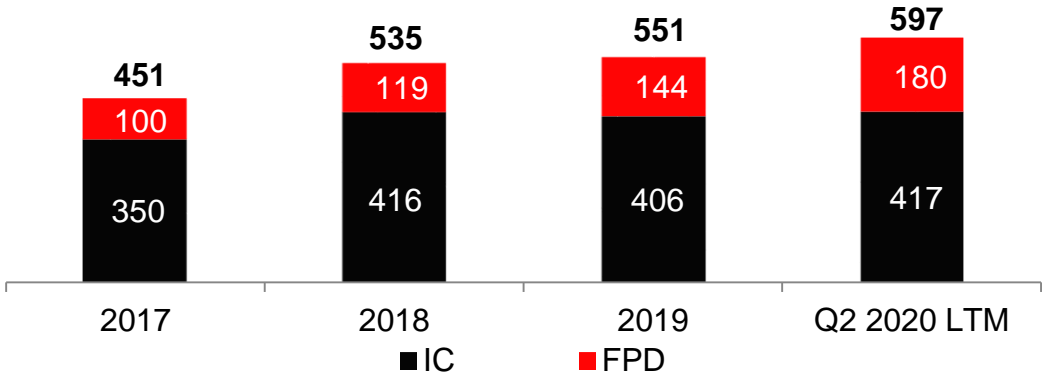
- *Strategic investments bring top-line growth*
- *Operating leverage creates margin expansion*
- *Increasing free cash flow to fund growth investments and share repurchase*

Photronics at a Glance

Largest Merchant Photomask Manufacturer

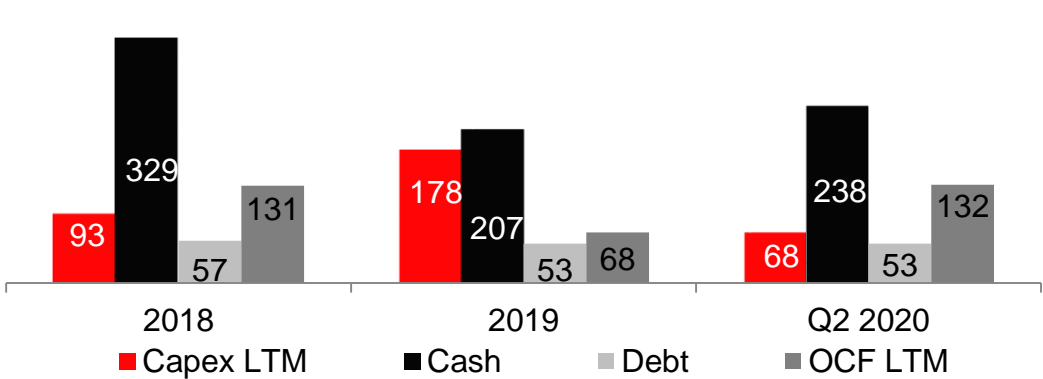


Converting Investments Into Revenue (\$M)



Unmatched Global Footprint
11 Strategically Located Manufacturing Facilities

Financial Strength to Fund Investments (\$M)



Photomasks: Essential for Electronics Manufacturing

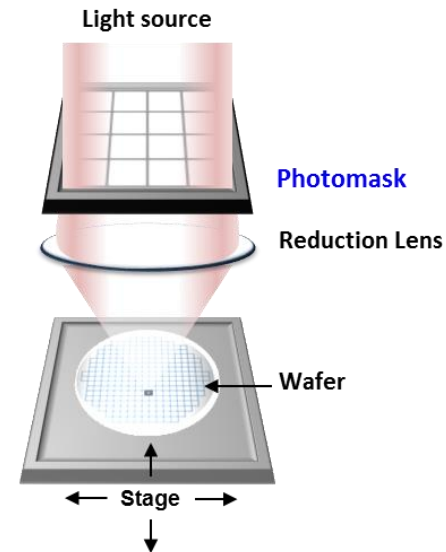
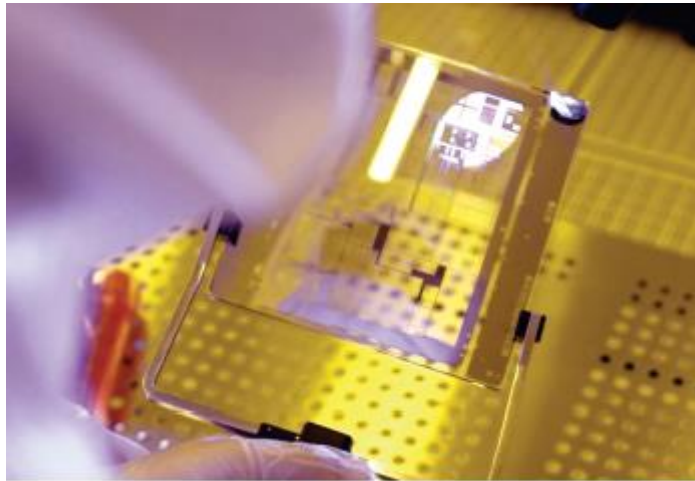
Component
Design

Photomask

Manufacturing
Process

End
User

*BRINGS DESIGN TO
MANUFACTURING FLOOR*



Core Competencies Underpin Sustainable Growth

Low Cost Producer

**Cost control
Supply chain optimization**

Operational Excellence

**Flexible delivery
High yields**

Customer Intimacy

**Trusted partner
Wafer yield enhancement**

Technology Leader

**Process know-how
Advanced PoR**

Repositioned for Growth

► China

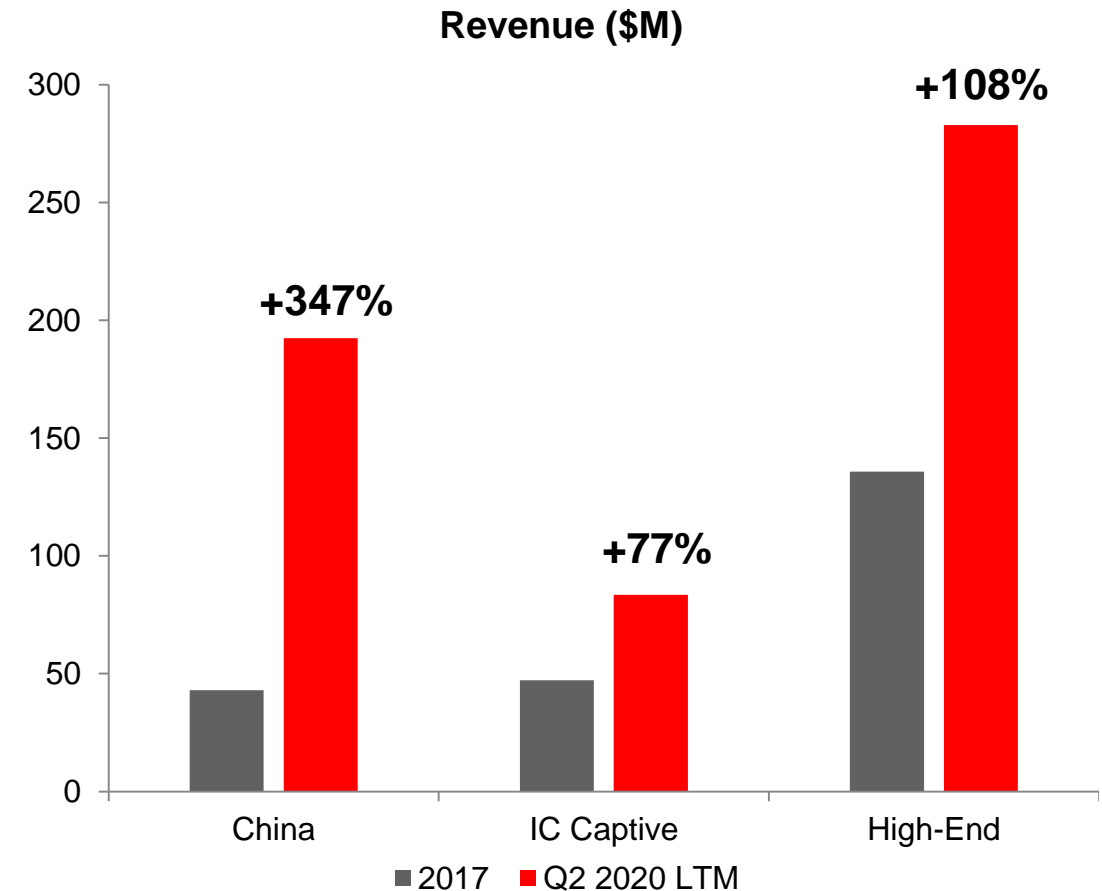
- Total TAM +\$800M by 2023
- Region with strongest growth potential
- Supported by new manufacturing facilities since 2019

► IC Captive

- Approximately ~\$2.5B TAM
- We are seen as trusted partner
- Commitments improve sustainability

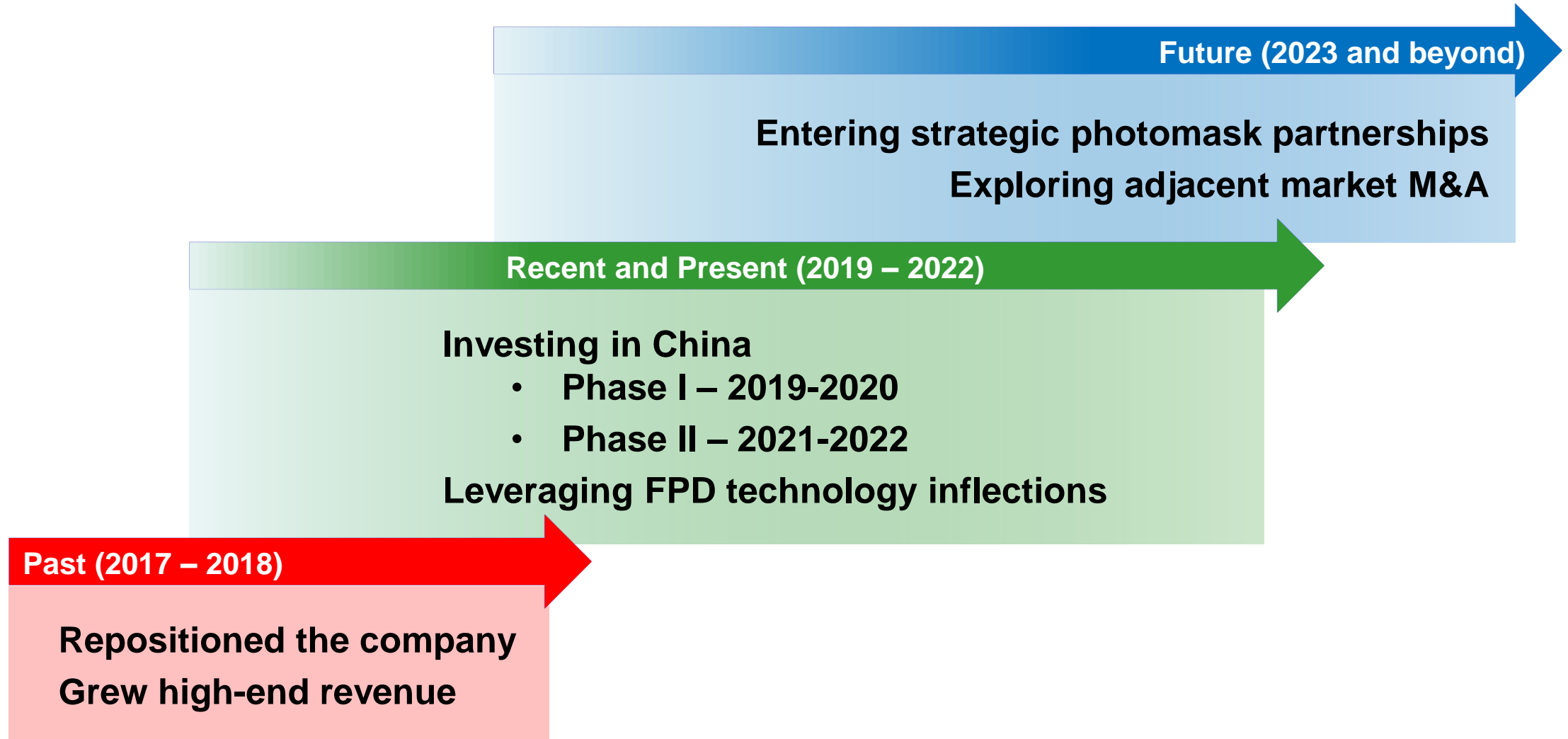
► High-end revenue growth

- High value and high growth
- Supports China & captive initiatives

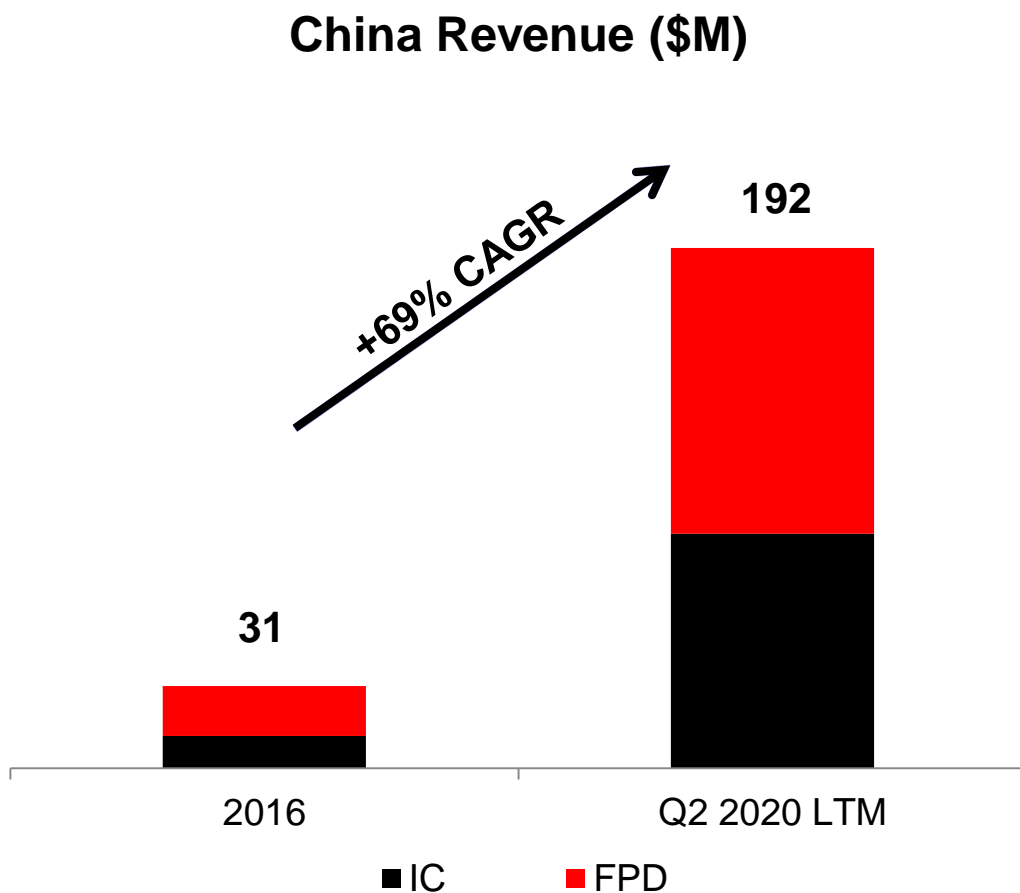


Note: classifications in graph above are not distinct; revenue related to certain products may appear in more than one category

Driving Sustainable, Profitable Growth



Developing and Growing China Business



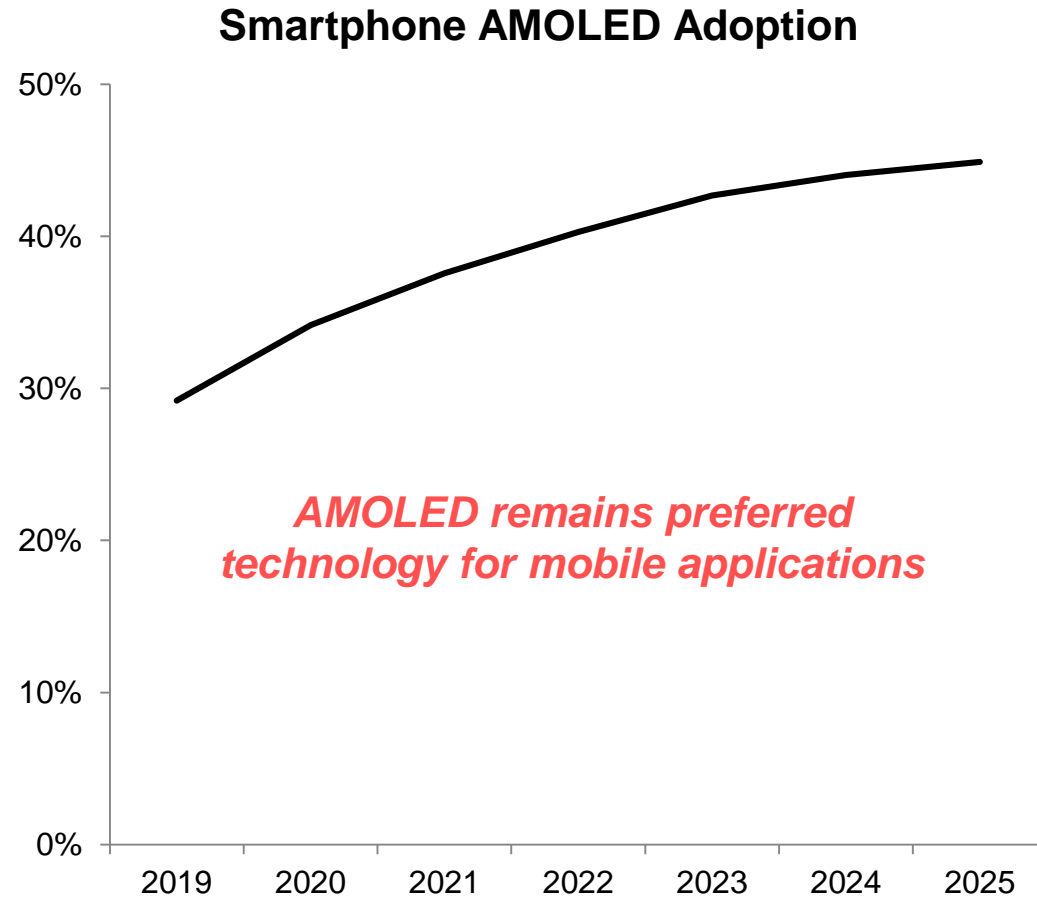
▶ We already have growing business in China

- 32% of total revenue in Q2 2020 LTM
 - 21% of IC revenue
 - 59% of FPD revenue
- Growing strong since 2016
 - IC +76% CAGR
 - FPD +64% CAGR

▶ Manufacturing presence in China aims to accelerate growth

- Customer contracts help ramp facilities more quickly
- Investment incentives reduce risk and improve returns
- IC JV enables us to compete more effectively

Leveraging Technology Leadership for Mobile Display AMOLED Adoption



Source: Internal Estimates

▶ Mobile devices moving from LCD to AMOLED

- Superior visual characteristics
- Lower power consumption
- Enables flexible format
- Preferred for VR/AR devices

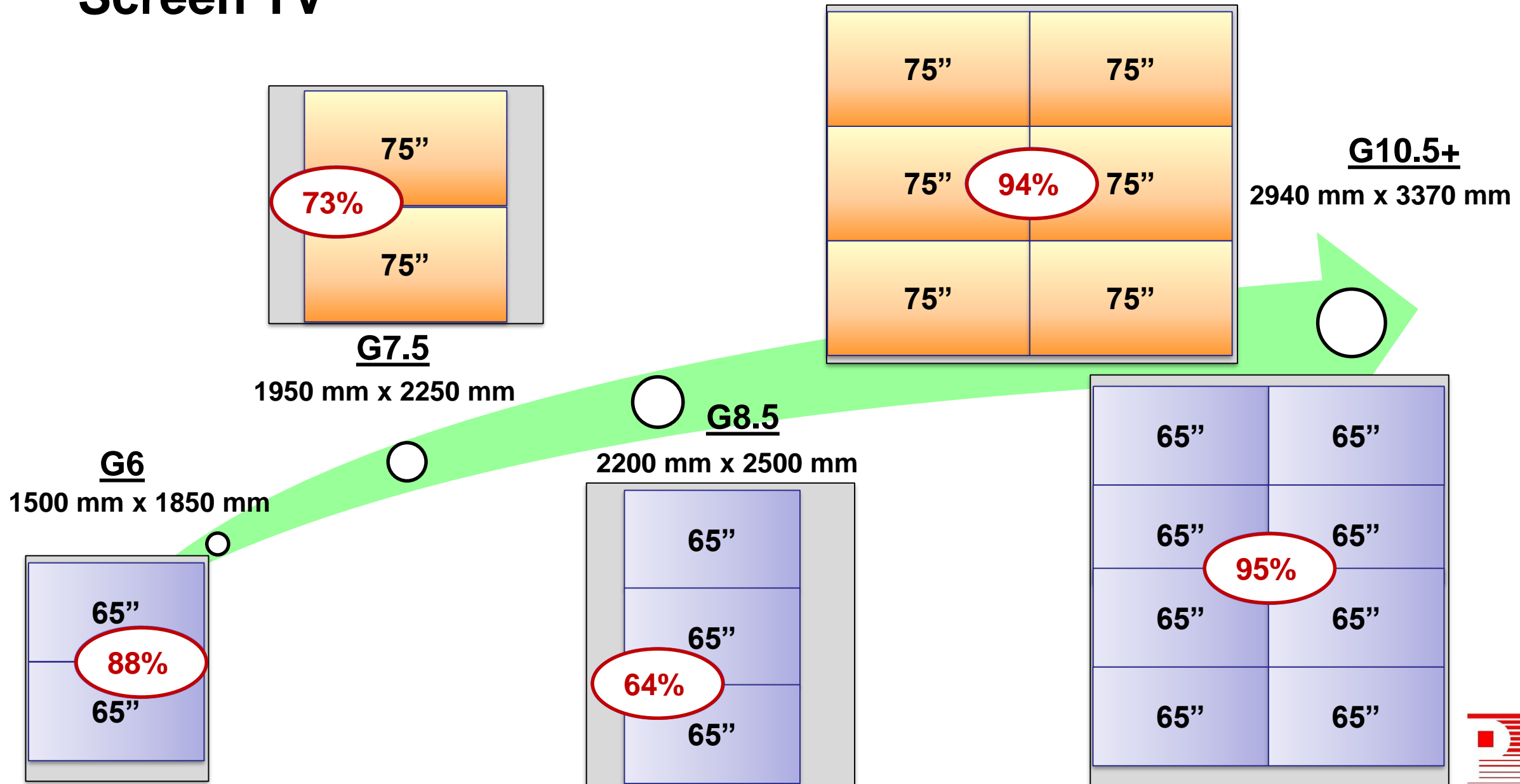
▶ Increasing mask complexity

- More mask layers per set
- Tighter specs on each layer

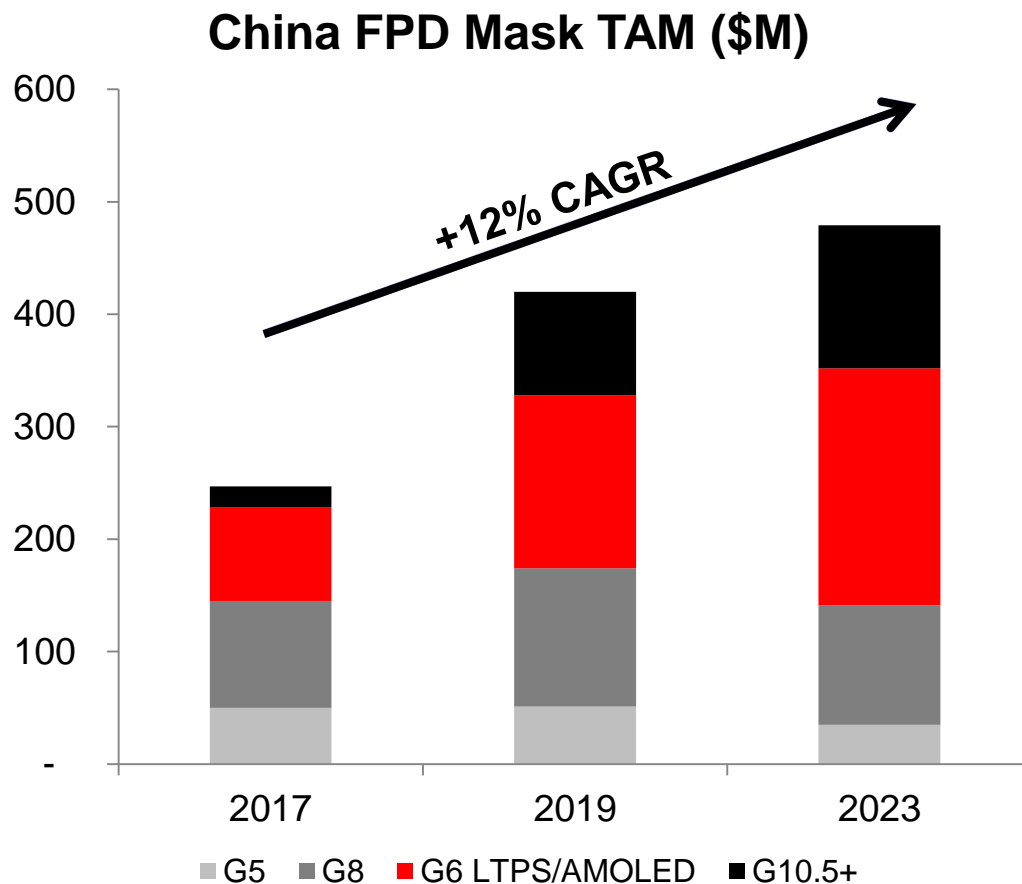
▶ Established technology leadership

- 1st firm with P-800 mask writer; 2nd P-800 on order
- Produces highest resolution AMOLED masks
- Competitive advantage vs. all merchants and captives

G10.5+ → Improved Glass Efficiency for Ultra-Large Screen TV



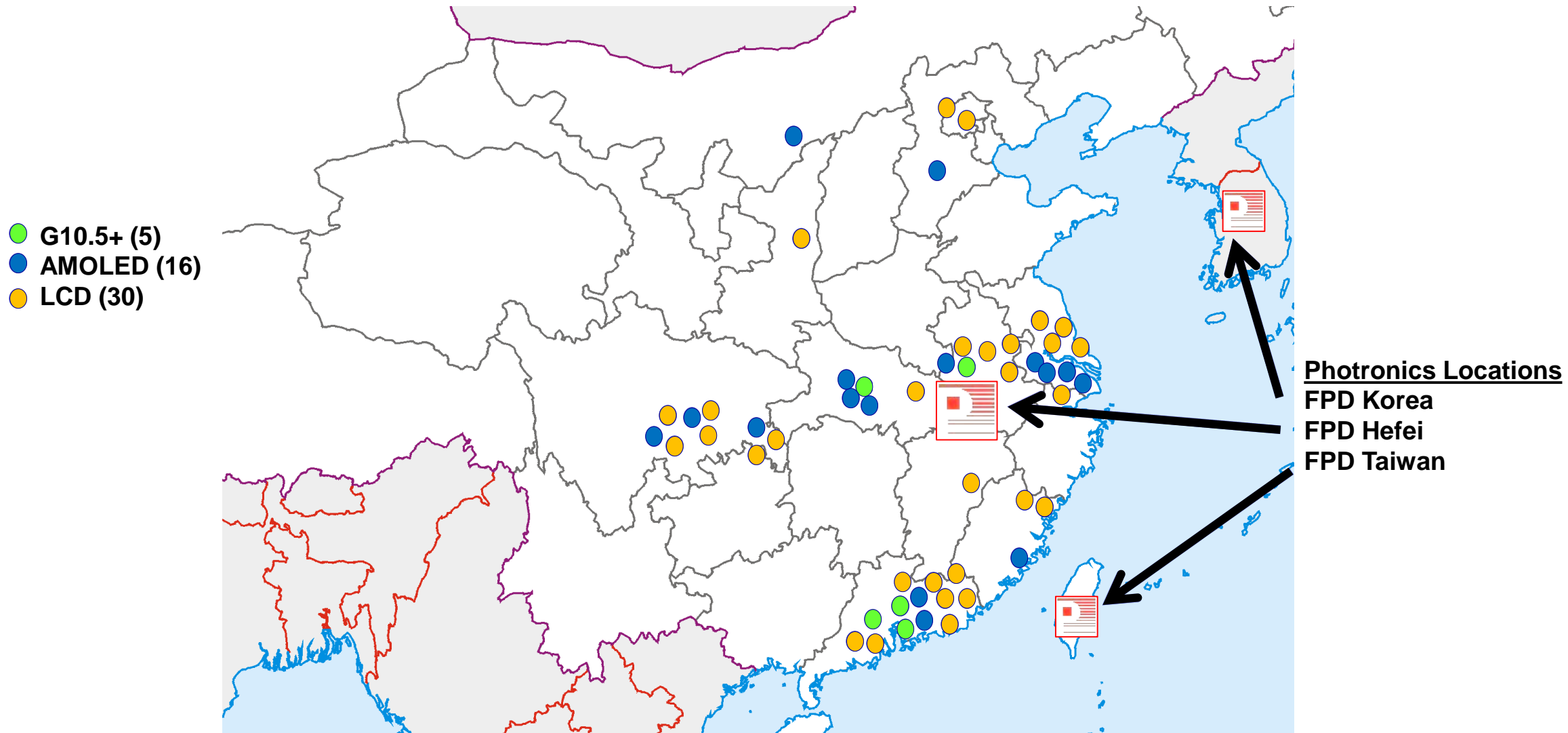
“Made in China 2025” Driving Growth in FPD Market



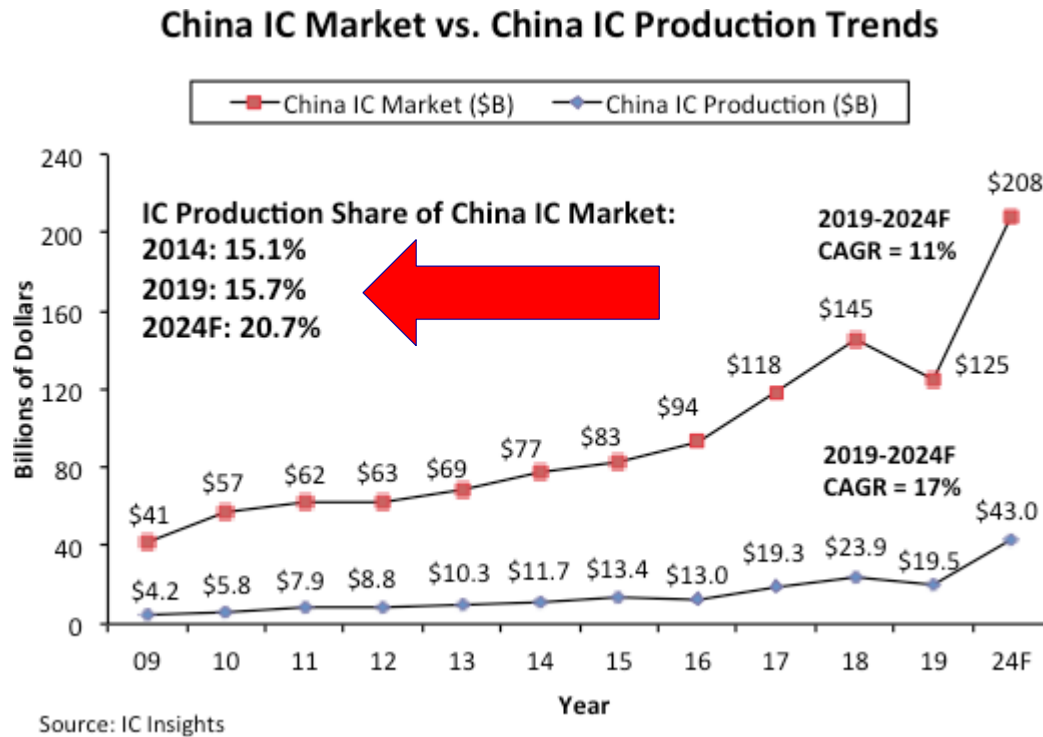
Source: Internal Estimates

- ▶ **China represents fastest growing display region**
 - 51 fabs in production or under construction
 - Largest LCD display producer (Korea 2nd)
- ▶ **Photomask opportunities in China are attractive**
 - Wide range of display technologies
 - No merchant photomask producer with high-end experience
 - We are aligned with fastest growing sectors: AMOLED & G10.5+

51 China Display Fabs in Production by 2022

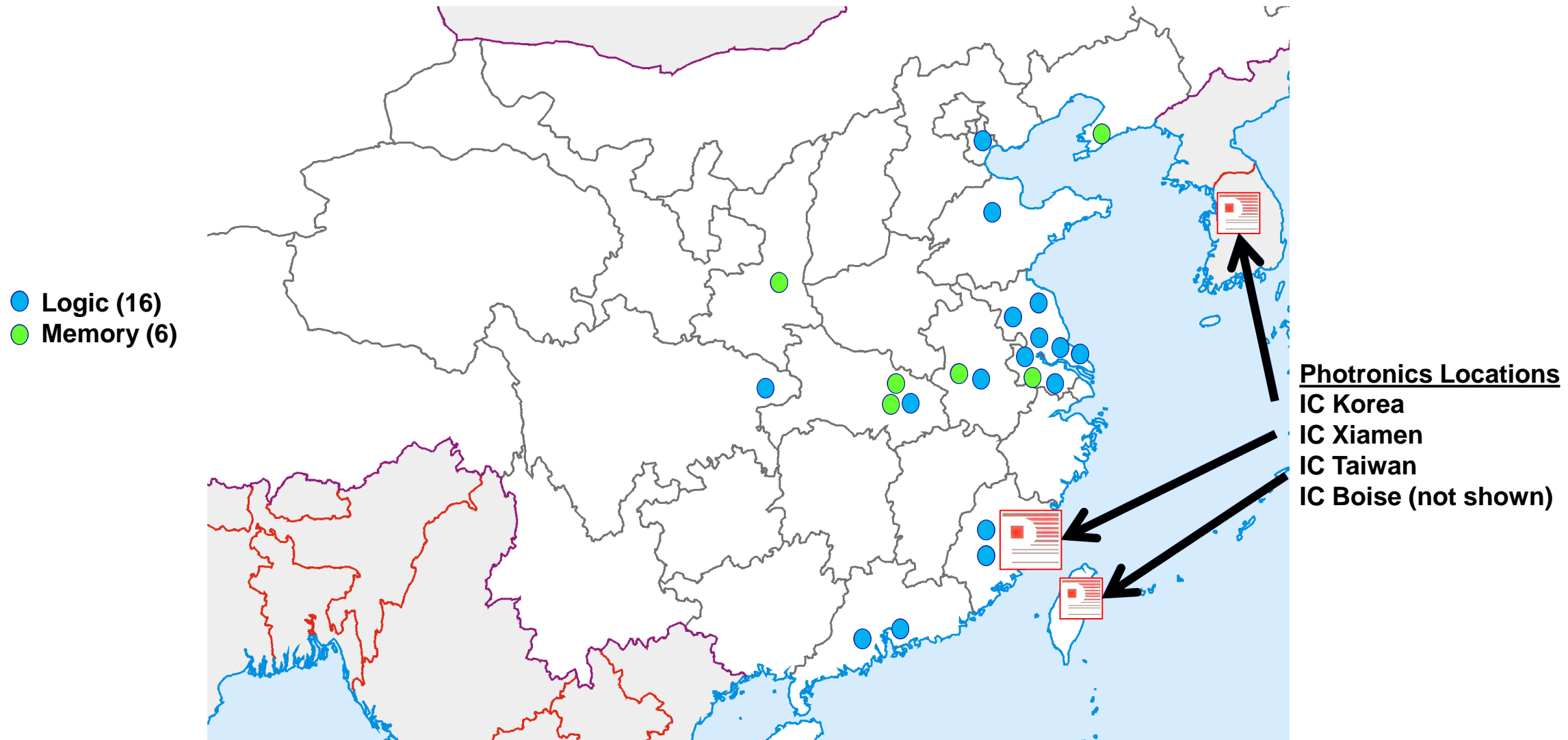


“Made in China 2025” Driving Growth in IC Market



- ▶ **China represents fastest growing semiconductor region**
 - Growing domestic producers
 - Investments by multi-nationals
- ▶ **More investment needed to meet national production share targets of 40% by 2020, 70% by 2025**
- ▶ **Photomask opportunities in China are attractive**
 - Wide range of nodes in logic and memory
 - No strong domestic merchant mask producer

22 New China 12" IC Fabs 2018-2022



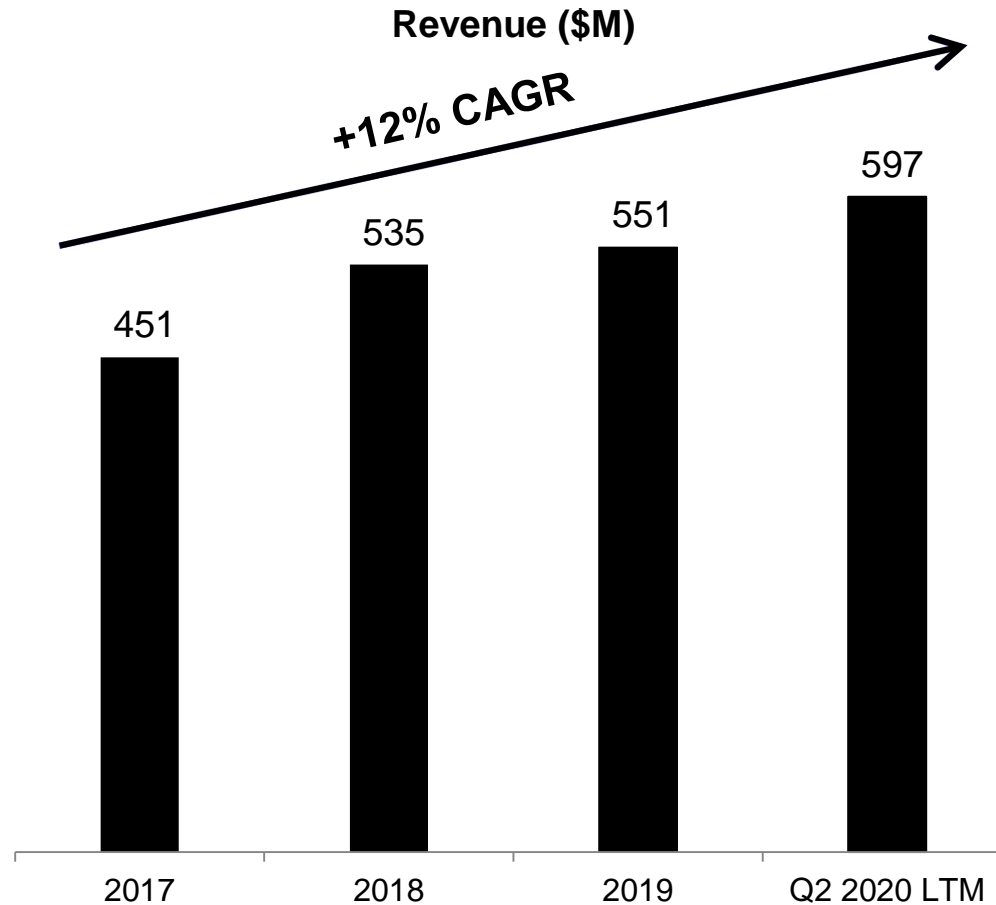
Strategic Priorities to Improve Shareholder Value

- ▶ **Top line growth with continued focus on driving costs out**
- ▶ **Disciplined focus on investments to improve ROIC**
- ▶ **Maintain strong balance sheet while returning cash to shareholders**
 - Share repurchases
 - Flexibility to invest in other growth opportunities (organic or M&A)

Solid Financial Fundamentals

- ▶ **Powerful operating leverage: target 50%**
- ▶ **Strong operating cash flow generator**
- ▶ **Disciplined investment approach**
- ▶ **Solid balance sheet**

Building Long-Term Momentum



Key Success Factors

- ▶ On pace for 3rd consecutive record annual revenue
- ▶ “Made in China 2025” – new facilities
- ▶ FPD technology inflections
- ▶ Repositioned the company
- ▶ Node migration (logic & memory)
- ▶ Growing business with captive producers
- ▶ IC JV’s in China and Taiwan
- ▶ Stable mainstream business
- ▶ Cross-site collaboration to serve global customers

Clear Capital Deployment Priorities

► Fund organic growth

- Geographic expansion into China
- Investments to maintain technical leadership
- Capacity expansion when reciprocated by customer commitment

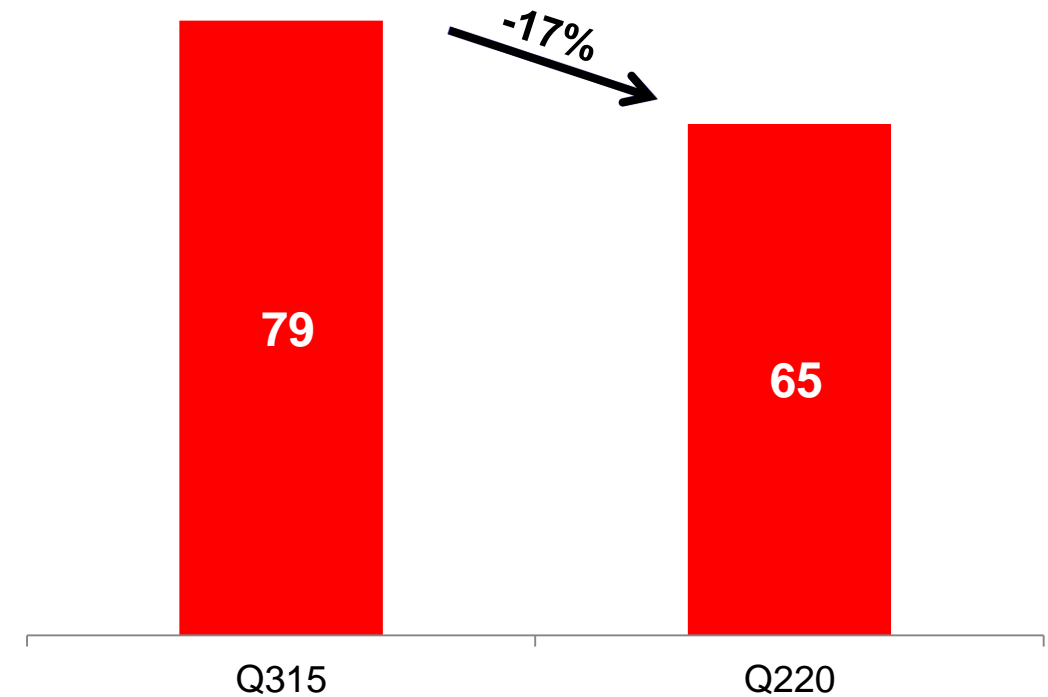
► Explore strategic M&A

- Photomask industry – IC & FPD
- Adjacencies to increase revenue diversification

► Share repurchase

- Repurchased 6.2M shares (\$61.7M) since 2018
- Redeemed \$115M in convertible debt since 2016, eliminating 10.3M potentially dilutive shares

Reducing Diluted Shares (Million Shares)



A Compelling Investment Thesis

▶ Global leader in merchant photomask industry

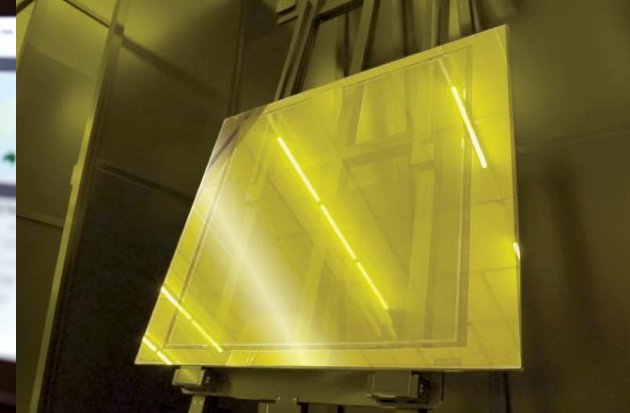
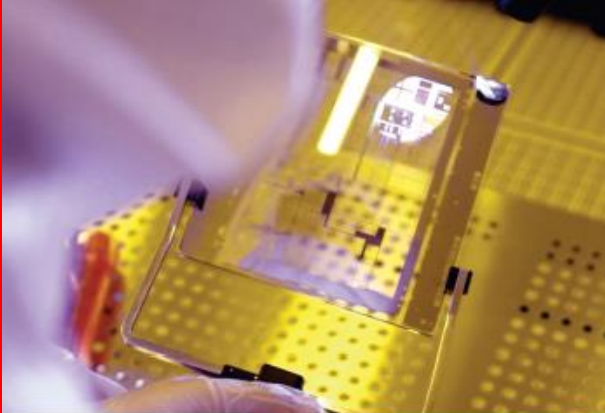
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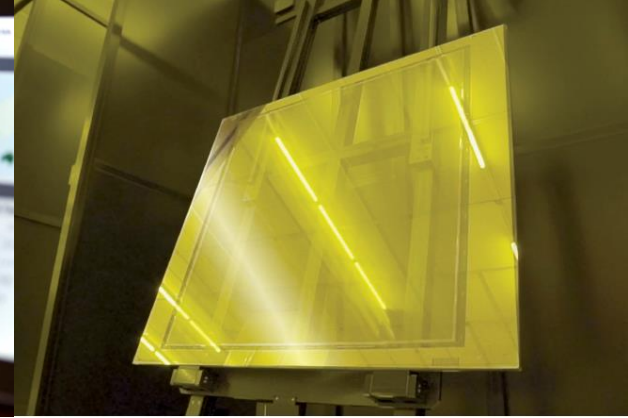
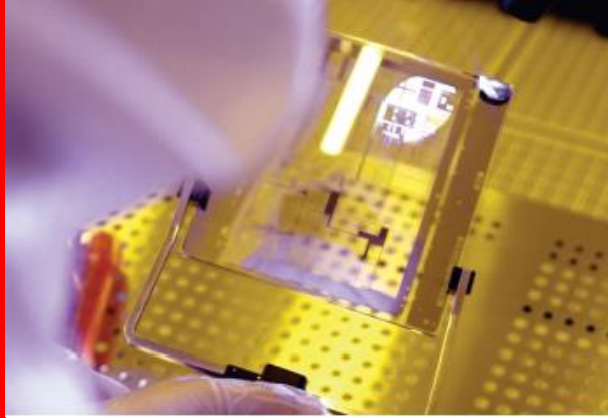
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Thank you for your interest!

For Additional Information:

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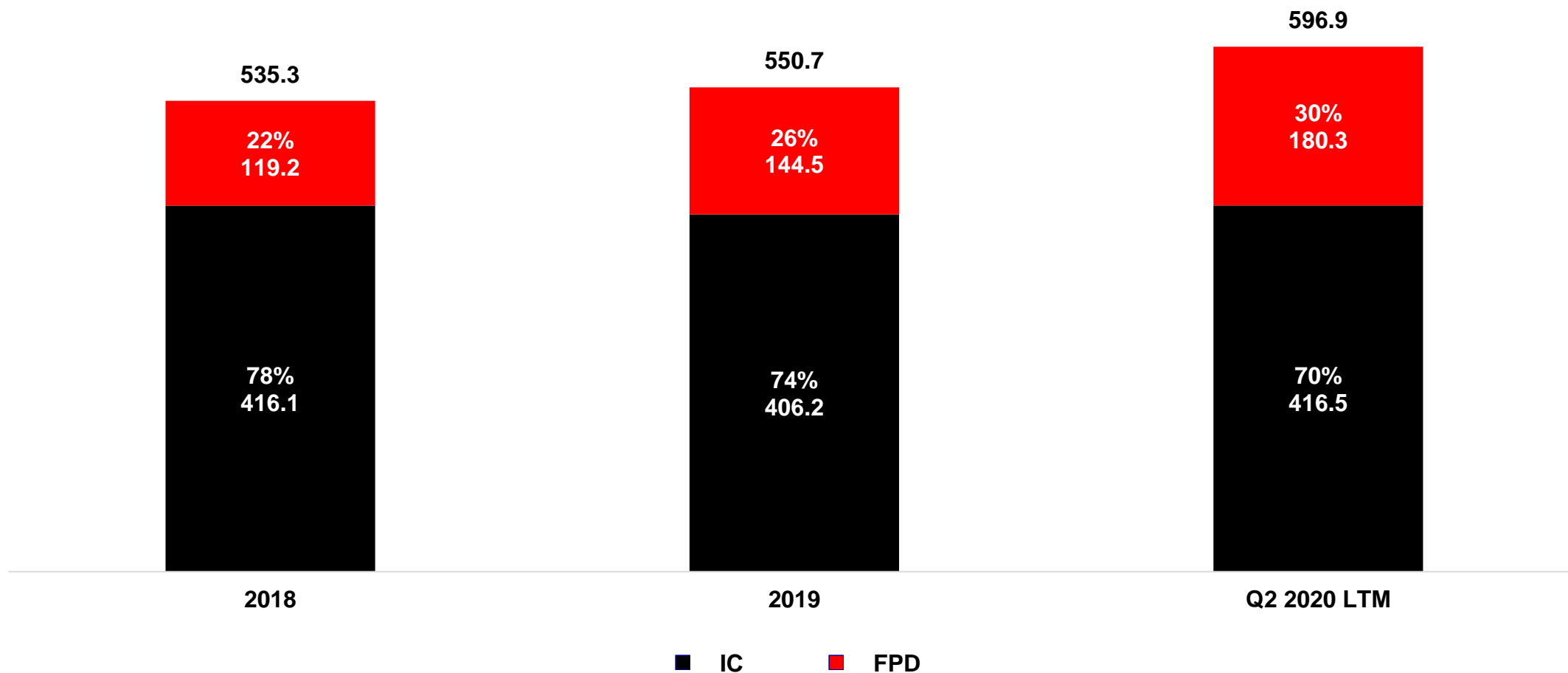
Appendix

Q2 2020 Summary

- ▶ **Revenue was \$142.8M, down 11% Q/Q and up 9% Y/Y**
 - FPD production remained at capacity, with sequential mix shift away from G10.5+ and AMOLED as customers in China pushed out orders
 - IC revenue impacted by order push out from China customers
 - Revenue of products shipped to China improved 39% Y/Y, but fell 20% Q/Q
- ▶ **Net income attributable to Photronics, Inc. shareholders of \$6.3M (\$0.10/share)**
- ▶ **Cash balance grew to \$238M; \$31M operating cash generation**
- ▶ **Repurchased 0.5M shares for \$6M; program terminated 3/26/2020**
- ▶ **China production contributed \$17M to revenue; Hefei facility generated operating profit and positive operating cash flow despite significant drop in G10.5+ demand**
- ▶ **Remain committed to growth strategy with commencement of next phase of FPD investment**

Successfully repositioned the business; China investments driving long-term, profitable growth

Total Revenue



Total may differ due to rounding

Income Statement Summary

<u>\$M (except EPS)</u>	<u>Q220</u>	<u>Q120</u>	<u>Q/Q</u>	<u>Q219</u>	<u>Y/Y</u>
Revenue	\$ 142.8	\$ 159.7	(11%)	\$ 131.6	9%
Gross Profit	\$ 30.4	\$ 34.6	(12%)	\$ 26.0	17%
Gross Margin	21.3%	21.7%	(40 bps)	19.8%	150 bps
Operating Income	\$ 12.7	\$ 16.3	(22%)	\$ 9.2	38%
Operating Margin	8.9%	10.2%	(130 bps)	7.0%	190 bps
Other income (expense)	(\$ 1.0)	\$ 3.7	(\$ 4.6)	\$ 3.9	(\$ 4.9)
Income tax provision	\$ 3.8	\$ 9.1	(\$ 5.3)	\$ 3.3	\$ 0.5
Minority interest	\$ 1.7	\$ 0.6	\$ 1.1	\$ 1.4	\$ 0.3
Net Income*	\$ 6.3	\$ 10.3	(39%)	\$ 8.5	(26%)
Diluted EPS*	\$ 0.10	\$ 0.16	(\$ 0.06)	\$ 0.13	(\$ 0.03)
Days in quarter	91	94	(3)	91	-

► Gross and operating margin moved in line with revenue (up Y/Y; down Q/Q)

► China operations were \$1.0M negative impact to operating income

► Other income / (expense) primarily due to FX gain / (loss)

► Minority interest reflects Taiwan JV gain offset by China JV loss

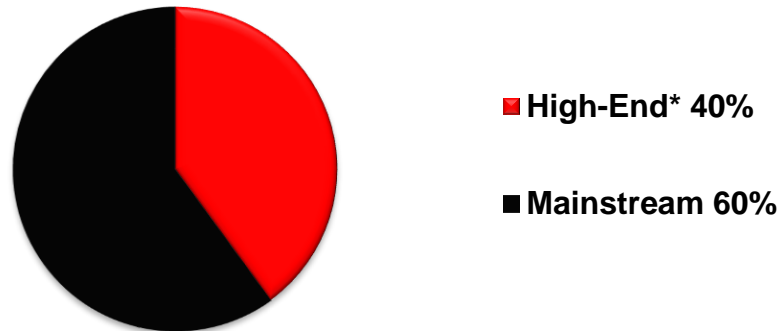
*Net income attributable to Photronics, Inc. shareholders

IC Photomask Revenue

<u>\$M</u>	<u>Q220</u>	<u>Q120</u>	<u>Q/Q</u>	<u>Q219</u>	<u>Y/Y</u>
High-End*	\$ 38.3	\$ 41.0	(7%)	\$ 38.4	--
Mainstream	\$ 58.6	\$ 65.9	(11%)	\$ 60.2	(3%)
Total	\$ 96.8	\$ 107.0	(9%)	\$ 98.6	(2%)

Total may differ due to rounding

Q220 Revenue by Technology



*28nm and smaller

► **High-end flat Y/Y; sequential decline primarily due to Chinese order push outs**

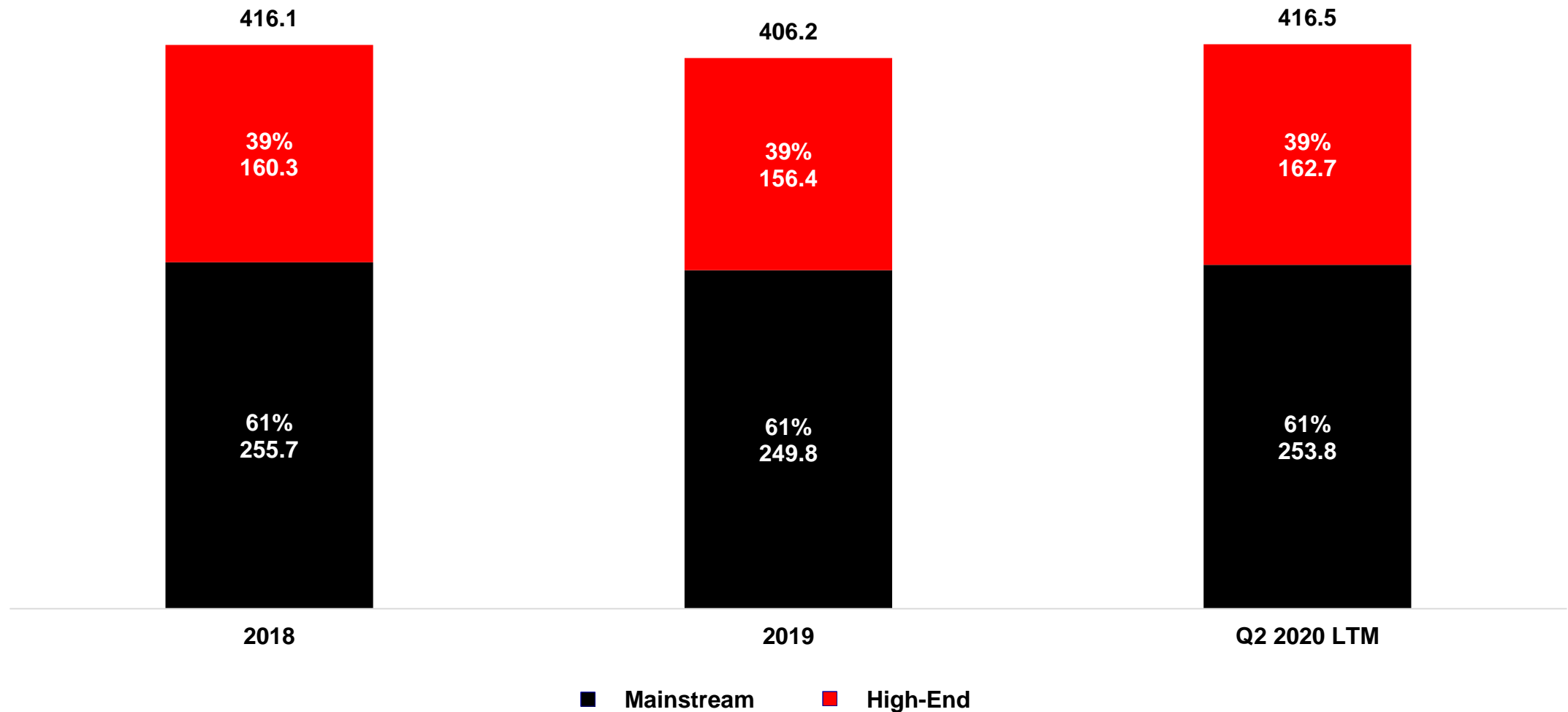
► **China revenue**

- +14% Y/Y
- Q/Q down 21% on soft foundry demand
- Represents 21% of Q220 IC revenue

► **Outlook**

- Demand trends improving
- Government restrictions and trade policy developments create uncertainty

IC Photomask Revenue



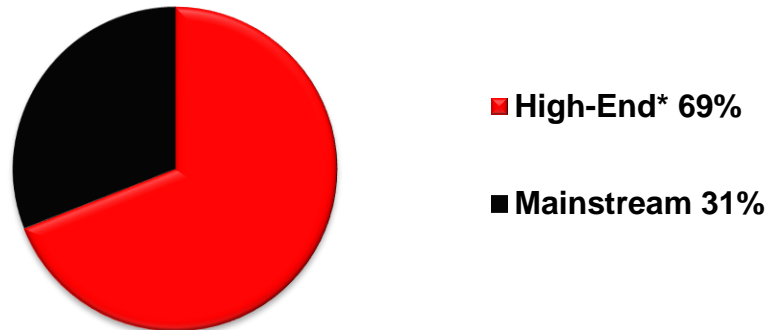
High-End: 28nm and smaller; total may differ due to rounding

FPD Photomask Revenue

<u>\$M</u>	<u>Q220</u>	<u>Q120</u>	<u>Q/Q</u>	<u>Q219</u>	<u>Y/Y</u>
High-End*	\$ 31.8	\$ 39.8	(20%)	\$ 22.1	44%
Mainstream	\$ 14.1	\$ 13.0	9%	\$ 10.9	29%
Total	\$ 45.9	\$ 52.8	(13%)	\$ 33.0	39%

Total may differ due to rounding

Q220 Revenue by Technology



*≥G10.5, AMOLED and LTPS

► **Y/Y growth due to production ramp in Hefei; Q/Q decline due to China order push out (G10.5+ & AMOLED)**

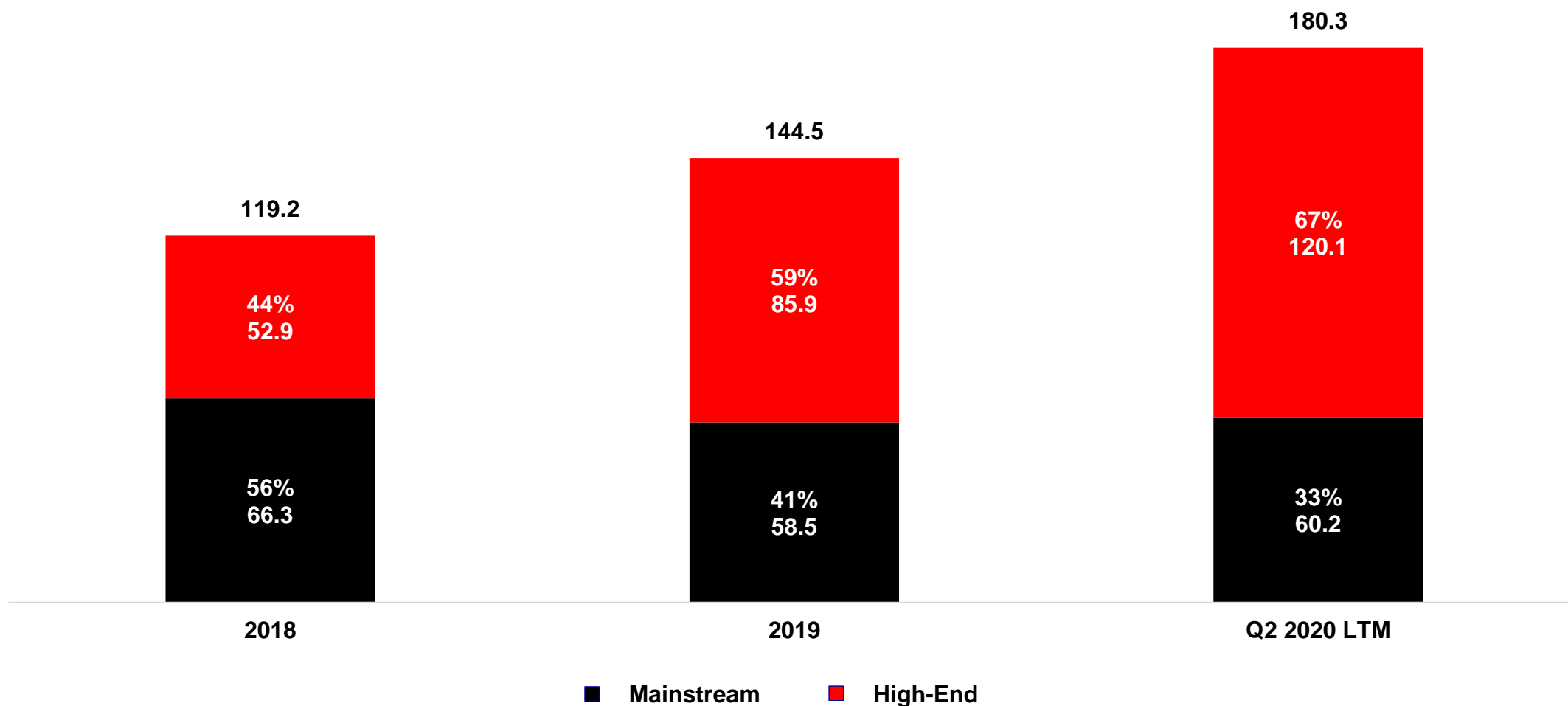
► **China revenue**

- -20% Q/Q; +69% Y/Y
- Represents 57% of Q220 FPD revenue

► **Outlook**

- Demand trends improving for G10.5+ and AMOLED
- Government restrictions create uncertainty, especially for mobile demand
- Production should remain at capacity

FPD Photomask Revenue



High-End: ≥G10.5, AMOLED and LTPS; total may differ due to rounding

Select Financial Data

<u>\$M</u>	<u>Q220</u>	<u>Q120</u>	<u>Q219</u>
Cash	\$ 238	\$ 218	\$ 167
Debt	\$ 53	\$ 54	\$ 36
Net Cash*	\$ 184	\$ 164	\$ 131
Operating Cash Flow	\$ 31	\$ 31	\$ 17
Capital Expenditures	\$ 16	\$ 14	\$ 34
Government Incentives for Capital Equipment	\$ 3	\$ 2	\$ 1
Share repurchase	\$ 6	\$ 11	-

- ▶ Debt is local China borrowing to finance fixed assets
- ▶ FY 2020 capex ~ \$100M (includes \$35M capital lease)
- ▶ Repurchased 0.5M shares for \$6M (1.5M shares for \$17M YTD); program terminated 3/26/2020
- ▶ Balance sheet able to fund planned investments, share repurchases, and strategic M&A opportunities

*Net cash defined as cash and cash equivalents less long-term borrowings (including current portion), as reported in accordance with GAAP