

Photronics, Inc.

Global Leader in the Merchant Photomask Industry

22nd Annual Needham Growth Conference
January 15, 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.

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

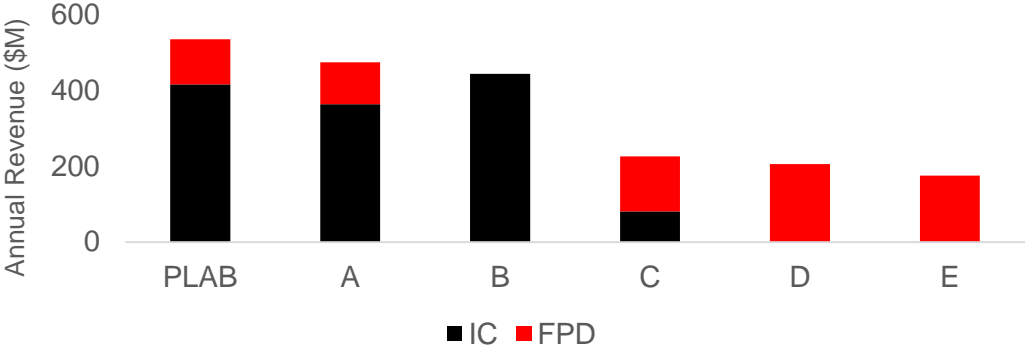
- *China industry expansion (IC & FPD) – Made in China 2025*
- *Technology inflection from LCD to AMOLED*
- *Rapid expansion of G10.5+ panel capacity*

▶ Investment strategy drives earnings growth

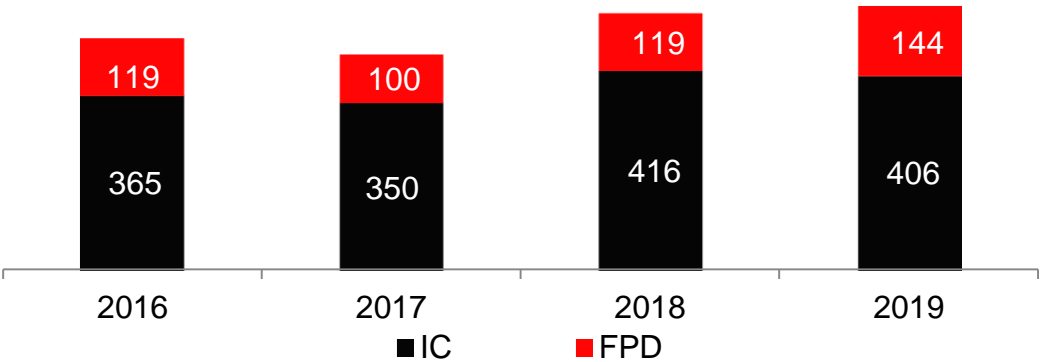
- *Strategic investments bring top-line growth*
- *Operating leverage creates margin expansion*
- *Increasing free cash flow to fund growth investments and share repurchase*

Photronics at a Glance

Largest Merchant Photomask Manufacturer

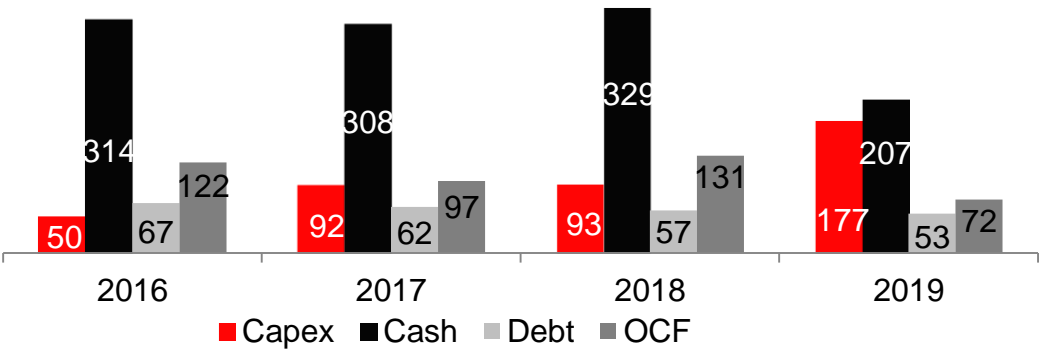


Converting Investments Into Revenue (\$M)



Unmatched Global Footprint
11 Strategically Located Manufacturing Facilities

Financial Strength to Fund Investments (\$M)



Photomasks: Essential for Electronics Manufacturing

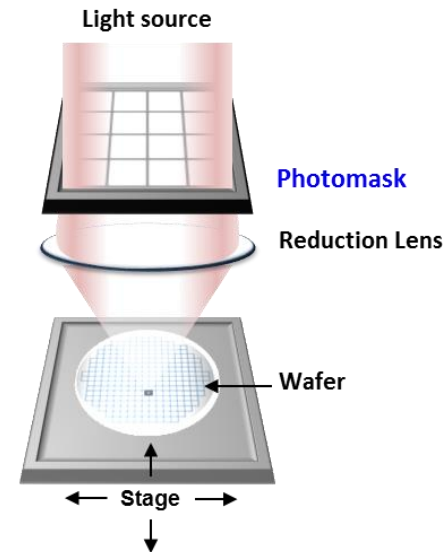
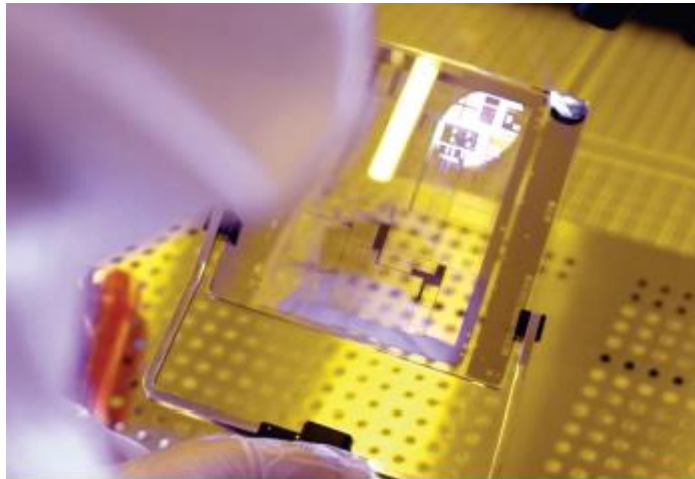
Component
Design

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

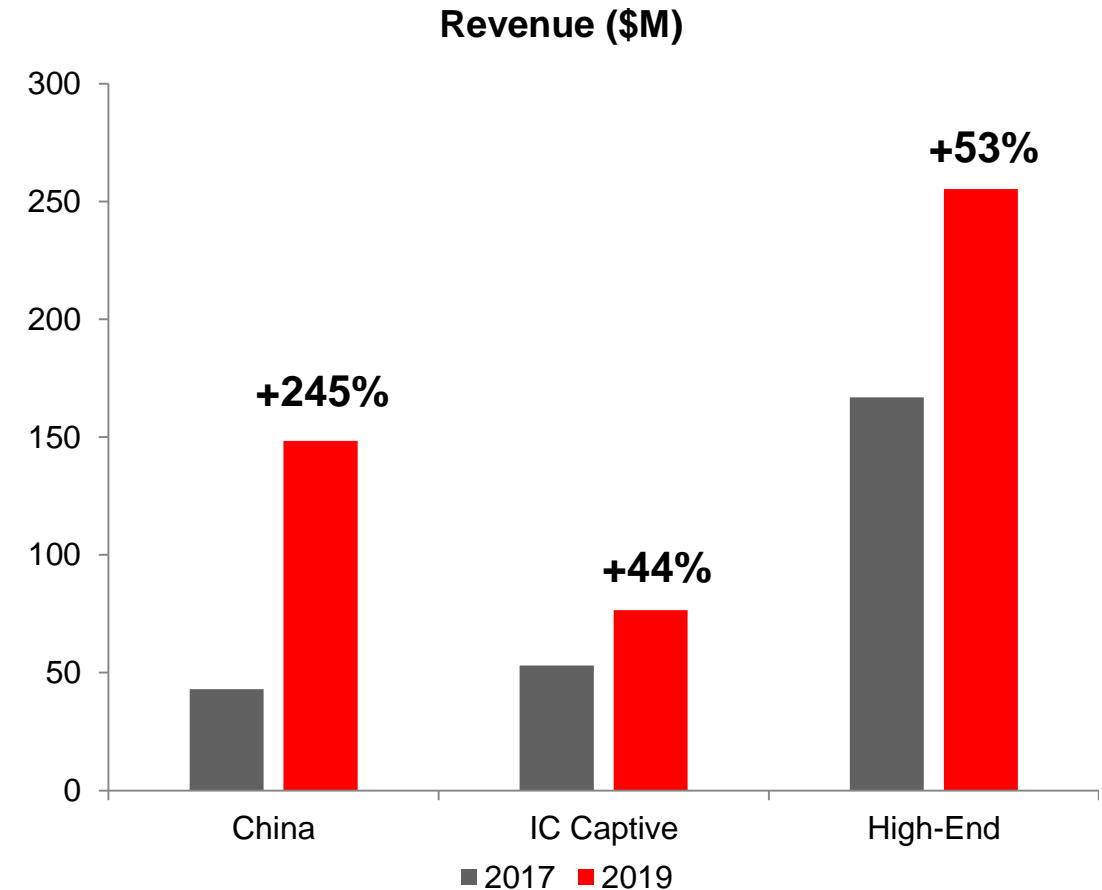
- Total TAM ~\$700M by 2022
- Region with strongest growth potential
- Supported by new manufacturing facilities since 2019

► IC Captive

- Approximately \$2.6B TAM
- We are seen as trusted partner
- Commitments improve sustainability

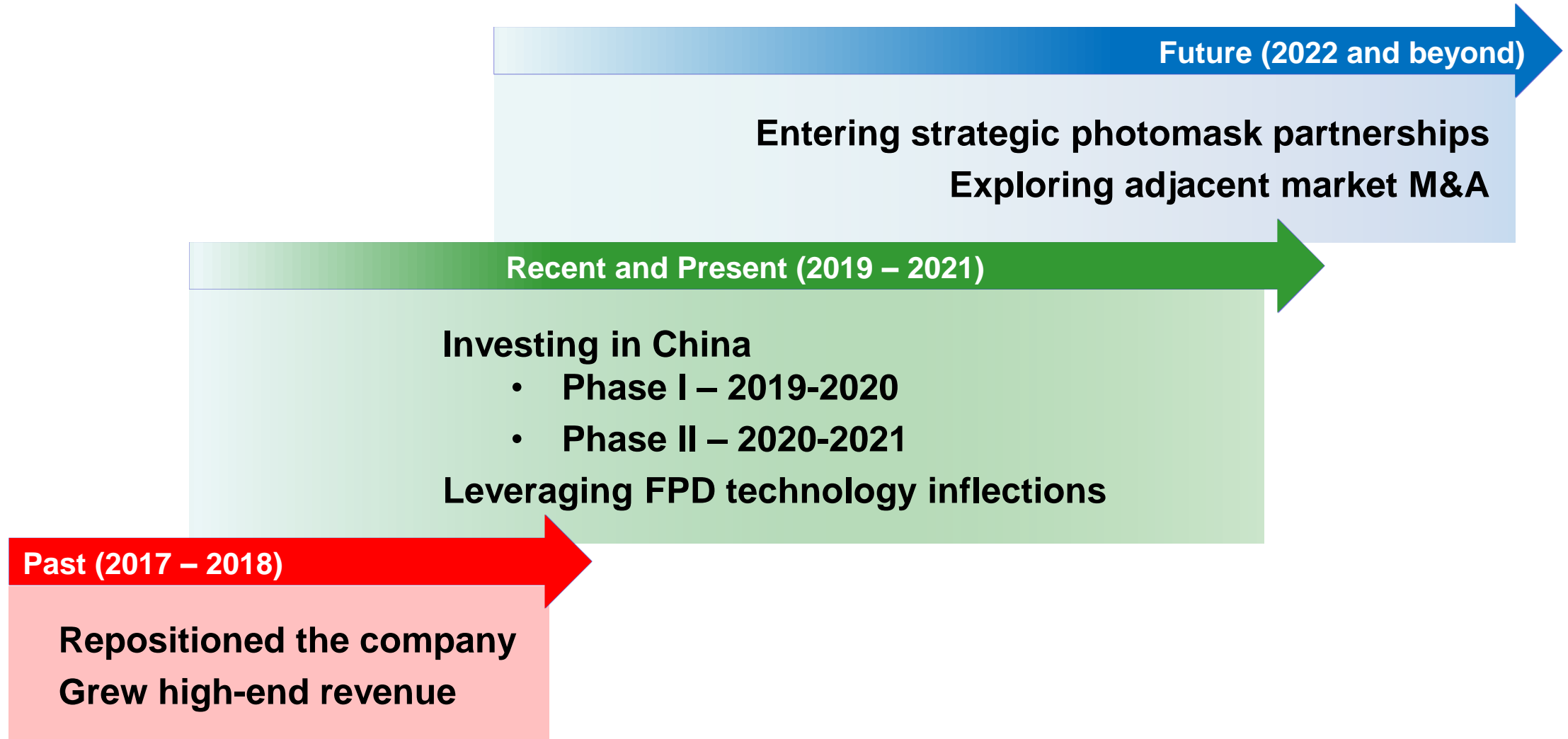
► High-end revenue growth

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

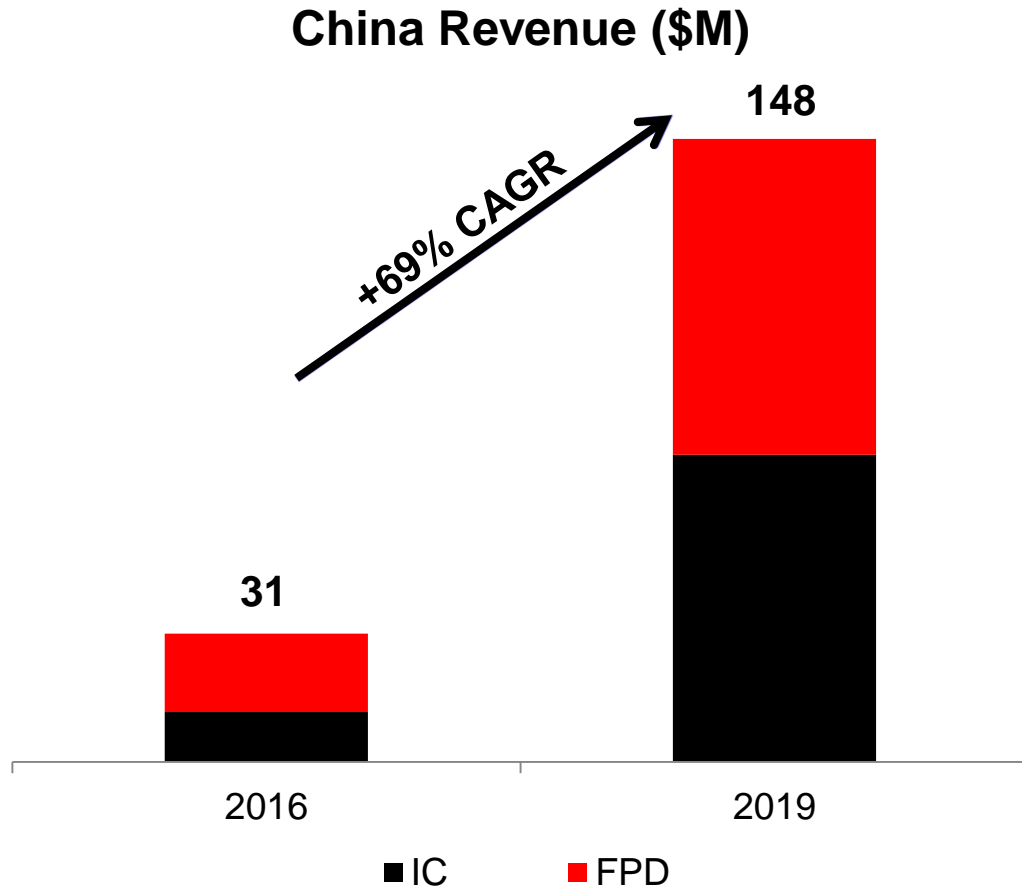


Note: classifications in graph above are not distinct; revenue related to certain products may appear in more than one category

Driving Sustainable, Profitable Growth



Developing and Growing China Business



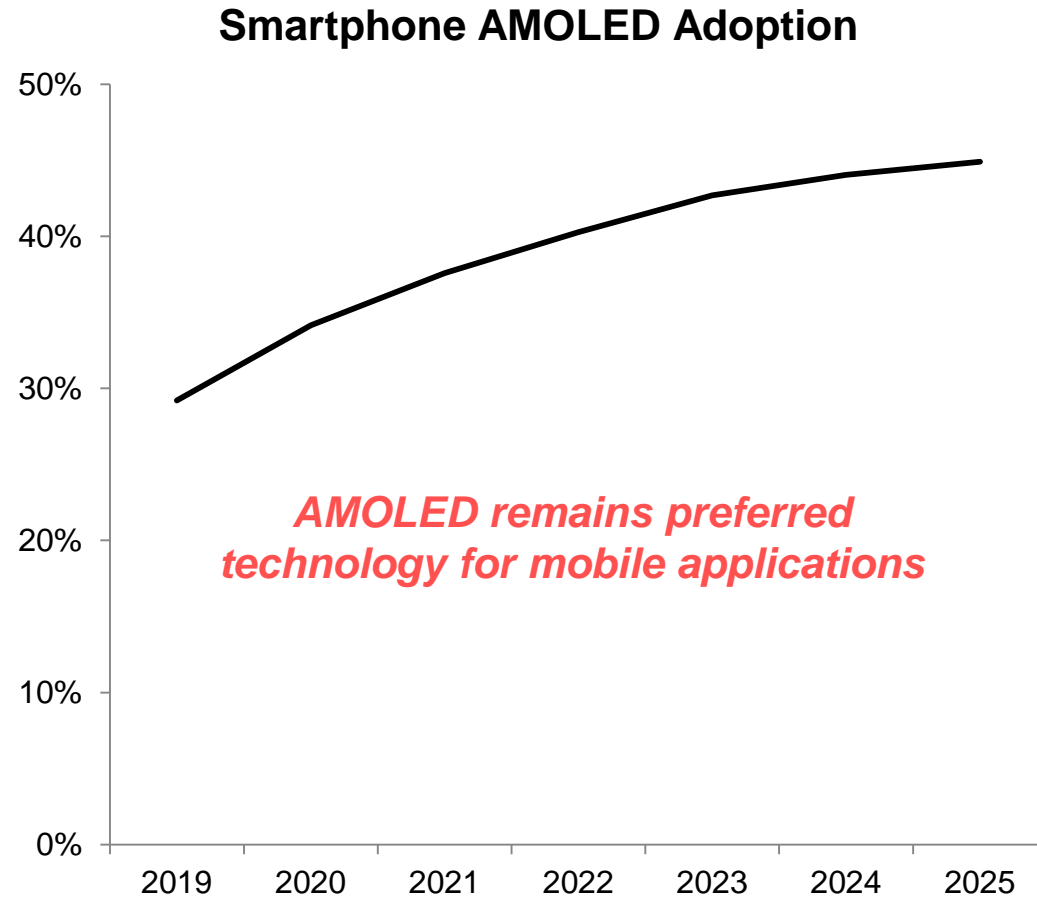
▶ We already have growing business in China

- 27% of total revenue in 2019
 - 18% of IC revenue
 - 52% of FPD revenue
- Growing strong since 2016
 - IC +83% CAGR
 - FPD +59% 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

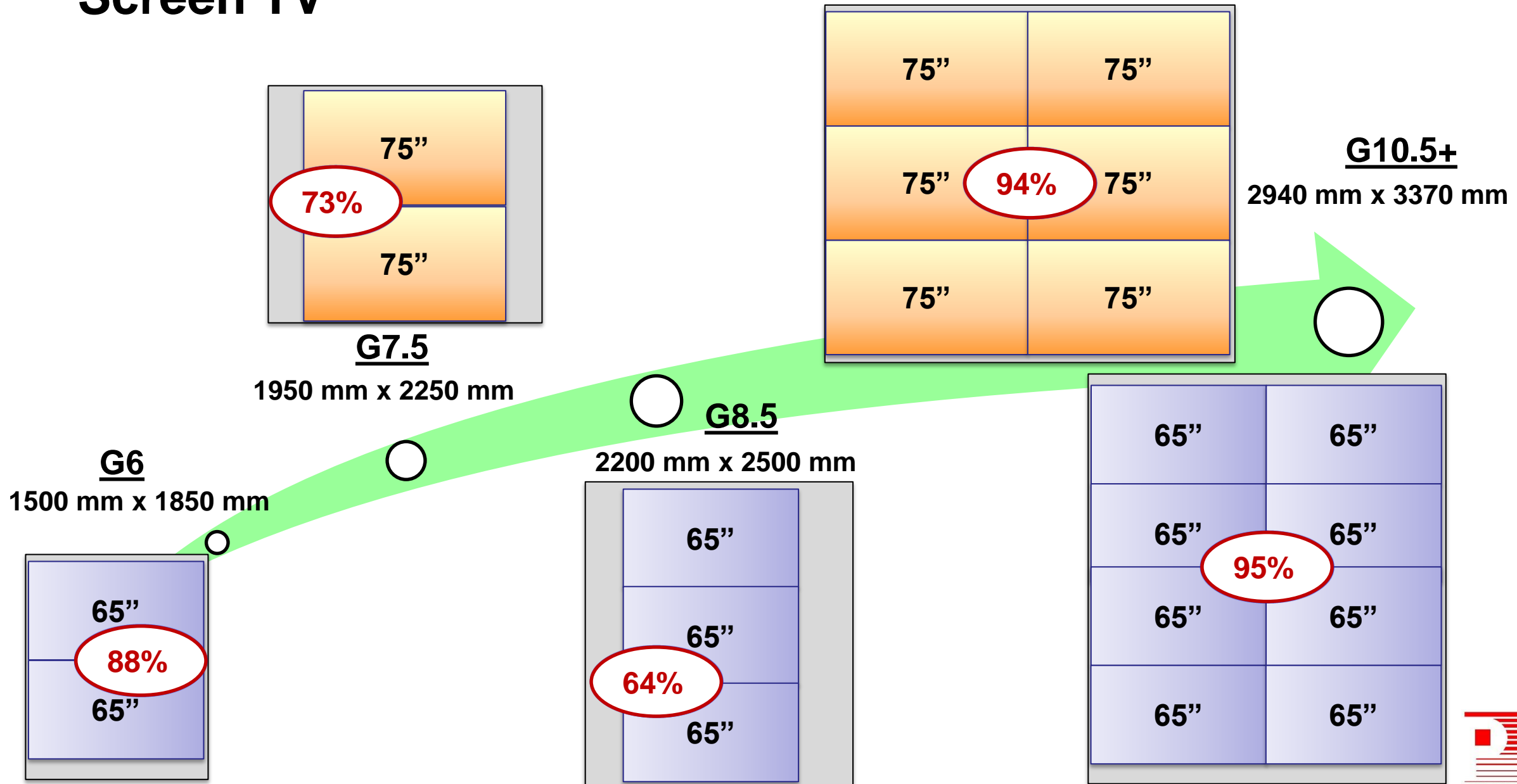
▶ Increasing mask complexity

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

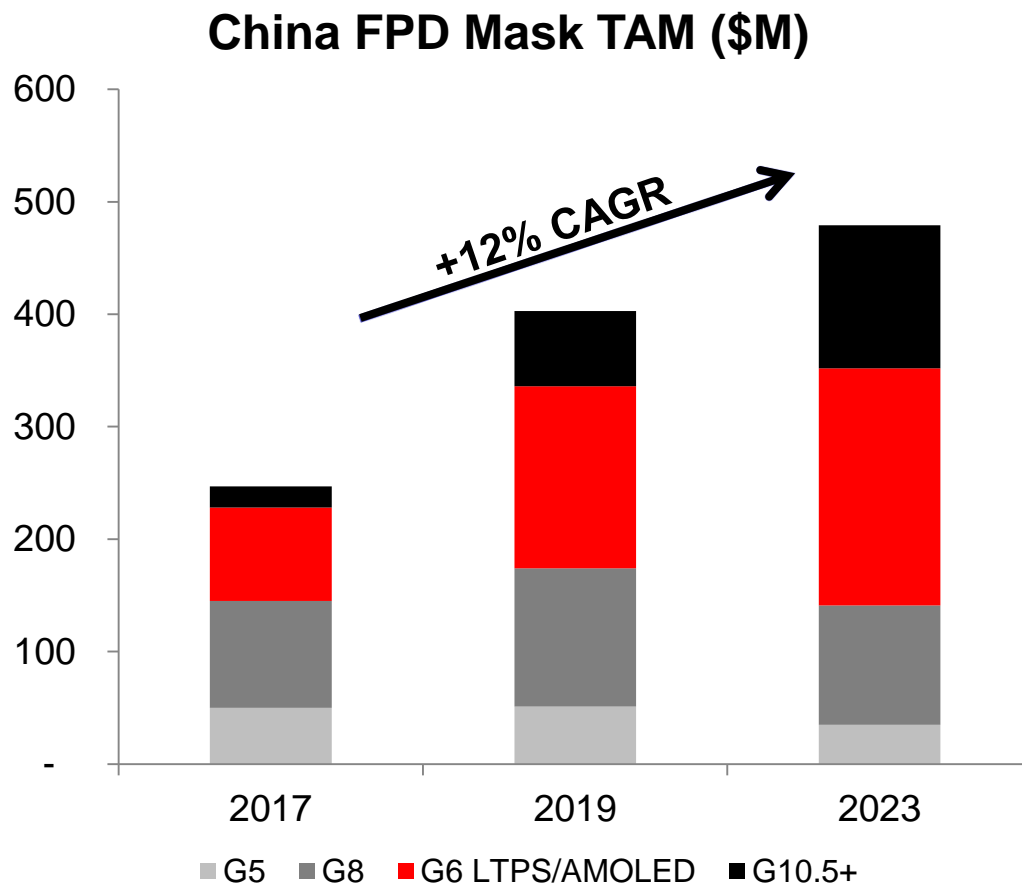
▶ Established technology leadership

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

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



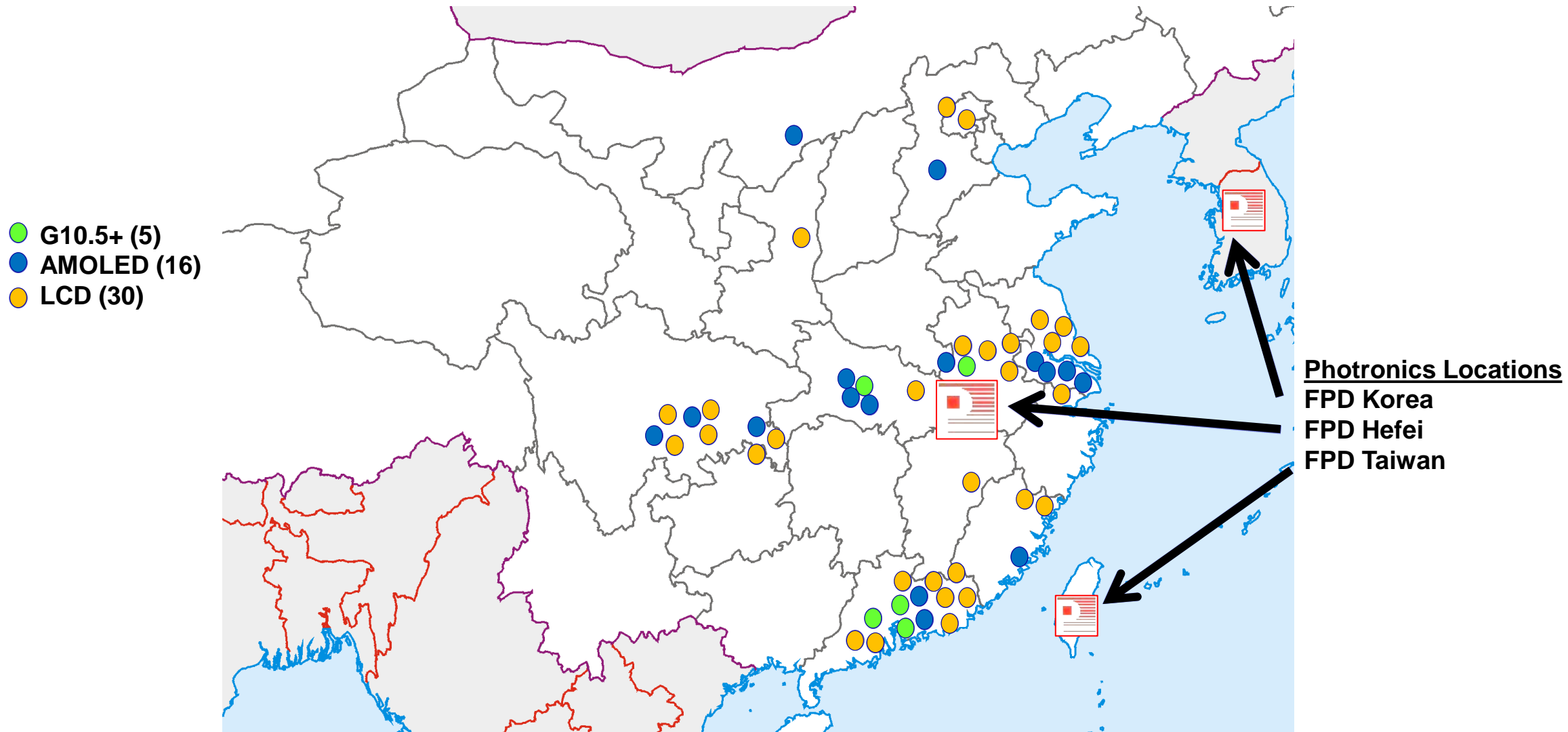
“Made in China 2025” Driving Growth in FPD Market



Source: Internal Estimates

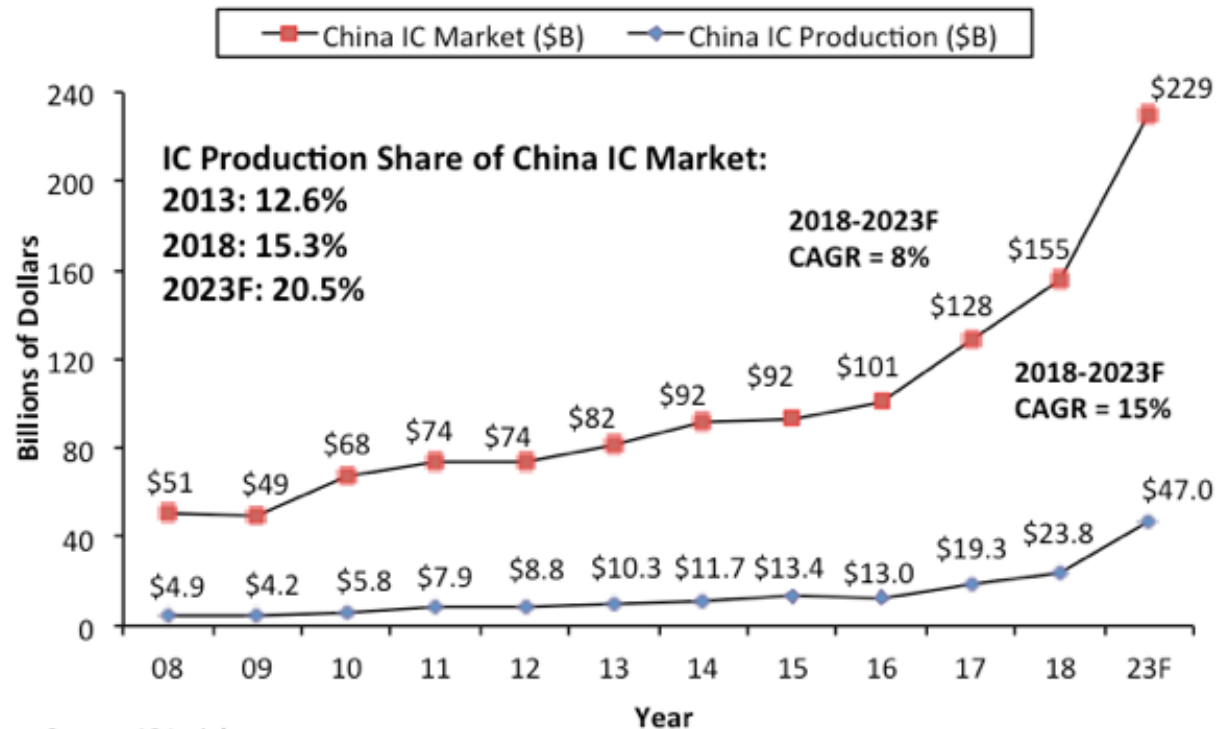
- ▶ **China represents fastest growing display region**
 - 51 fabs in production or under construction
 - Largest LCD display producer (Korea 2nd)
- ▶ **Photomask opportunities in China are attractive**
 - Wide range of display technologies
 - No merchant photomask producer with high-end experience
 - 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

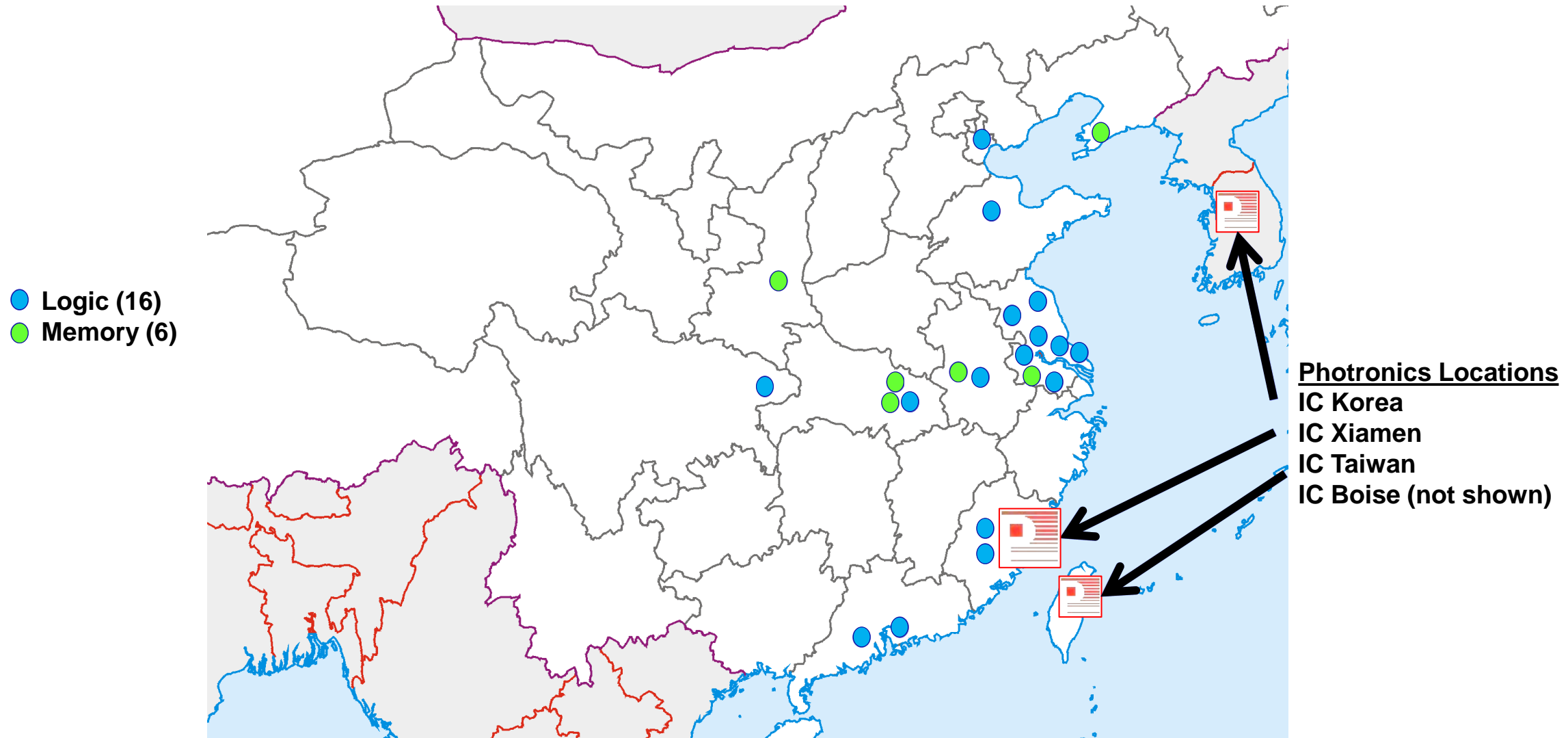
China IC Market vs. China IC Production Trends



Source: IC Insights

- ▶ **China represents fastest growing semiconductor region**
 - Growing domestic producers
 - Investments by multi-nationals
- ▶ **More investment needed to meet national targets**
 - 2023 forecast is 21%
 - China government target is 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



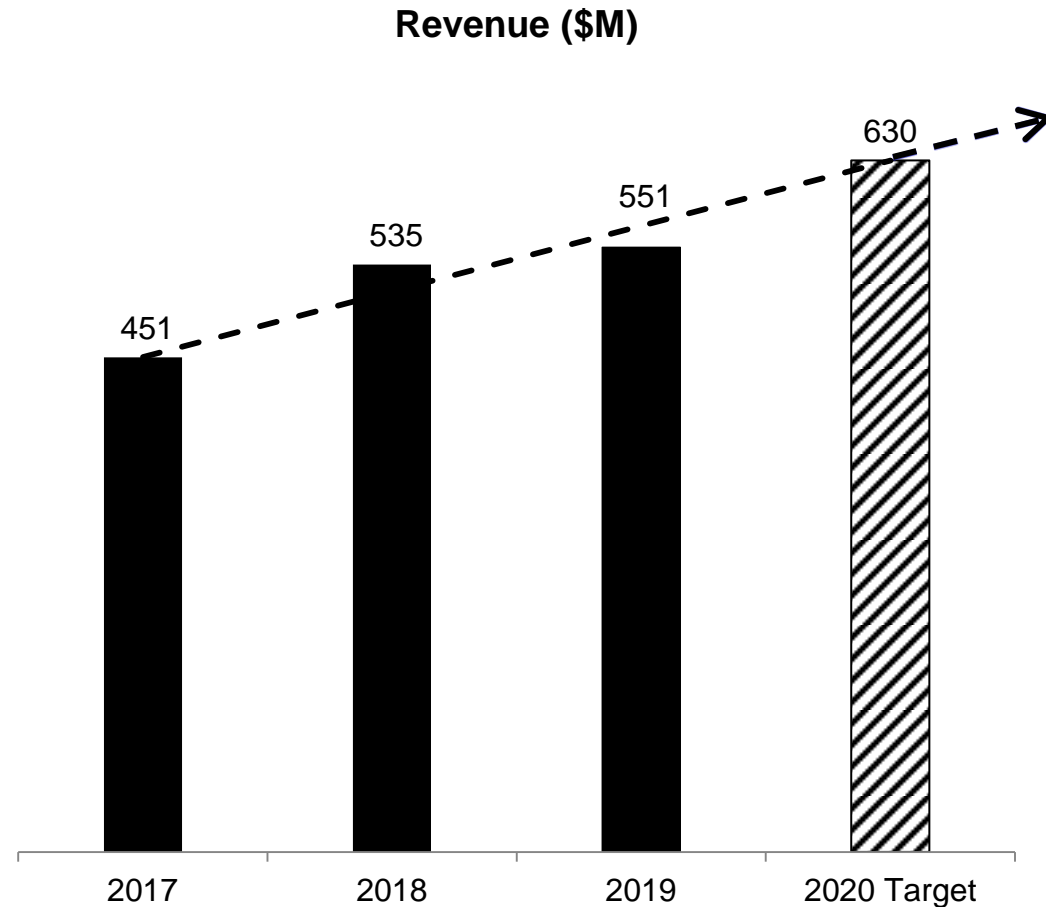
Strategic Priorities to Improve Shareholder Value

- ▶ **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**

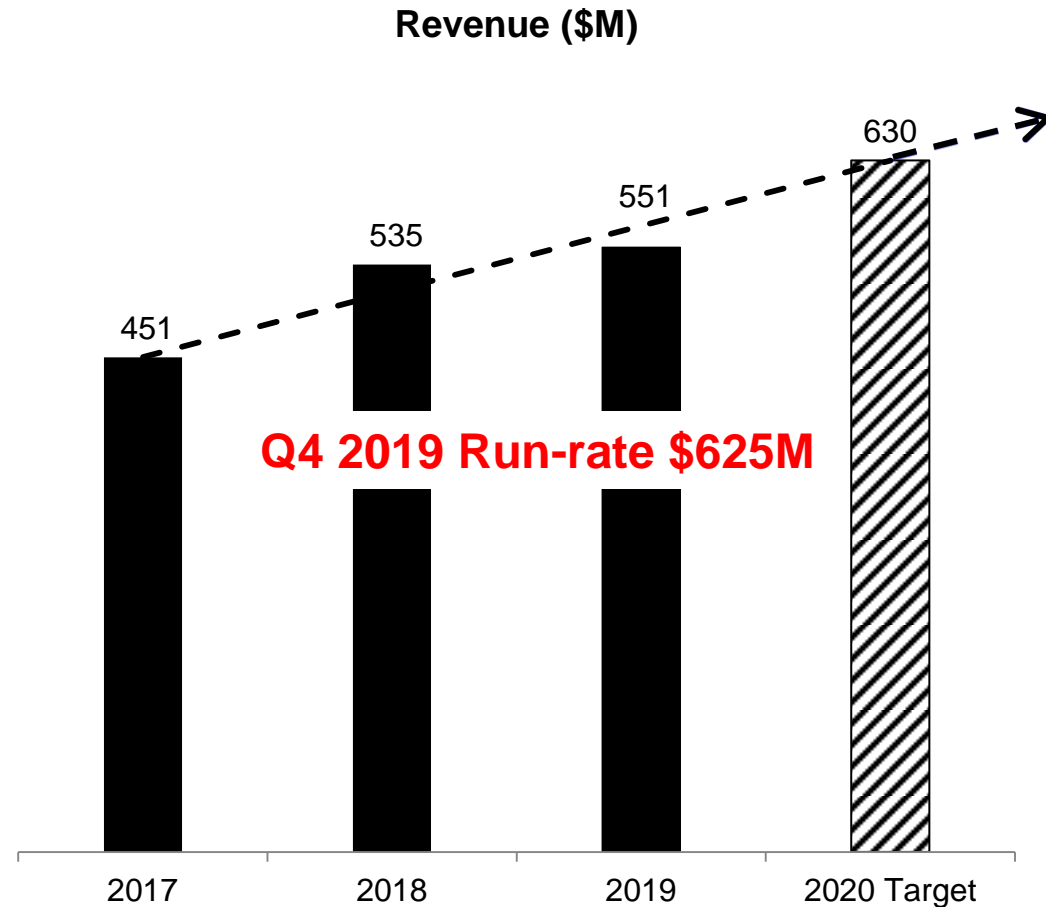
On Our Way to 2020 Target



Key Success Factors

- ▶ “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

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Clear Capital Deployment Priorities

► Fund organic growth

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

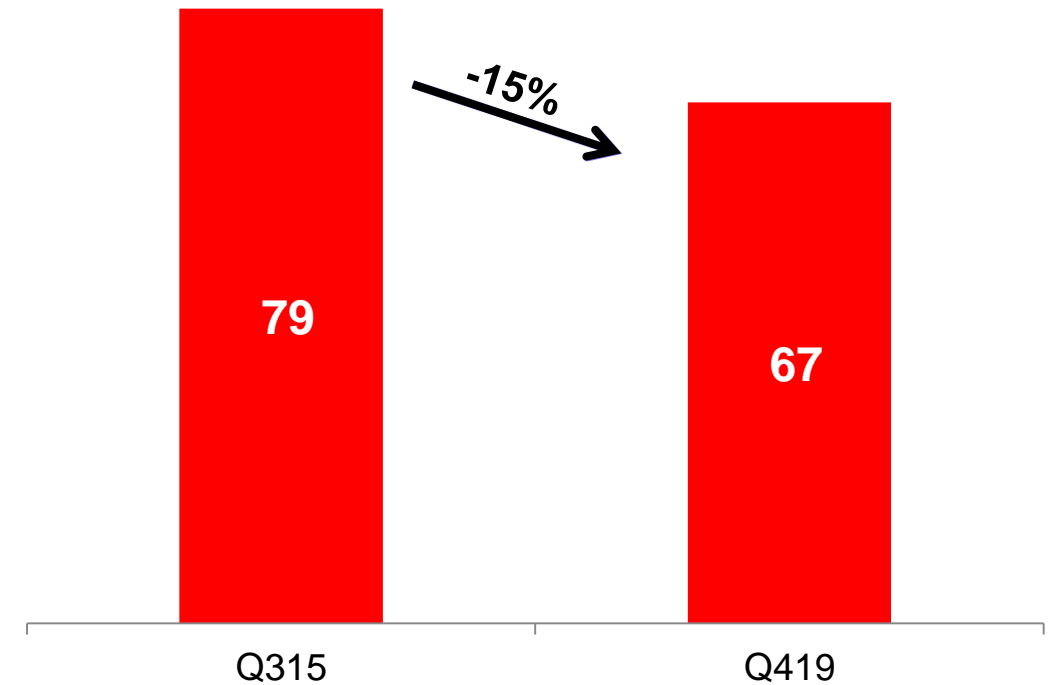
► Explore strategic M&A

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

► Share repurchase

- Repurchased 4.7M shares (\$44.8M) since 2018
- \$89M remaining in current \$100M authorization
- Redeemed \$115M in convertible debt since 2016, eliminating 10.3M potentially dilutive shares

Reducing Diluted Shares
(Million Shares)



Financial Summary

- ▶ **Clear path to accelerate profitable growth**
- ▶ **Prudent stewardship of balance sheet**
- ▶ **Financial model to grow income faster than revenue**
- ▶ **On track to achieve financial targets**
 - Revenue \$630M & EPS \$0.80 by 2020
 - Operating margin > 15%
 - Minimum \$100M net cash
 - Improve ROIC – no projects accepted below hurdle rate

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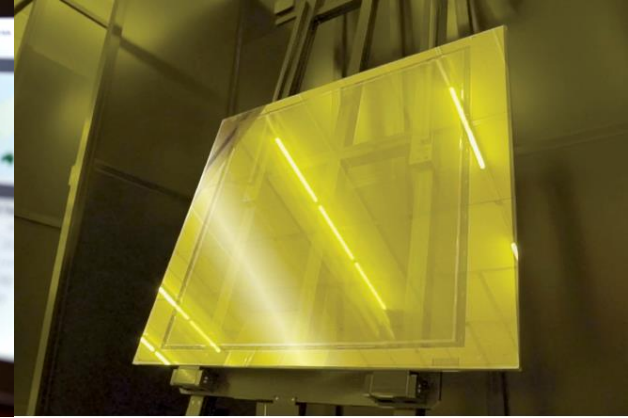
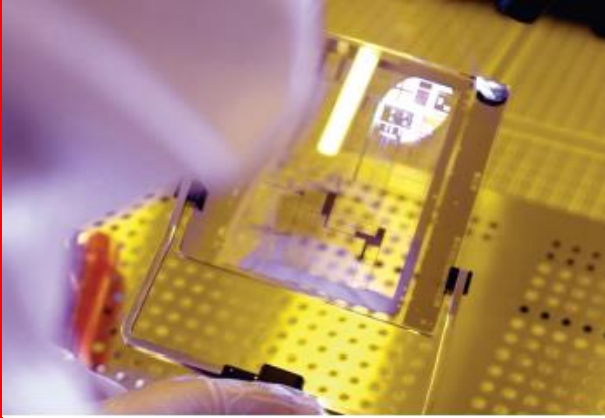
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Thank you for your interest!

For Additional Information:

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