



# Innovating for the Era of AI-Optimized Networking

Lumentum Investor Briefing at OFC 2025

April 1, 2025

# Cautionary Note Regarding Forward-Looking Statements and Non-GAAP Measures

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These include statements regarding our belief and expectations with respect to our markets, customers and industry, including market growth and addressable market, any anticipation or guidance as to demand for our products and technology from our customers and their end customers, including drivers of that demand, statements regarding our acquisitions, achievement of synergies the expected impact of acquisitions on our business and financial results, statements regarding our product roadmaps, investments, new technologies and availability of new products and technologies and our financial models and outlook with respect to revenue growth, future net revenue, gross margin, operating expenses and operating margin, and related assumptions. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected. Among the factors that could cause actual results to differ from those contemplated are: (a) uncertainty and volatility in the global markets, including uncertainty and volatility in the macroeconomic environment, inflationary pressures, uncertainty in the political or economic environment, such as geopolitical conflicts, war, changes in the regulatory environment, including trade and export restrictions and the imposition of tariffs, duties, and other restrictions on business, and the effect of market disruptions on demand for our products, technology spending by our customers and our ability to obtain components for our products; (b) quarter-over-quarter product mix fluctuations, which can materially impact profitability measures due to the broad range of gross margins across our portfolio; (c) decline of average selling prices across our businesses or increase in costs, either of which will also decrease our margins; (d) effects of seasonality; (e) the ability of our suppliers and contract manufacturers to meet production, quality, and delivery requirements for our forecasted demand and the effect of ongoing supply chain constraints, particularly in semiconductors; (f) changes in customer demand, including those due to changes in inventory practices and end-customer demand; (g) our ability to attract and retain new customers; (h) the risk that Lumentum's financing or operating strategies will not be successful; (i) failure to successfully integrate acquired companies and businesses or obtain the expected returns on our investment and (j) our failure to accurately identify liabilities and risks in the businesses we have acquired or will acquire. For more information on these and other risks, please refer to the "Risk Factors" section included in the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2024, filed with the Securities and Exchange. In addition, the results contained in this presentation are valid only as of today's date except where otherwise noted. The forward-looking statements contained in this presentation are made as of the date hereof and the Company assumes no obligation to update such statements, except as required by applicable law.

Unless otherwise stated, all financial results and projections are on a non-GAAP basis. Our GAAP results, details about our non-GAAP financial measures, and a reconciliation between historical GAAP and non-GAAP results can be found in our earnings releases on our web site, [www.lumentum.com](http://www.lumentum.com), under the investors section. Our non-GAAP measures used in this presentation exclude (i) stock-based compensation, (ii) acquisition related costs, (iii) amortization of acquired intangibles, (iv) amortization of acquired inventory fair value, (v) restructuring and related charges, (vi) foreign exchange (gains) losses, net, (vii) non-cash interest expense on convertible notes, (viii) intangible assets write-off, (ix) integration related costs, (x) non-GAAP income tax reconciling adjustments, and (xi) other charges or income related to non-recurring activities. We have not provided reconciliations from GAAP to non-GAAP measures or the equivalent GAAP measure for non-GAAP measures in our outlook or forecasts, as they cannot be provided without unreasonable effort. A large portion of non-GAAP adjustments, such as restructuring charges, stock-based compensation, non-GAAP income tax reconciling adjustments, acquisition related costs, and other costs and contingencies unrelated to current and future operations are by their nature highly volatile and we have low visibility as to the range that may be incurred in the future.

This presentation contains industry market data, industry forecasts and other statistical information. Such information has been obtained from publicly available information, industry publications and other third-party sources, and the Company makes no representations as to the accuracy of such information. The Company has not independently verified any such information. Certain information in this presentation is based upon management forecasts and reflects prevailing conditions and management's views as of this date, all of which are subject to change.

# Today's speakers



**MICHAEL HURLSTON**  
President and CEO



**WUPEN YUEN**  
President  
Cloud and Networking



**WAJID ALI**  
EVP and CFO



**KATHY TA**  
VP, Investor  
Relations



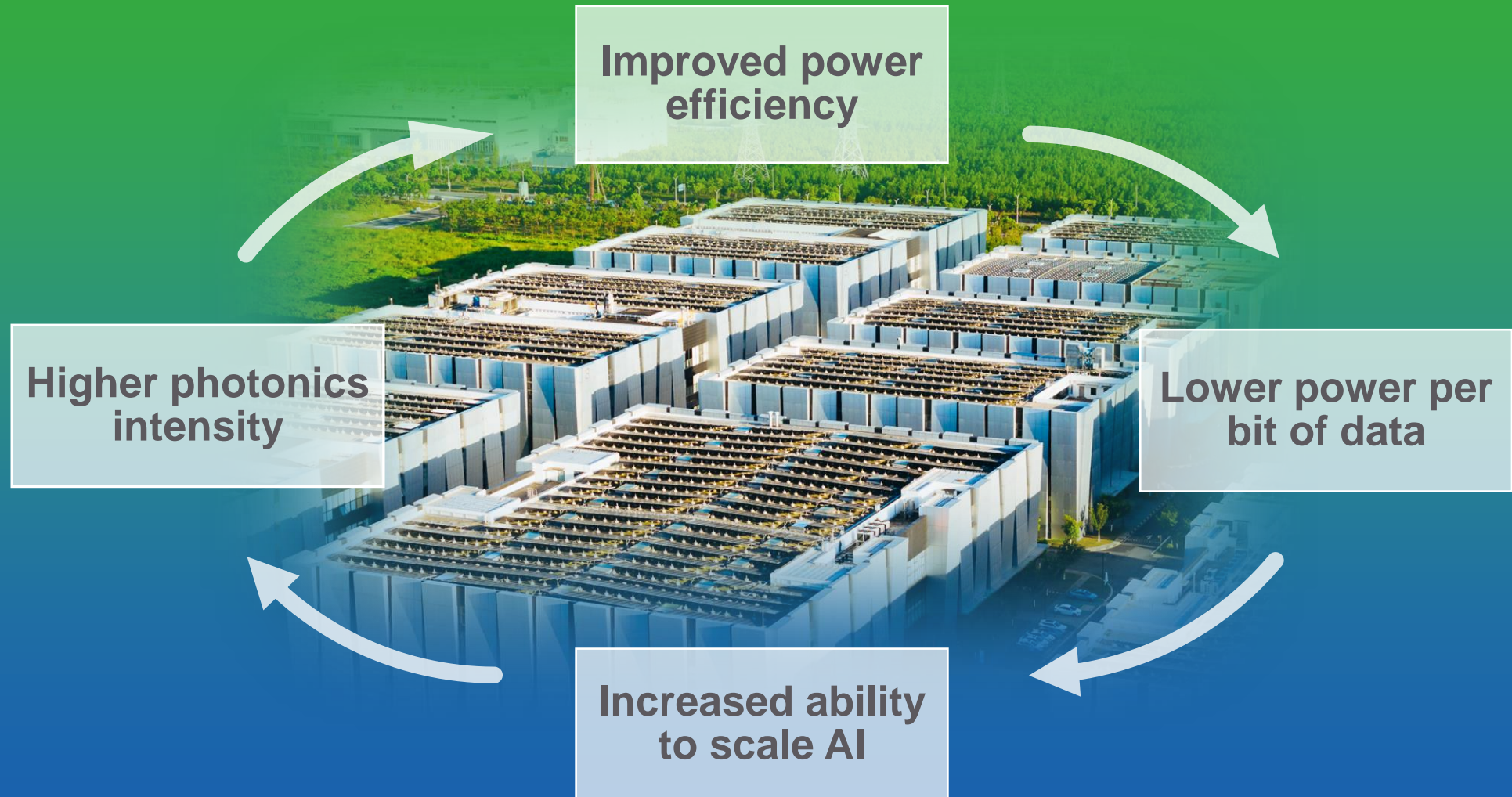
**CHRIS COLDREN**  
SVP, Chief Strategy  
and Corp. Dev. Officer



Innovating for the Era of  
**AI-Optimized  
Networking**

**MICHAEL HURLSTON**  
PRESIDENT AND CEO

# The Virtuous Cycle Driving AI Power Scaling



# Photonic Solutions: The Key to Unlocking AI Growth

UHP DFB lasers

200G PAM4 EML

xPU interconnects

1.6 DR4 and FR4 transceivers

Optical circuit switches

VCSEL arrays

CPO

200G lane speed

Indium Phosphide

400G EML

400G lane speed EMLs

SiPho

Silicon photonics transceiver solutions

Ultra-high-power CW lasers

200G differential EMLs

Copper-to-optical transition

# Broad Expertise in Foundational Technologies Critical to AI



Gallium Arsenide (GaAs)

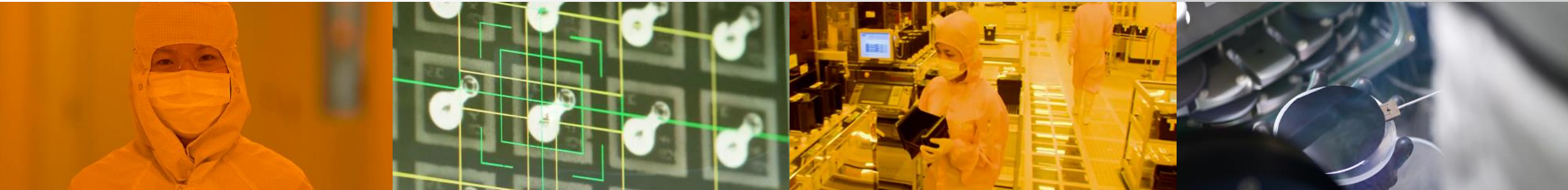
Indium Phosphide Photonic ICs  
MEMS

Indium Phosphide (InP)

Silica on Silicon  
Silicon Photonic ICs

**Experts in materials and device physics**

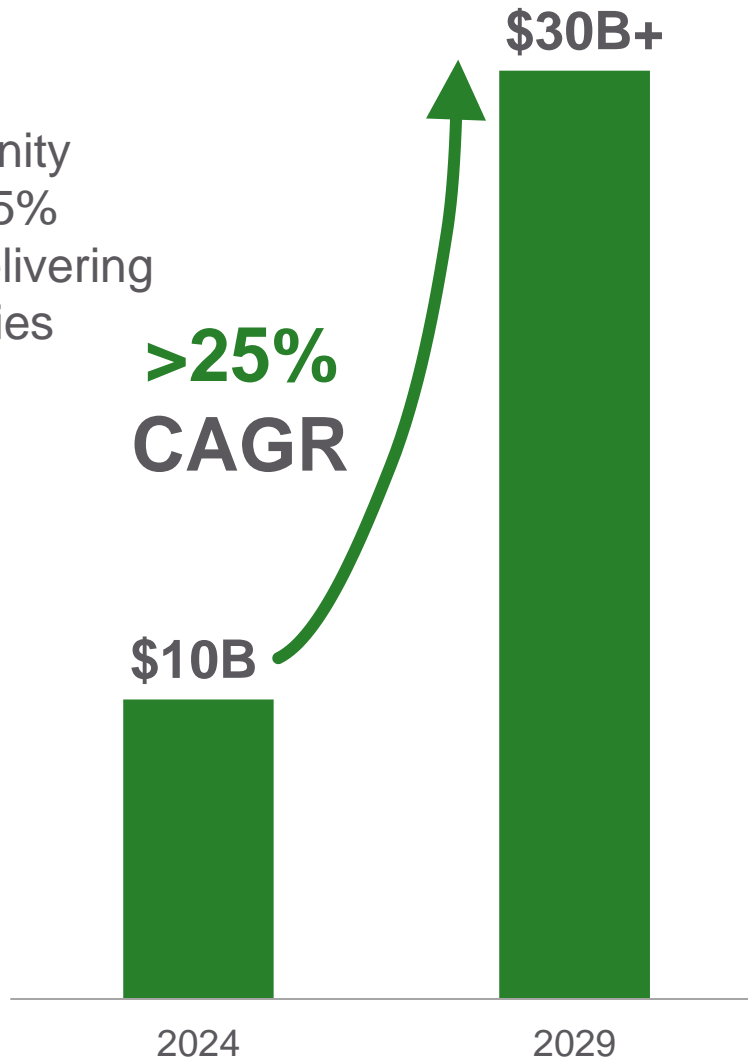
*Design • Process • Know-How • Wafer Production*



# Photonics Evolution Sparks a Rapidly Growing AI Market

Market opportunity growing over 25% CAGR while delivering power efficiencies

**>25%  
CAGR**



## Served Market Focus for AI:

- High-speed datacom transceivers, InP lasers, and optical components
- Custom CPO and LPO solutions
- Optical Circuit Switching (OCS)
- ZR/ZR+ DCI modules & high-baud-rate components
- Optical line system components

***Scale-up photonics to provide further upside***

# End-to-End Cloud and Networking Leadership

## CLOUD-DRIVEN MARKETS

### SUB-SEA



HIGH-RELIABILITY PUMP  
LASER & AMPLIFIER  
COMPONENTS  
  
COHERENT  
LASER & COMPONENTS

### LONG-HAUL & METRO



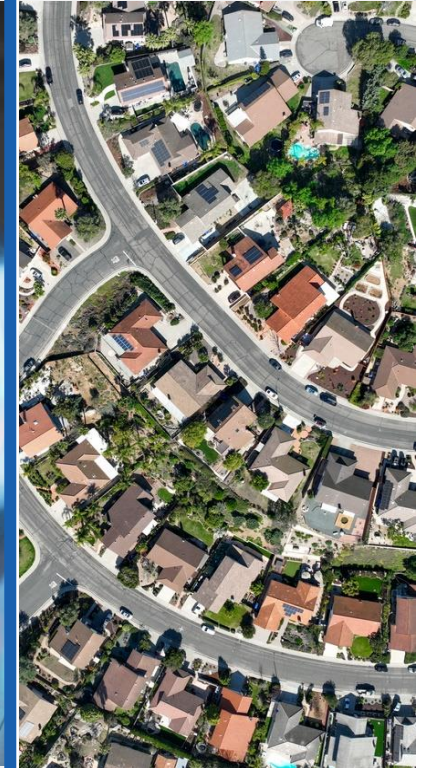
COHERENT COMPONENTS & MODULES  
ZR+ MODULES  
ROADMs & AMPLIFIERS  
PUMP LASER & PASSIVE COMPONENTS

### DATA CENTER



DML & EML TRANSMITTERS  
VCSEL TRANSMITTERS  
CW LASERS  
ZR MODULES  
OPTICAL SWITCHING

### ACCESS & 5G



TUNABLE ACCESS  
MODULES  
TRANSMIT & RECEIVE  
COMPONENTS

# Key Takeaways



**Lower power per bit** architectures drive increased data center photonics intensity



Served cloud market expanding **>25% CAGR** in a rapidly evolving ecosystem



AI photonics leadership to drive **>\$3B annual revenue** at **>20% operating margin\***



# Operating at **Cloud Velocity**

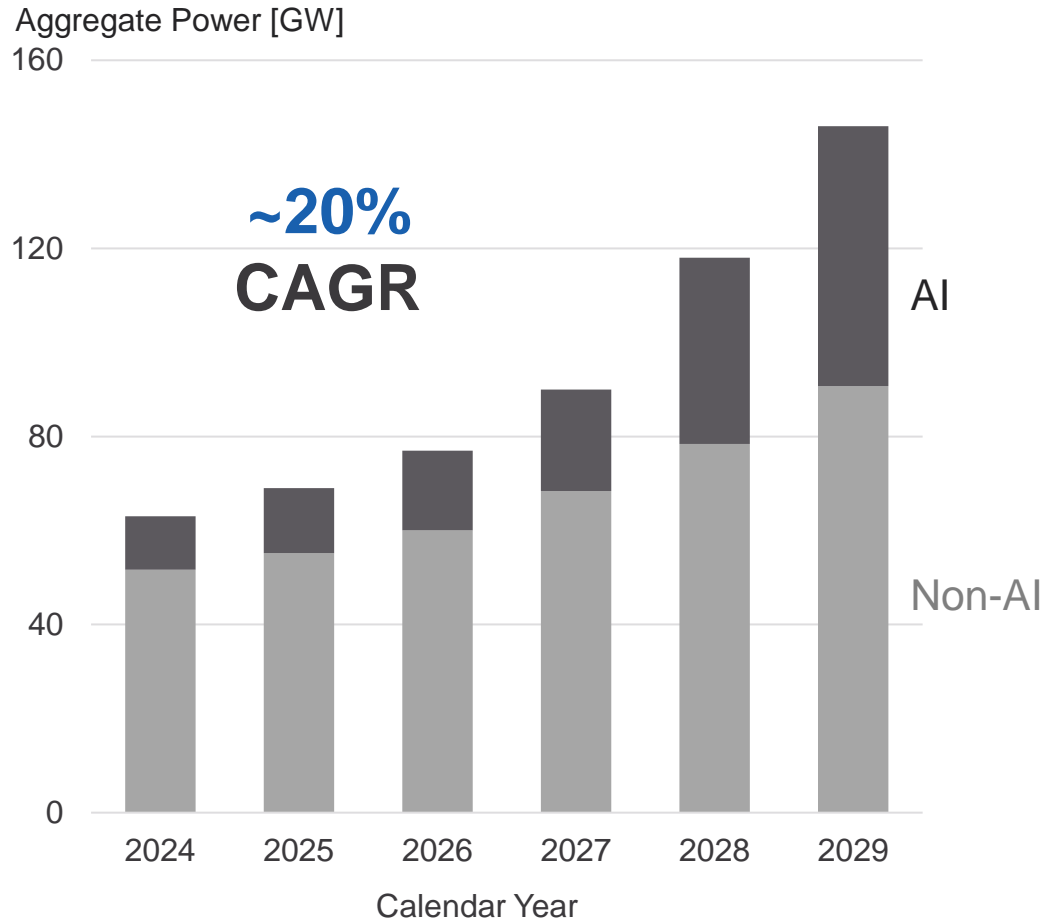
**WUPEN YUEN**

President, Cloud and Networking

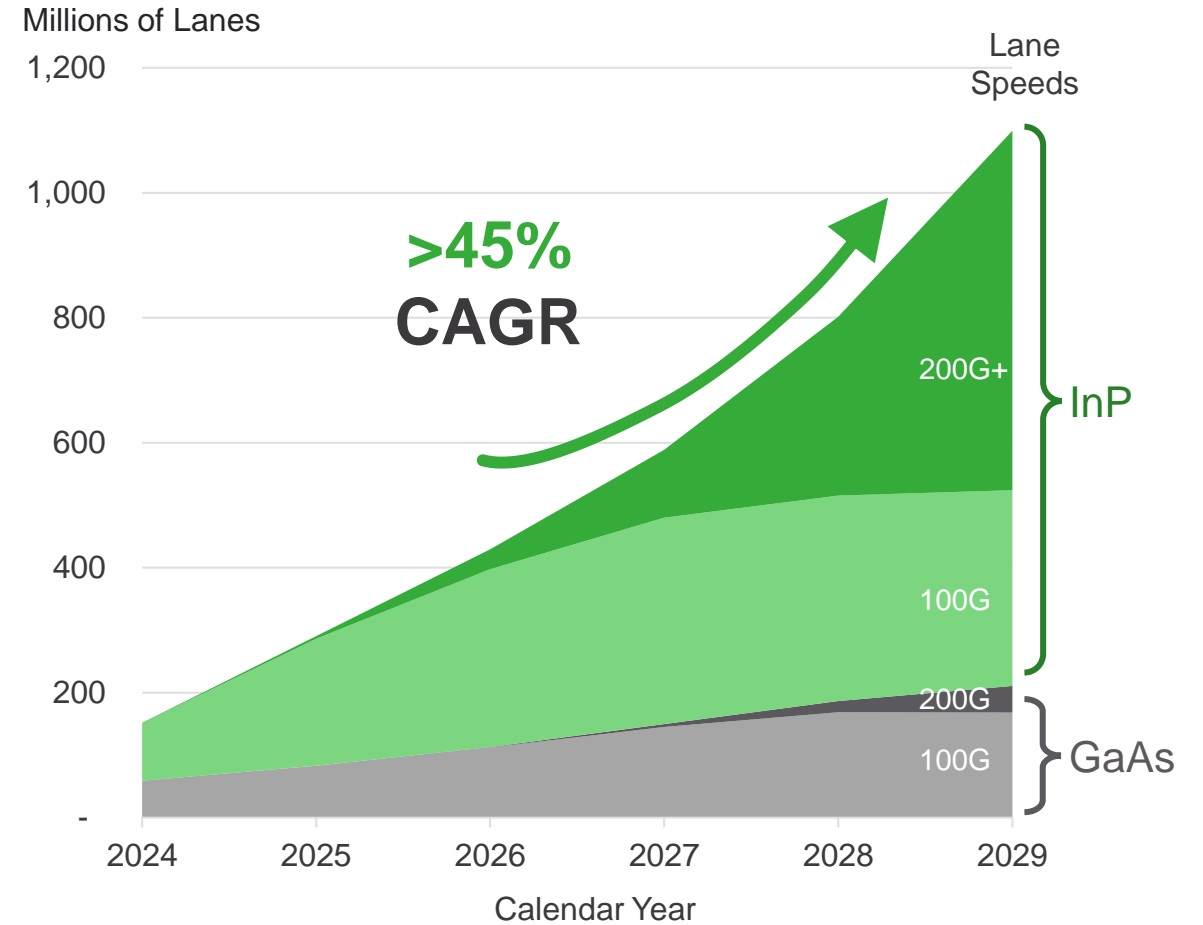


# Innovating with Photonics to Keep Data Center Power in Check

## ESTIMATED GLOBAL DATA CENTER POWER USE



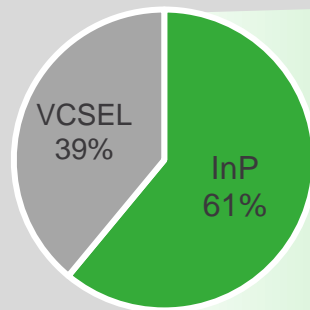
## ESTIMATED OPTICAL LANE GROWTH IN DATA CENTERS



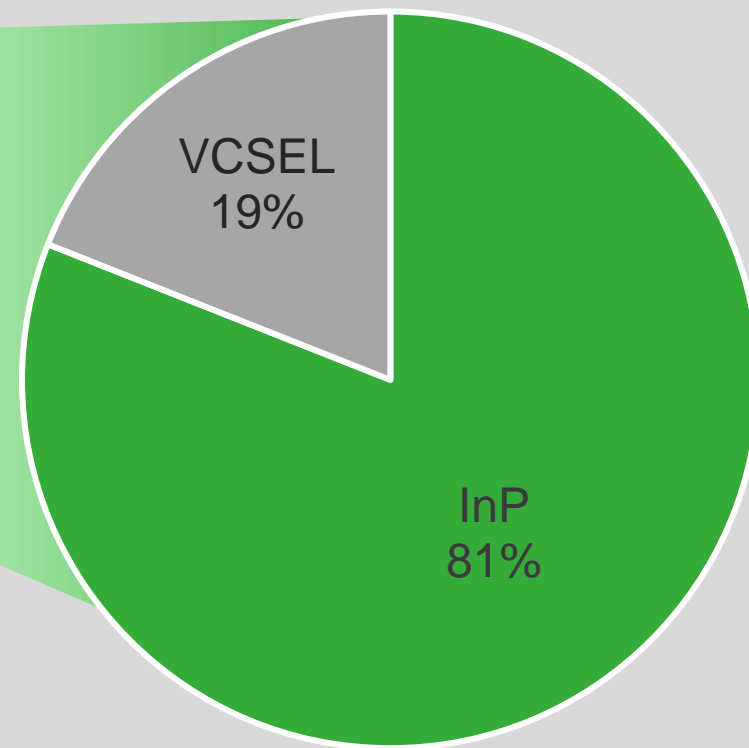
*200G+ lane speed generation, co-packaged optics, and OCS to mitigate data center power growth*

# Accelerating to Faster Optical Lane Speeds: Why InP is the Future

LANES IN 2024



LANES IN 2029F

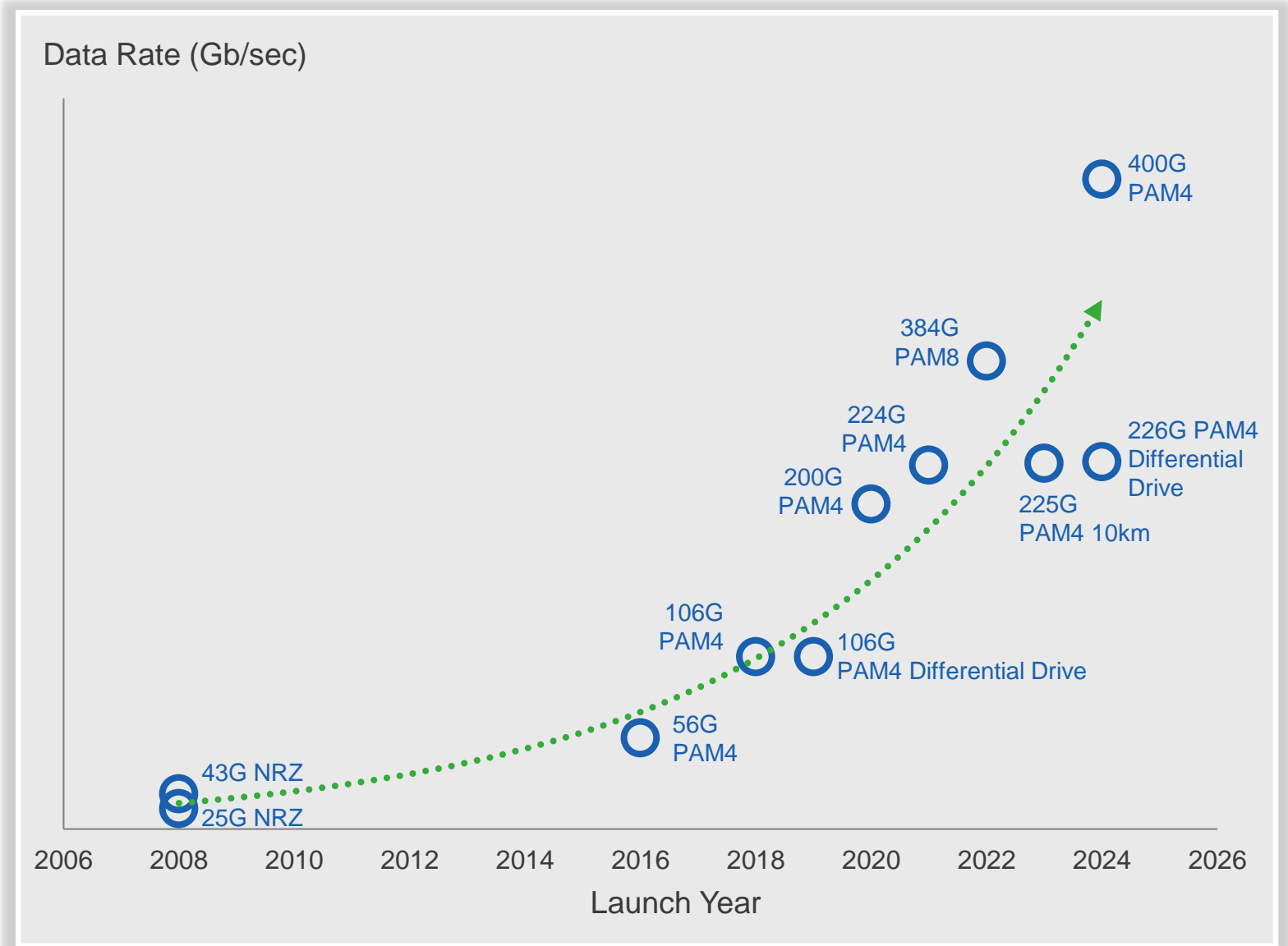


*Higher data rate lane speeds improve power-per-bit efficiency and demand more single-mode fiber InP solutions*

Source: LightCounting: Optics for AI, Jan 2025

# Lumentum's Decades of InP Leadership

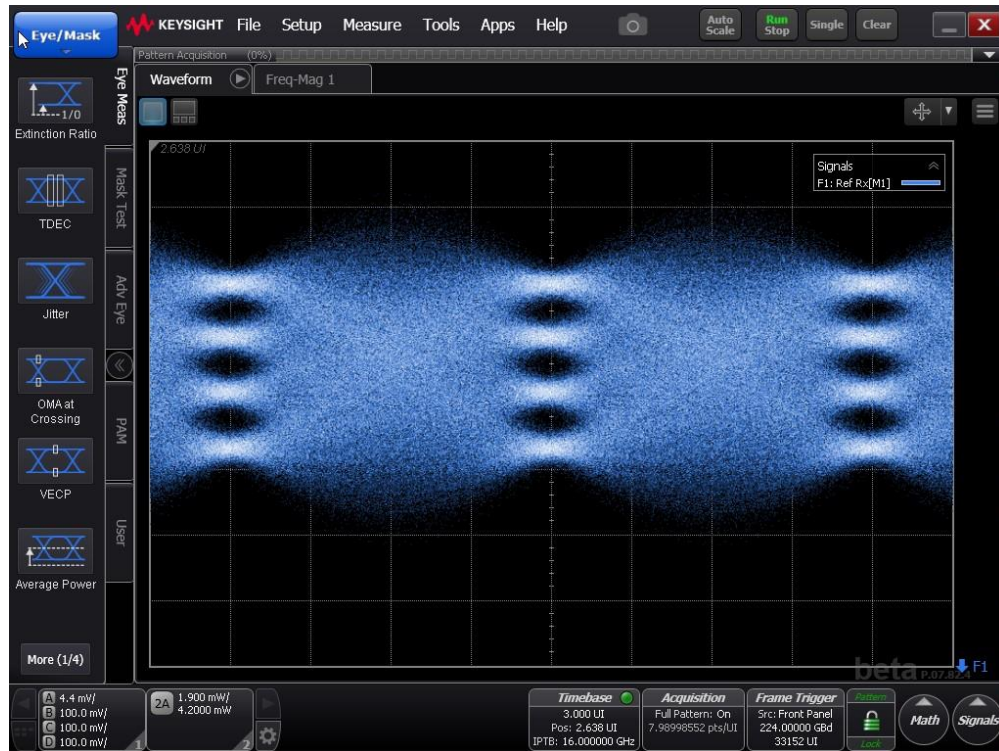
*Paving the way for  
Cloud data center  
success*



# 400G PAM4 InP Transmitter Demonstrations: *Lumentum Booth #2119*

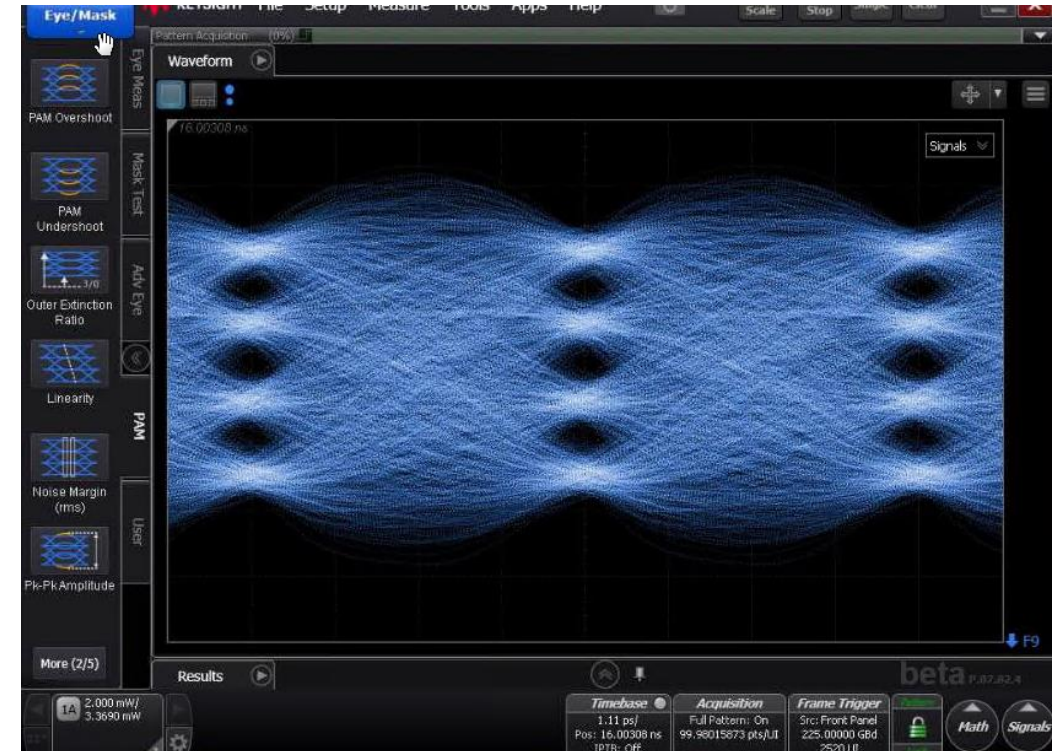
## *InP Chip Innovations Enabling Range of High-Speed Interconnect Needs*

### 448G InP EML



*Partner announcement: “Keysight, NTT Innovative Devices, and Lumentum Achieve New Benchmark 448 Gbps Data Transmission for AI”*

### 450G InP DFB-MZI



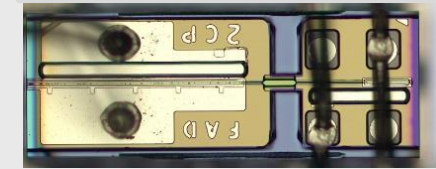
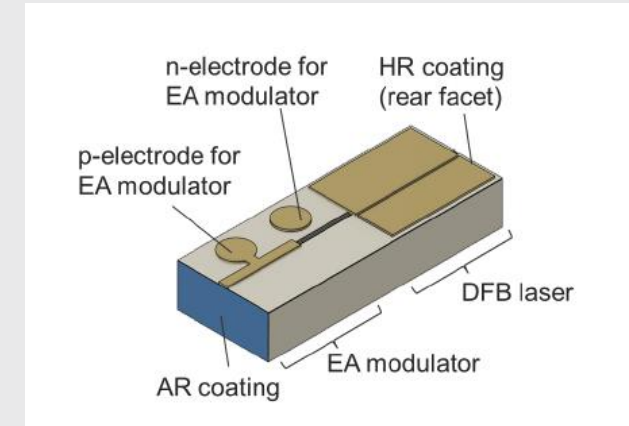
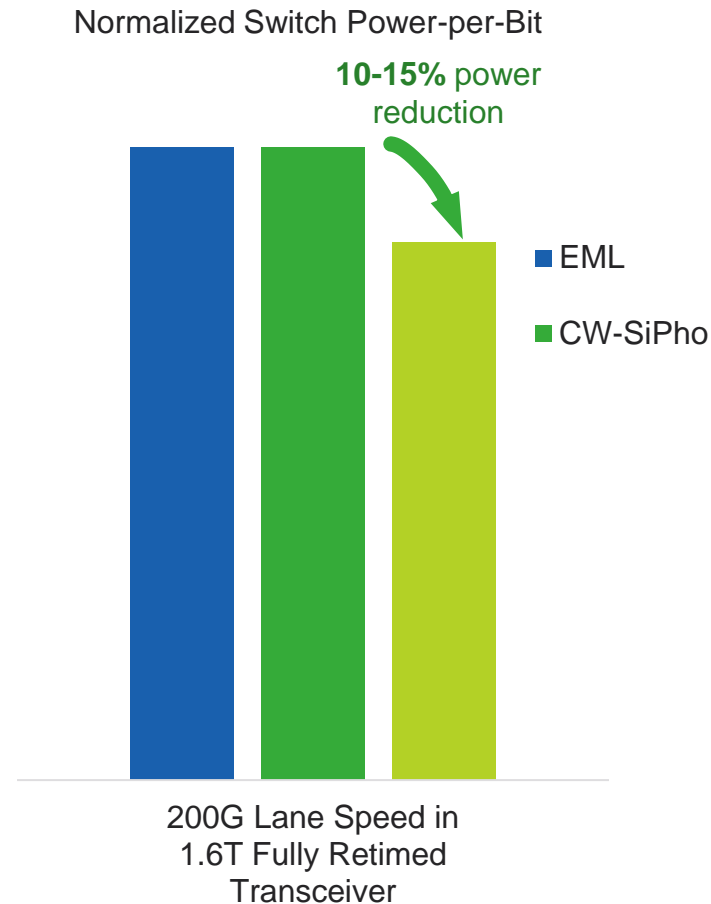
*Live demonstration in Lumentum’s booth #2119*

## ***Paving the way for next-generation 3.2T optical interfaces***

# Power Savings at 200G+ Lane Speed

*Differential-drive EML reduces power consumption and improves signal integrity*

## Laser Comparison at 200G Lane Speeds



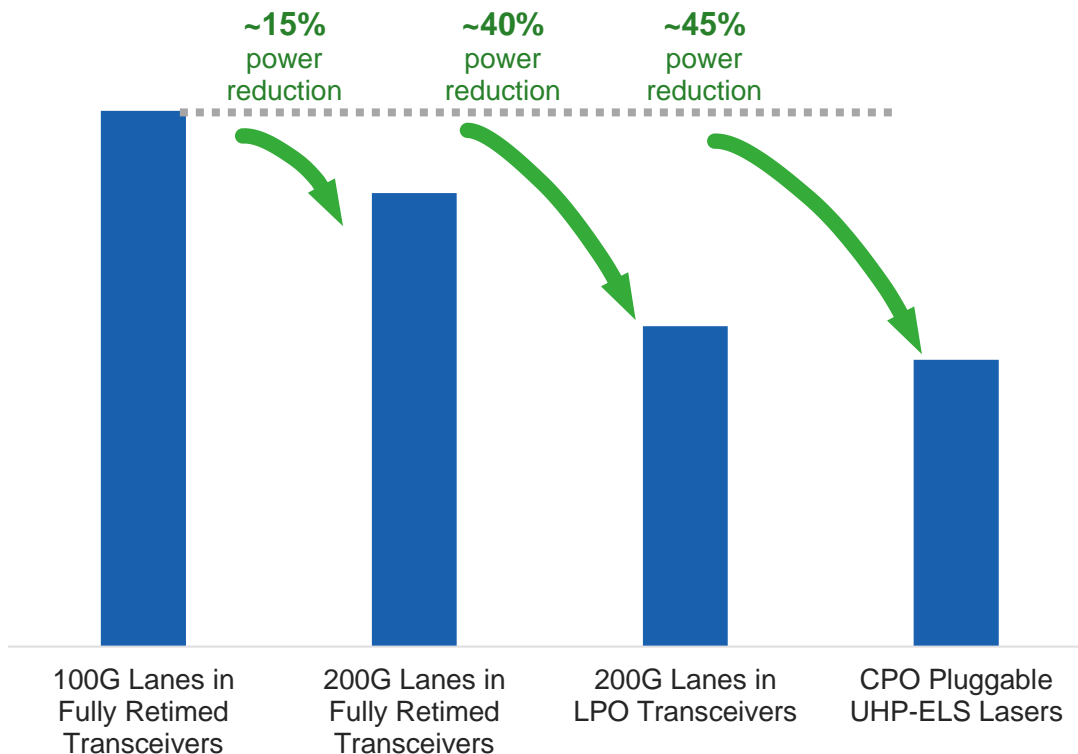
200G Lane Speed Differential Drive EML

# Power Scaling with an Advanced InP Laser Roadmap

*Multiple pathways to reduce power consumption*

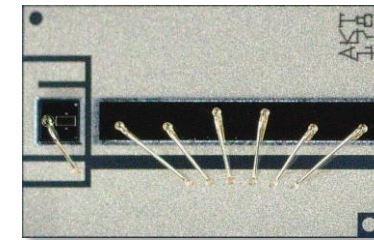
## Laser Options Within Pluggable Transceivers

*Network Power-per-Bit*

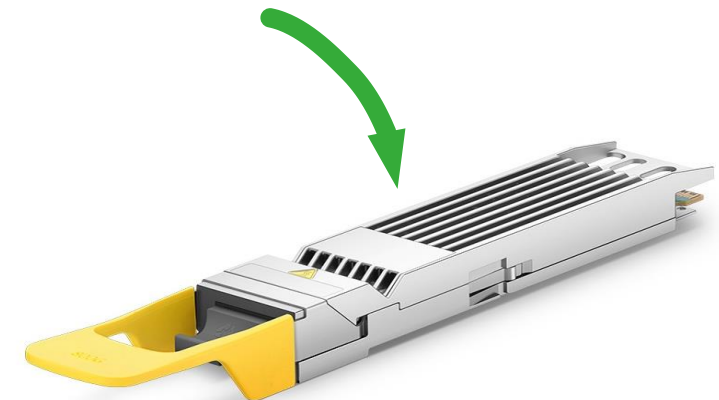


EML	✓	✓	✓	
CW	✓	✓	✓	✓

## Pluggable, Ultra-High-Power External Light Source CPO Solution



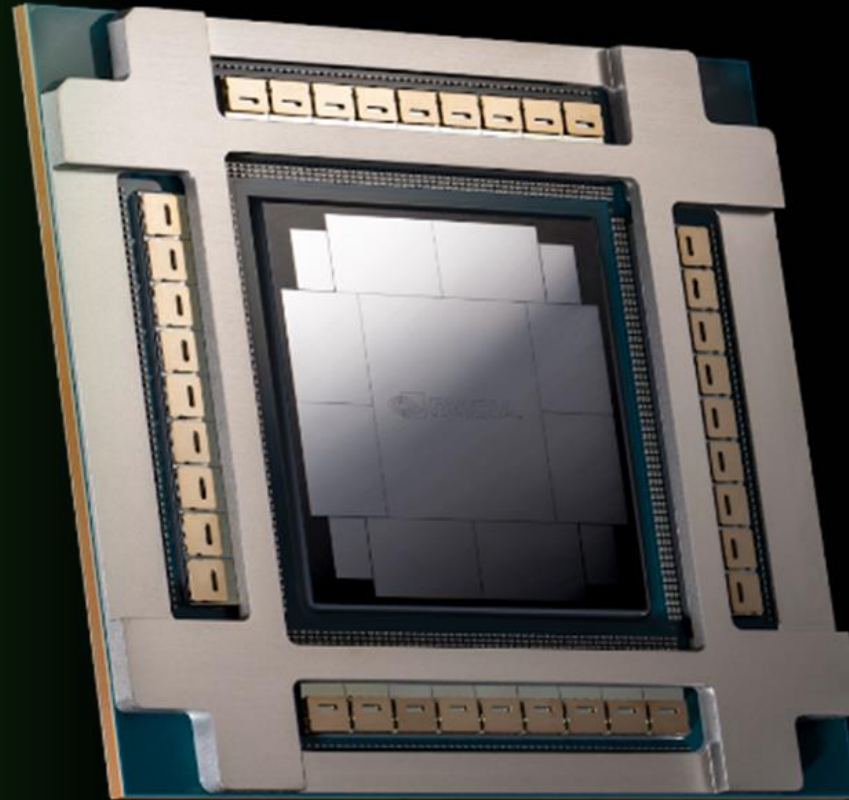
UHP InP LASER



ELS PLUGGABLE FORM FACTOR

# Lumentum Enabling CPO in NVIDIA's Spectrum-X Switch

*Enabled by Lumentum's  
high-reliability, ultra-high-  
power laser*



**NVIDIA Spectrum-X Photonics**  
CPO Co-Invention Ecosystem Partners

#### Technology Innovations

- New Microring Modulators (MRM)
- TSMC Photonics Engine Optimizations
- High Power, High Efficiency Lasers
- Detachable Fiber Connectors
- 100's of Patents, Licensed to Customers

LUMENTUM

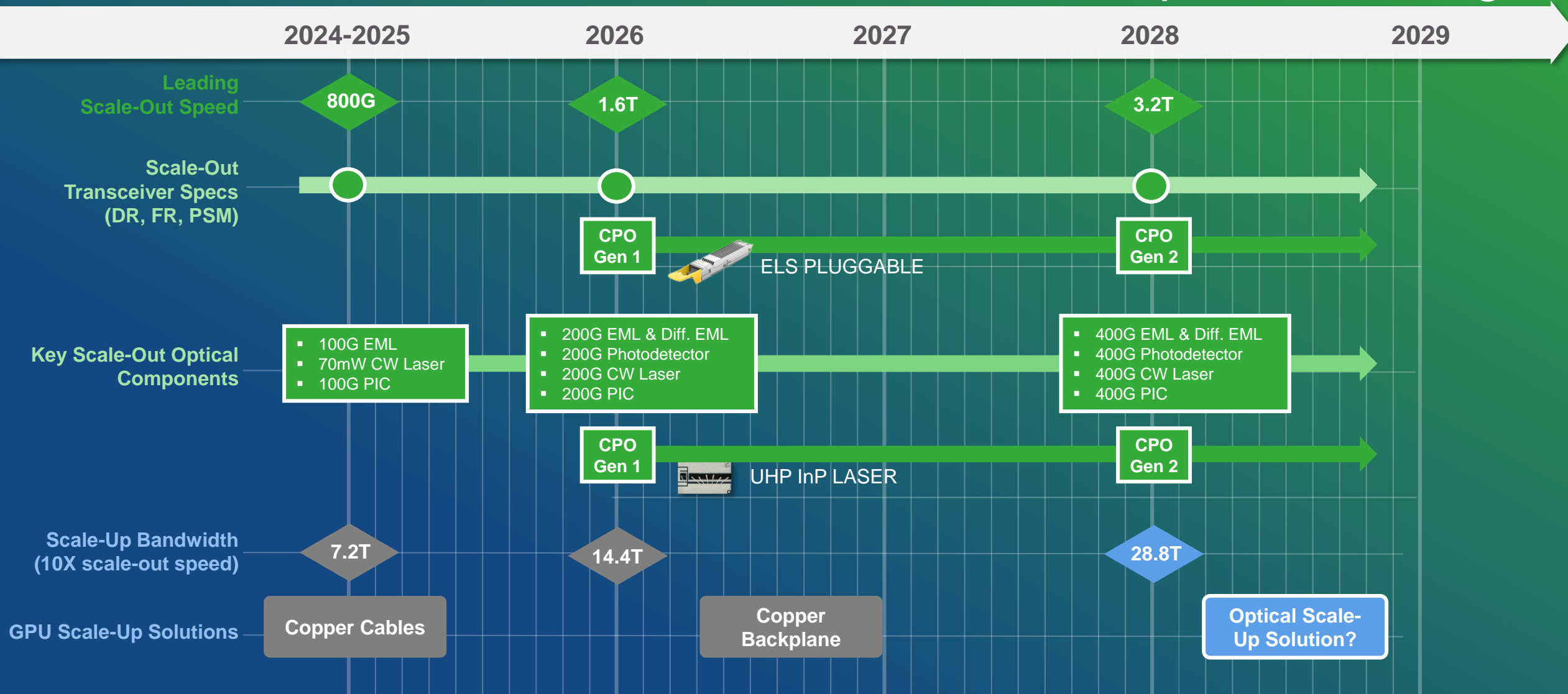
*Lumentum positioned to win in CPO with laser differentiation*

# What Does it Take to Develop a Winning CPO Laser Source?

*(Answer: leadership in the most demanding ultra-long-haul and sub-sea network applications)*

Image Source: <https://spie.org/>

# Lumentum's Power-Efficient Photonics Roadmap for AI Scaling



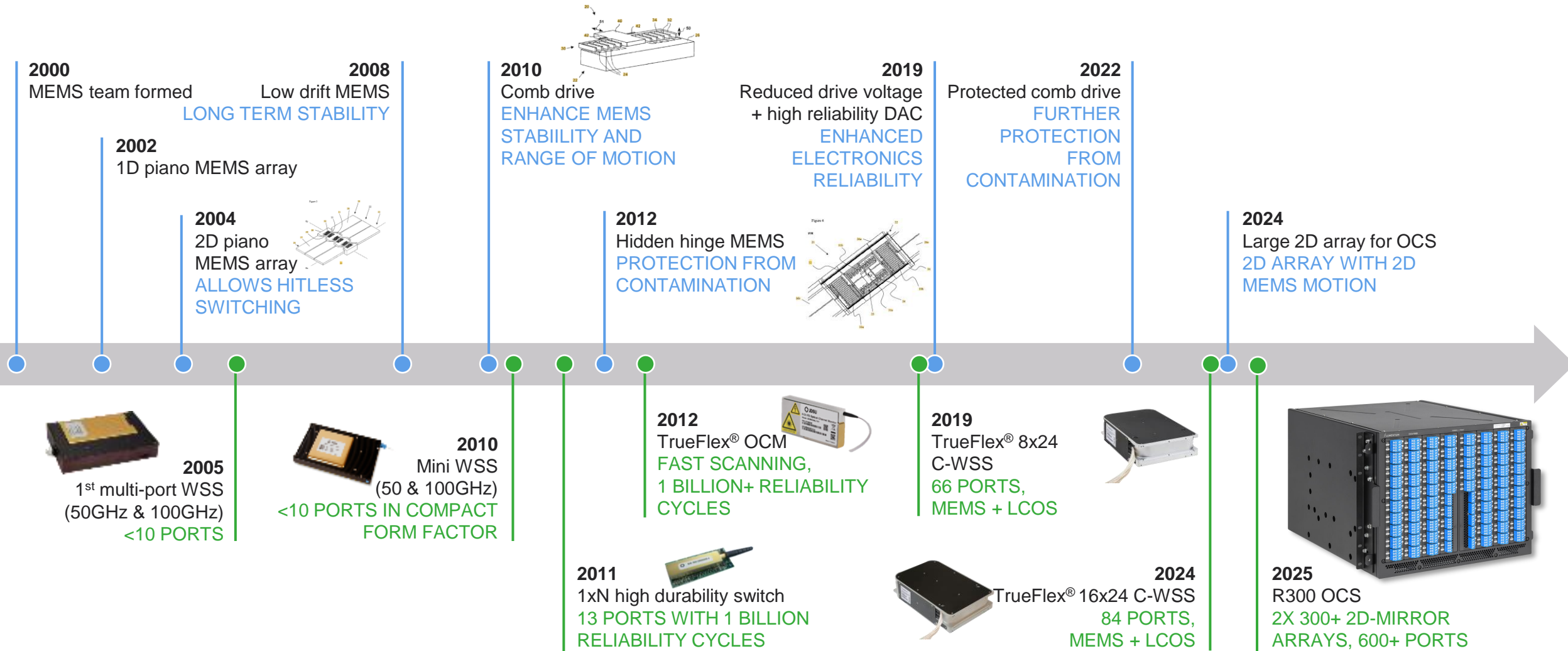


# What It Takes to Develop Optical Switching (OCS) Products for AI

- 25+ years of expertise in optical switching
- 200+ patents: reliability, design & applications
- 130,000+ MEMS-based WSS\* units shipped
- Over 1 trillion MEMS-hours of proven field reliability
- Large-scale, highly automated manufacturing
- #1 market leader in WSS

Note: WSS = Wavelength Selective Switch

# 25 Years of Leadership in MEMS Optical Switching Reliability



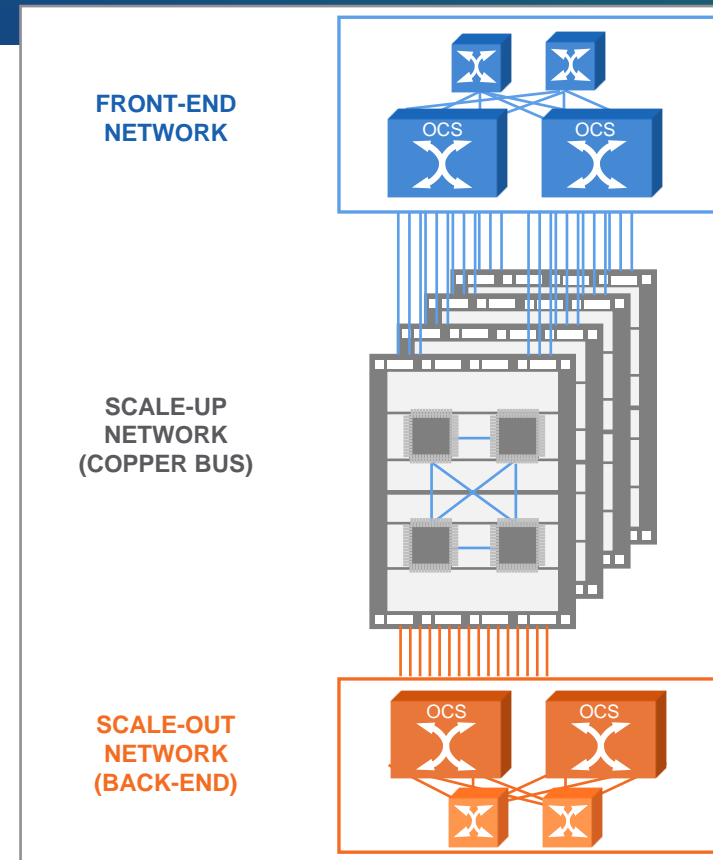
Unmatched reliability: 0.1 ppb issues with 1 trillion MEMS-hours in the field



# Breakthrough Power Savings Through Optical Switching

*>65% power reduction in 100K-scale GPU deployments with optical switching\**

*>\$1.5B market opportunity by 2029\*\**



Sources:

\*Lumentum: Energy-Efficient AI Networks Lead to Dramatic Reduction in Environmental Impact, 2024

\*\*Signal AI: The Optical Circuit Switching Market Report, 1Q25

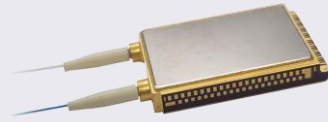


# Securing Grid Power Now Requires Spreading Out Data Centers

*Plays to Lumentum's strengths in coherent optical component leadership*



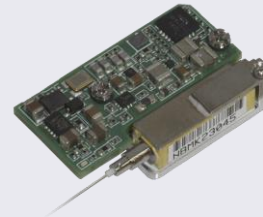
## LUMENTUM'S LEADING OPTICAL COMPONENTS



Integrated Coherent TROSA, 200 Gbaud Symbol Rate



400G and 800G Coherent Pluggable Transceivers



Ultra-Narrow Linewidth nITLA

Narrow Linewidth Tunable laser



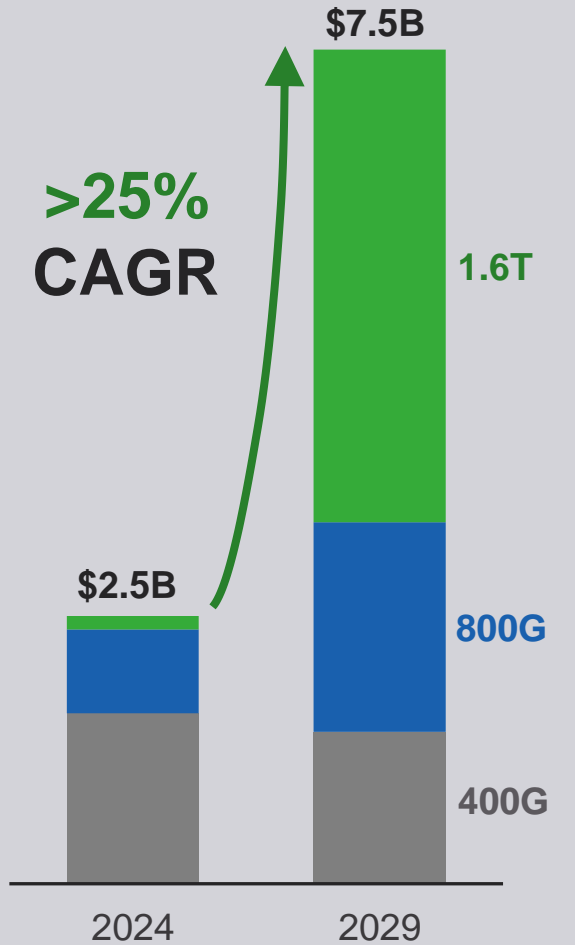
SiPho PIC



InP Modulator with Driver

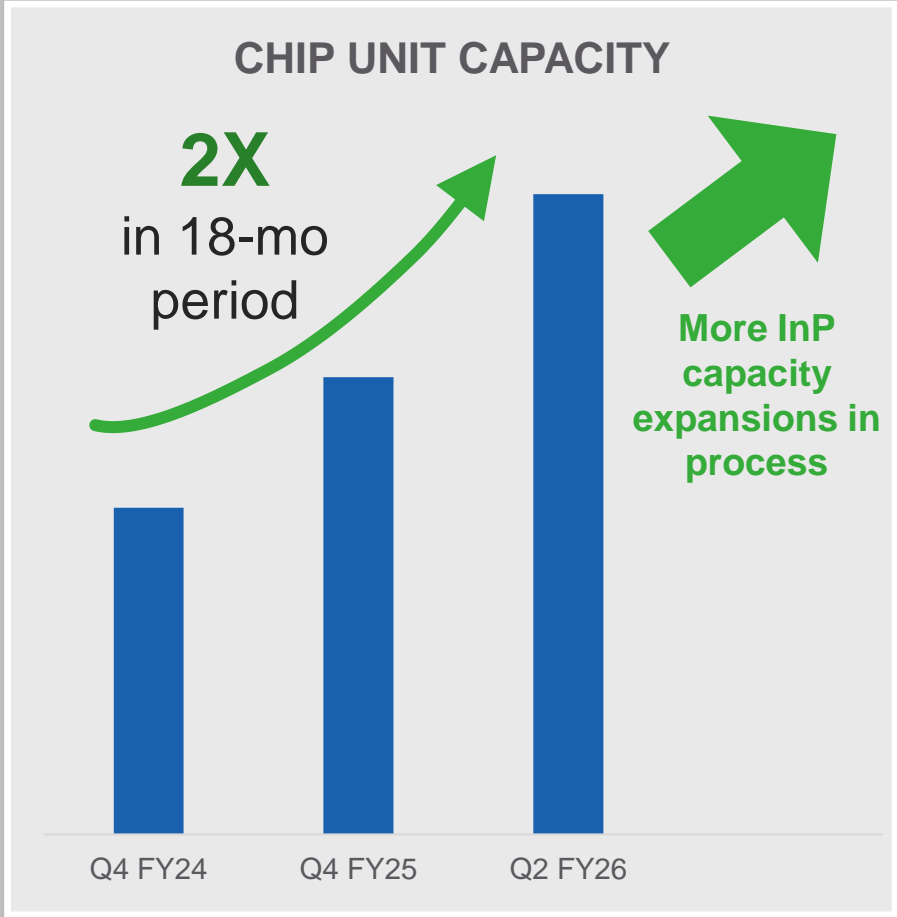


## CLOUD DWDM COMPONENT & TRANSCEIVER MARKET FORECAST



Source: LightCounting Market Forecast, Oct 2024; includes on-board optics, ZR/ZR+, and other DWDM modules for Cloud customers

# Cloud Laser Chips at High Manufacturing Scale





# World-Class Manufacturing at Lumentum's Thailand Campus

- Expanding state-of-the-art cleanroom campus to support AI growth
- Scaling production for 800G and 1.6T optical transceivers
- Proprietary process with custom equipment, wafer-level testing, and bare-die packaging

# A Full Suite of Optical Capabilities to Serve Cloud and AI/ML Needs

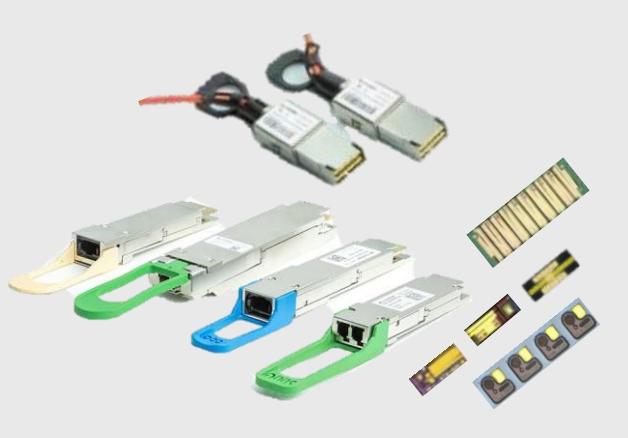
## INSIDE THE DATA CENTER

### Connectivity for High-Speed Ethernet and InfiniBand Applications

200–800G transceivers and AOCs with 1.6T in qualification

Full suite of photonic chips for vertical integration and cost

Note: AOC = Active Optical Cable



### Intra-Data Center Switching

New opportunities for optical switching



## OUTSIDE THE DATA CENTER



### Switching/Provisioning of Increasingly Dense Traffic

Full solution suite in optical switching, amplification, mux/demux, and monitoring



### Long-Reach Data Center Interconnect

ZR/ZR+ transceivers  
High-baud-rate coherent components  
Optical line system components

# Cutting-Edge Photonic Innovations at OFC 2025: *Lumentum Booth #2119*

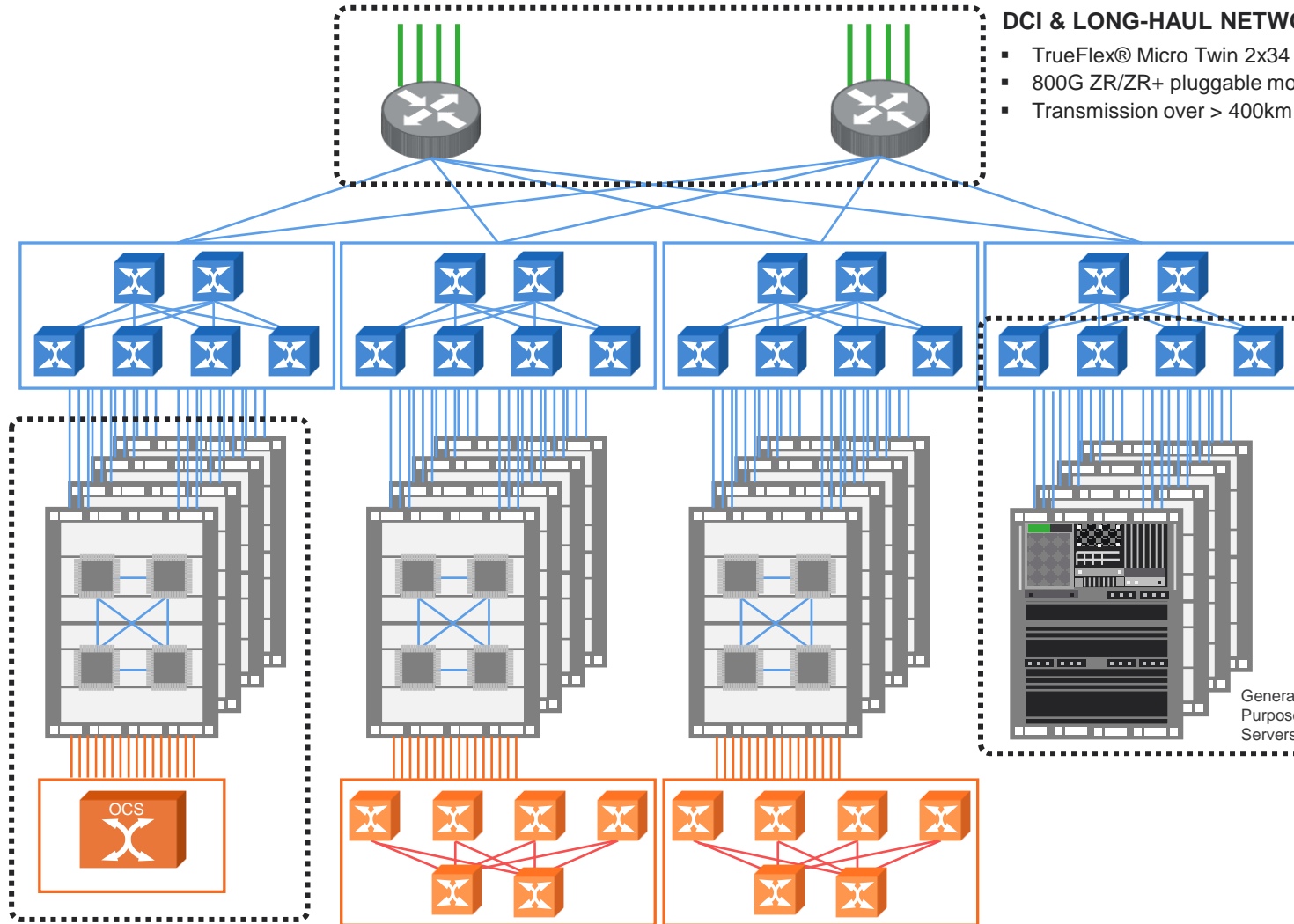
*Superior Photonic Connectivity from AI Racks to Cloud Interconnects to Long-Haul Networks*

**DATA CENTER  
 INTERCONNECT  
 (DCI)**

**FRONT-END  
 NETWORK**

**SCALE-UP  
 NETWORK  
 (COPPER BUS)**

**SCALE-OUT  
 NETWORK  
 (BACK-END)**



**DCI & LONG-HAUL NETWORKING RACK**

- TrueFlex® Micro Twin 2x34 integrated C + L WSS
- 800G ZR/ZR+ pluggable modules
- Transmission over > 400km fiber

**CLOUD FRONT-END  
 NETWORKING RACK**

- 400G, 800G SR transceivers
- 800ZR transceivers

General-Purpose Servers

**AI/ML BACK-END NETWORKING RACK**

- 800G and 1.6T optical transceivers
- 300x300 Optical Circuit Switch (OCS)



# Investing for **Rapid Growth**

**WAJID ALI**  
EVP and CFO

# Operating Strategy to Optimize Profitability



## Invest for Growth

Investments in R&D for product differentiation  
CapEx to support cloud growth  
Expand wafer fab scale and efficiency

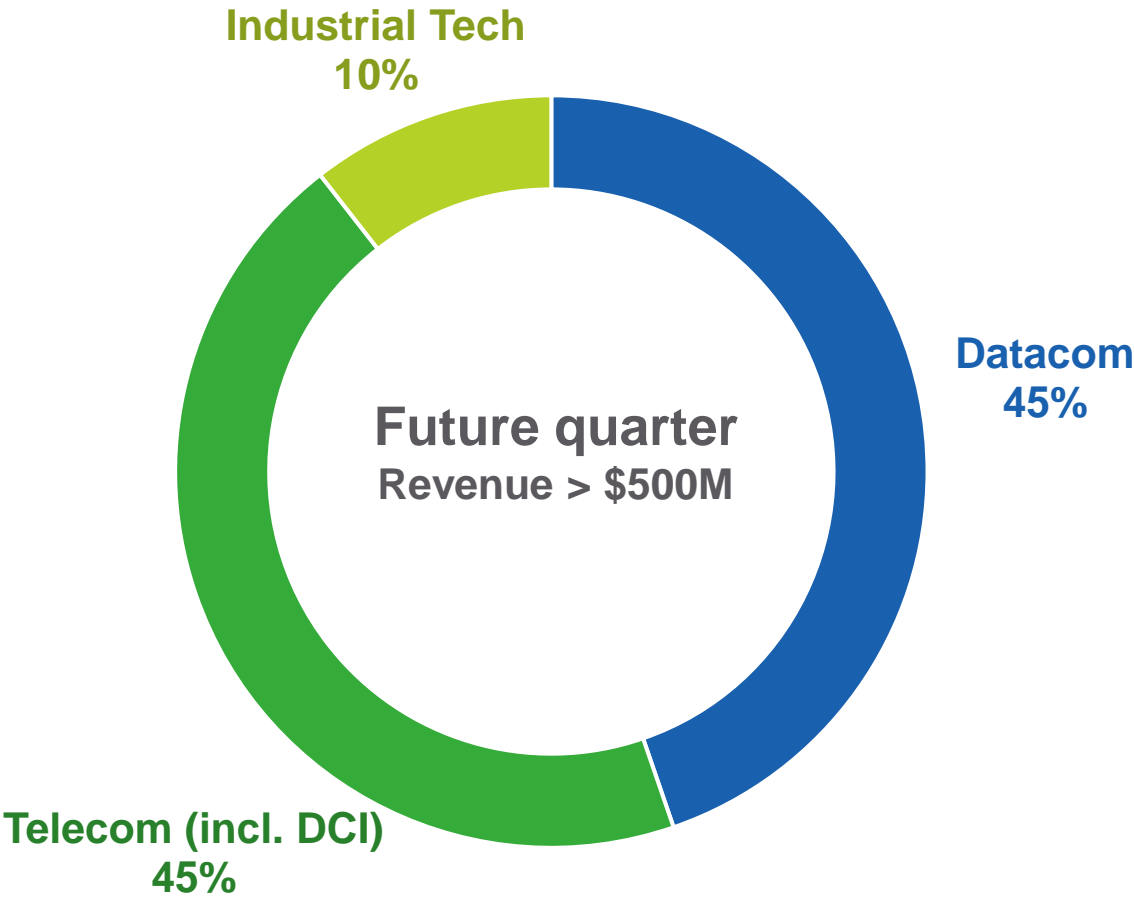
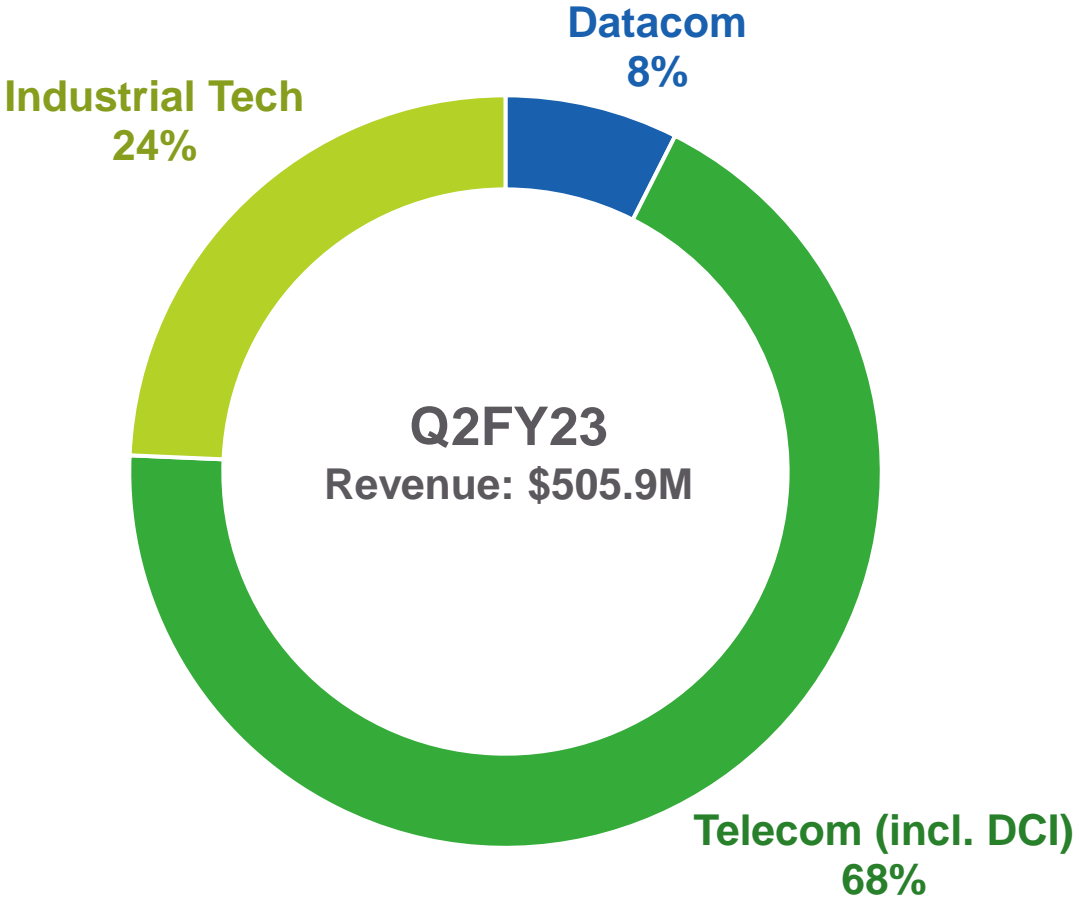


## Expand Operating Margin

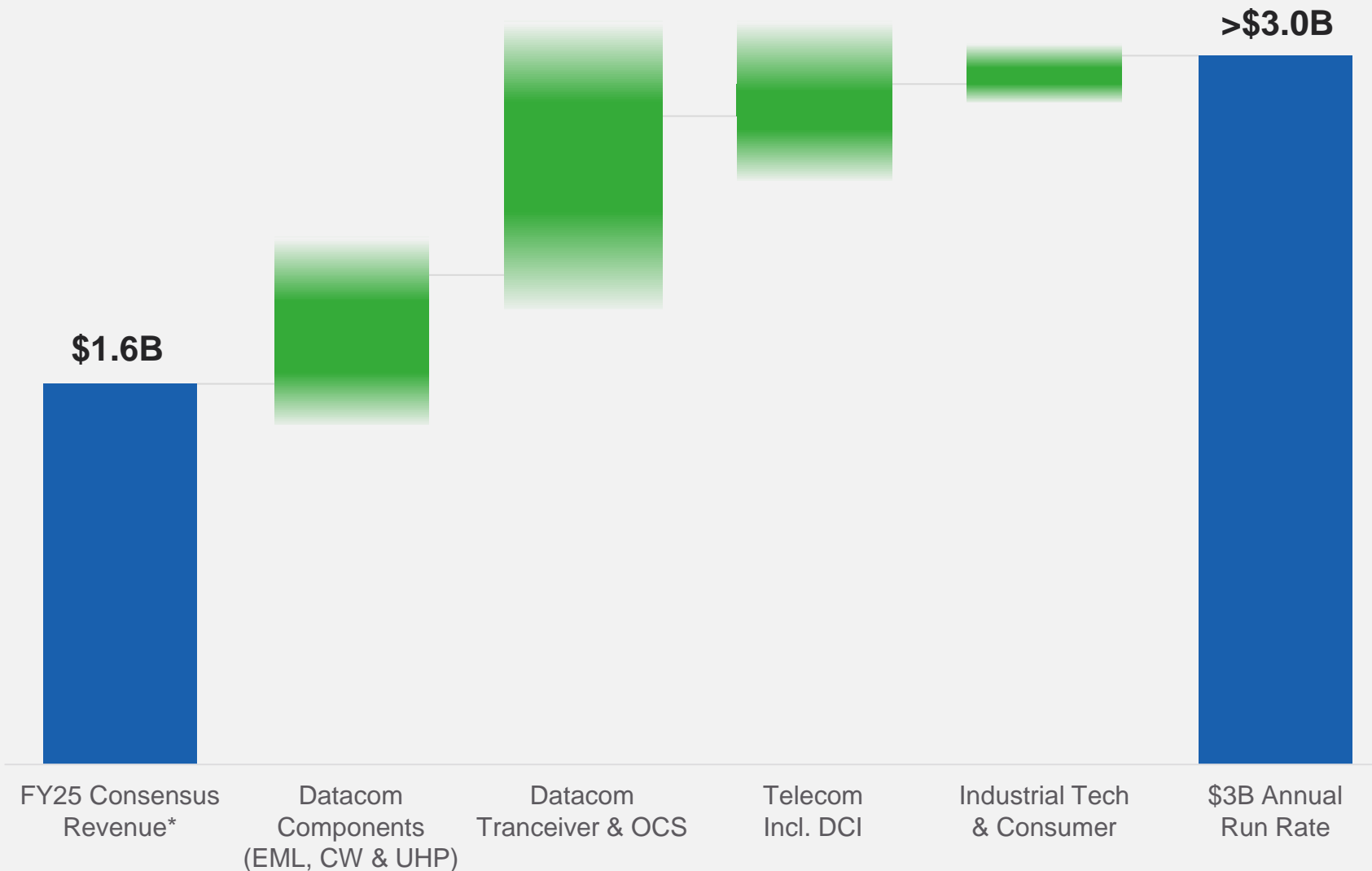
Grow top line revenue  
Optimize manufacturing footprint  
Reduce fixed costs

*Profitability expansion with increased operational scale*

# Customer and Product Mix Shift to Cloud



# Incremental Revenue Growth Scenario to >\$3B



*Majority of Revenue Growth from Cloud & AI customers*

# Operating Margin Progression to >20%



*> 1,100 bps Operating Margin Expansion, Primarily Driven by Cloud & AI*

# Target Financial Model

*Non-GAAP Model*

	<b>FY25 Consensus Estimates*</b>	<b>\$600M Quarterly Revenue</b>	<b>\$750M Quarterly Revenue</b>
<b>Annualized Revenue</b>	<b>\$1.6B</b>	<b>\$2.4B</b>	<b>\$3.0B</b>
<b>Gross Margin</b>	<b>33.8%</b>	<b>37 – 40%</b>	<b>39 – 42%</b>
<b>Operating Expenses</b>	<b>~25%</b>	<b>~20%</b>	<b>~18%</b>
<b>Operating Margin</b>	<b>8.4%</b>	<b>17 – 20%</b>	<b>&gt;20%</b>

*Driving Non-GAAP EPS to Expand Faster than Revenue*

\*Source: FactSet, March 26, 2025, consensus estimates on LITE

Note: This is a target model and is not intended to represent guidance on actual outcomes. Actual results and timing is subject to the various assumptions and other risks and uncertainties.

# Key Takeaways



Funding manufacturing capacity and R&D for **cloud opportunities**



Structural cost savings & cloud growth will drive **op margin expansion**



Driving to **>\$3B** annual revenue at **>20%** operating margin

# Q&A



# Thank You

