

EQUITY · OPTICAL MODULES

# Optical Modules: A Deep Comparison of US and China Capital Market Pricing Logic

Same track, two valuation frameworks — upstream-downstream interdependence and rivalry

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Lead Analyst: Chuck Guo (■■■) · May 2026 · CK-2026-OPT-002

Coverage: A-Share / Nasdaq / NYSE · Period: 2023–May 2026 · Currency: CNY (USD amounts shown as CNY (\$ USD) at 1 USD ≈ 7.25 CNY)

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**Key conclusion: US-listed optical module stocks offer more durable allocation value.**

## Same Track, Fundamentally Different Sources of Value

Since 2023, optical module stocks in both A-share and US markets have staged historically significant rallies, superficially driven by the same industrial thesis. In reality, the nature of the value support underlying the two moves is fundamentally different. We believe that clarifying this distinction is the core prerequisite for determining the correct allocation direction at the current juncture.

### 1.1 Core Financial Metrics

Note: All figures in CNY. US-listed figures shown as 'CNY amount (\$ USD amount)' at 1 USD  $\approx$  7.25 CNY.

Company (Market)	Market Cap	2025 Net Profit	Growt h	Gross Margin	Global Position
Zhongji Innolight (A)	~CNY 1.1tn	CNY 10.8bn	+109%	42.0%	#1 Global · Module leader
Eoptolink (A)	~CNY 600bn	CNY 9.5bn	+236%	47.0%	#3 Global · LPO pioneer
Tianfu Comm. (A)	~CNY 250bn	CNY 2.0bn	+50%	~55%	Optical components · CPO positioning
Coherent (US)	~CNY 540bn (\$74bn)	~CNY 3.2bn (\$440m)	Turn to profit	38.1%	Diversified photonics · AI pivot
Lumentum (US)	~CNY 490bn (\$68bn)	~CNY 1.8bn (\$250m)	Turn to profit	~38%	Laser components · scarce supply
Applied Opto (US)	~CNY 19bn (\$2.6bn)	Loss	N/A	~30%	Small-cap · high beta

Noteworthy: the three A-share leaders posted combined 2025 net profit exceeding CNY 22bn — earnings power fully realised. The three US counterparts combined for less than CNY 5bn, most still near breakeven. Both groups trade at comparable market capitalisation. This fundamental earnings gap is the starting point of the valuation divergence.

### 1.2 Gross Margins and Rally Magnitude

A-share companies report gross margins of 42–55%, materially higher than US peers at 30–38%. The rally magnitude reflects the same divergence: Eoptolink +~4,000% (A, from early-2024 low), Zhongji +~1,300% (A), versus Lumentum +~1,516% (US), AAOI +~1,136% (US), Coherent +~460% (US).

***"A-share declines are declines in numbers. US declines are declines in narratives. The speed, depth, and predictability of each type of collapse differ structurally."***

## SECTION 02

# Pricing Logic: Two Fundamentally Different Pathways

The same industrial fact — explosive AI datacentre demand for optical modules — has been interpreted as two entirely different investment theses in the two capital markets.

## 2.1 Two Pricing Pathways

Dimension	A-Share: Earnings-Driven	US: Narrative-Driven
Core driver	Net profit beats (EPS growth) → PE x EPS double-click	Narrative upgrade + strategic endorsement → EV/Sales re-rating
Valuation anchor	Forward PE; >30–40x viewed as 'discounting future profits'	EV/Sales + long-cycle DCF; no hard PE ceiling
Collapse trigger	Sequential earnings miss — even if YoY growth remains high	Narrative falsification; no earnings floor, bottom hard to predict
Key catalyst	Earnings pre-announcements, quarterly beats, institutional surveys	Capacity guidance, strategic investments, industry summits
Policy layer	Implicit valuation floor from national industrial policy (A-share only)	Pure market mechanism; no policy backstop
Sector framing	Comms-sector historical PE 15–20x; premium requires sustained hypergrowth	Reframed as AI infrastructure; valuation framework shifted toward tech co.

## 2023 to Present: Four-Phase Historical Timeline

### Phase 1 | Jan 2023 – Jun 2023 · ChatGPT ignites; both markets rally together

Zhongji +~120%, Eoptolink +~80%; Coherent +~60%, Lumentum +~50%. Both markets moved in tandem, but the underlying drivers had already diverged. A-share: 800G orders began to ramp genuinely, net profit expectations formed ahead of the US. US: still expectation-driven, profit timeline uncertain, valuation relying on compute narrative.

### Phase 2 | Jul 2023 – Mar 2024 · Consolidation; A-share earnings floor shows resilience

Market concerns around demand timing and Fed rate trajectory triggered pullbacks. A-share: continued earnings beats provided a net-profit floor; drawdown ~-30%, shorter duration. US: narrative briefly questioned, drawdown -20% to -40%, but framework not falsified, recovery actually faster.

### Phase 3 | Apr 2024 – Mar 2025 · 800G scale ramp; Davis double-click fully plays out

North American hyperscaler capex +69% YoY; demand certainty sharply improved. Zhongji +~430%, Eoptolink +~410%; Lumentum +~200%, Coherent +~150%. A-share: 'earnings delivery + narrative upgrade' formed a dual engine. US: NVIDIA strategic investment and Google TPU endorsement as core catalysts, valuation framework upgrade began.

### Phase 4 | Apr 2025 – May 2026 · 1.6T enters volume cycle; US accelerates

Zhongji +~550% further, breaking CNY 1,000/share in April 2026, market cap approaching CNY 1.1tn. US: AAOI +488% YTD, LITE +166%, COHR +97%. NVIDIA invested ~CNY 14.5bn (\$2bn each) into LITE and COHR, triggering a systemic valuation re-rating.

### 3.1 Four Replicable Patterns

Pattern	A-Share	US
Response timing	Reacts first to earnings signals (pre-announcements, results)	Reacts later to narrative upgrades (industry events, strategic investments)
Drawdown trigger	Deep drawdowns require earnings trigger; predictable — 'miss' is strongest negative signal	Can fall >10% in one session without negative fundamentals — pure sentiment
Recovery path	Must wait for next quarter's earnings beat to recover	Narrative re-endorsement sufficient; pace faster
Co-movement rule	Both up: almost always = NA hyperscaler capex beat; Both diverge: US up/China down = narrative without earnings; China up/US down = earnings beat without new narrative	→ same

## Value Chain: China-US Interdependence and Rivalry

Zhongji Innolight holds the #1 global market share in optical modules, dominating the mid-stream. Yet its high-end products depend heavily on upstream chips controlled almost entirely by US-listed companies. This structural contradiction is both a supply-chain chokehold risk and an important lens through which to understand the valuation divergence between the two markets.

### 4.1 Value Chain Structure

Tier	Key Companies	Core Value / Risk
Upstream: Chip suppliers (US)	Lumentum (LITE), Coherent (COHR), Marvell (MRVL), Broadcom (AVGO)	EML laser chips + CW lasers + high-speed detectors + DSP chips (near-monopoly on electronic side) ▲ Chokehold: Zhongji's high-end solutions rely 60%+ on this tier
Midstream: Module assembly (A)	Zhongji Innolight (300308), Eoptolink (300502), Tianfu (300394)	#1 global share (Zhongji); combined 2025 net profit >CNY 22bn ■ In-house silicon photonics (Paisilicon): 1H2025 revenue CNY 142m, +2,103% YoY
Downstream: Cloud customers (US)	Google (Alphabet), Meta, Microsoft, Amazon	2026 four-CSP combined capex est. >CNY 800bn Google procurement: Zhongji ~70% share ▲ Customer concentration: order swings directly impact A-share earnings

Lumentum and Coherent are simultaneously Zhongji's core upstream suppliers and its direct competitors in the optical module end market. NVIDIA's ~CNY 14.5bn investment into each company has further intensified this internal contradiction — and the two capital markets interpret this same event in opposite directions.

### 4.2 Same Event, Opposite Market Interpretations

Event	A-Share Interpretation	US Interpretation
NVIDIA invests ~\$2bn each in LITE/COHR	Indirect positive: NA supply chain integration reinforced, Zhongji shipment expectations revised up	Direct positive: industrial binding signal established; companies reframed from manufacturers to AI infrastructure providers
EML chip supply remains tight	Supply chain constraint risk; short-term earnings pressure	Scarcity premium reinforced; seller's market extends; directly positive for LITE/COHR chip pricing power
Zhongji silicon photonics self-development advances	Positive: reduces US dependency, gross margin improvement expected	Threat: downstream clients' demand for US chips may decline medium-term
Tariffs / geopolitical risk rises	Systemic pullback; but government market-stabilisation signals provide implicit valuation floor	No policy backstop; companies must rely on own fundamentals and supply chain resilience

***"EML and DSP chip supply constraints are intensifying. Lumentum and Coherent's pricing power and gross margin upside are expanding as a result. The same objective fact is priced as scarcity premium in the US and as supply-chain risk in China."***

## Why US-Listed Optical Modules Offer More Durable Allocation Value

The A-share rally has genuine earnings support — that is beyond dispute. However, from a long-term allocation perspective, US-listed optical module stocks offer structural advantages that A-shares cannot replicate. This is particularly relevant for international investors not constrained by China's policy cycles.

### 5.1 The Historical Pattern of A-Share Theme Cycles

Theme Cycle	Core Driver	Reason for Fade	Valuation Outcome
Internet Finance (2014–15)	Policy-directed; 'Internet + Finance' narrative; PE >200x	Regulatory tightening 2016; theme exited market narrative	Most names gave back >80% of gains
NEV supply chain (2020–22)	Policy subsidy + globalisation + supply shortage; CATL PE peaked ~150x	Subsidy phase-out + growth slowdown + competitive intensity	PE compressed from 150x to <20x
Semiconductor localisation (2019–21)	Policy premium + national strategy; SMIC, NAURA at elevated valuations	Earnings delivery below narrative expectations + liquidity tightening	Fundamentals still solid, but elevated valuations unsustainable

We believe optical modules in A-shares face the same path risk. When the AI compute narrative enters a plateau, growth slows, or the policy focus shifts, the 'policy premium layer' and 'narrative layer' currently embedded in valuations face a risk of simultaneous compression — typically without advance warning.

### 5.2 Three-Layer Foundation: US Two Layers Are More Solid

Layer	Core Content	A-Share	US
Layer 1	AI narrative + global hyperscaler capex expansion	Present	Present
Layer 2	Earnings delivery (A) / Industrial re-rating (US)	Present (growth ceiling approaching)	Present (profit cycle just starting)
Layer 3	National will: policy premium + import-substitution narrative + implicit floor	Present (double-edged)	Absent

### 5.3 Three Reasons to Allocate to US Optical Modules

#### Core allocation rationale

- Narrative durability: AI infrastructure demand is global. LITE and COHR serve the world's leading hyperscalers with no dependence on any single country's policy cycle.
- Profit cycle yet to start: US names are near breakeven or loss, with combined profit ~CNY 5bn. A-share Davis double-click is largely complete; the US equivalent has barely begun — this timing gap is the most visible asymmetric opportunity.

- Upstream positioning is more durable: Zhongji depends on Lumentum and Coherent's chips, not vice versa. Even if Zhongji's silicon photonics breakthrough reduces its own dependency, the rest of the global optical module industry will continue purchasing. Upstream pricing power outlasts downstream assembly economics.

***"A-share gains have already occurred, supported by earnings. But those valuations are doubly constrained — by the policy framework and the PE framework. A meaningful portion of US gains still lies ahead: the narrative is established, the profit cycle has not yet launched, and industrial positioning has been locked in through strategic investment."***

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Lead Analyst: Chuck Guo (■■■) · Charles & Kwok Multi-Asset Research · May 2026