

中际旭创 Zhongji Innolight (300308 CH)

首次覆盖：高速率光模块头部厂商，受益于 AI 硬件产业趋势

800G/1.6T Optical Module Leading Player, Benefiting from AI Trend: Initiation

观点聚焦 Investment Focus

首次覆盖优于大市 *Initiate with OUTPERFORM*

评级	优于大市 OUTPERFORM
现价	Rmb156.10
目标价	Rmb210.00
市值	Rmb125.32bn / US\$17.32bn
日交易额 (3 个月均值)	US\$594.36mn
发行股票数目	802.83mn
自由流通股 (%)	74%
1 年股价最高最低值	Rmb179.99-Rmb64.68

注：现价 Rmb156.10 为 2024 年 4 月 5 日收盘价



资料来源：Factset

	1mth	3mth	12mth
绝对值	-3.1%	48.7%	132.6%
绝对值 (美元)	-3.6%	46.8%	121.5%
相对 MSCI China	-6.7%	47.6%	149.9%

(Rmb mn)	Dec-22A	Dec-23E	Dec-24E	Dec-25E
营业收入	9,642	10,861	27,457	39,446
(+/-)	25%	13%	153%	44%
净利润	1,224	2,099	5,514	8,140
(+/-)	40%	72%	163%	48%
全面摊薄 EPS (Rmb)	1.52	2.61	6.87	10.14
毛利率	29.3%	32.6%	32.6%	33.2%
净资产收益率	10.3%	15.9%	32.1%	33.4%
市盈率	103	60	23	15

资料来源：公司信息, HTI

(Please see APPENDIX 1 for English summary)

AI 加速光模块升级迭代，高速率光模块 TAM 迅猛增长：光模块是真正受益全球 AI 建设浪潮的、处于 NVIDIA、Google 产业链上、随 AI 硬件建设有持续迭代成长逻辑的板块。我们预计 GB200 NVL 36 将在 2025 年成为主流产品，并乐观估计 2025 年将有 58,000 个机架的出货量，带动至 2025 年 B/X 系列出货 450 万颗，将加速带动 1.6T 光模块的部署。我们预期 2025 年全球 1.6T 出货在 700 万只，光模块整体市场规模预计会在 1.6T 的带动下持续增长。

绑定头部客户，优先受益产业升级：Google/NVIDIA 高速率光模块需求引领市场，旭创高速率光模块进度第一，持续受益产品迭代升级。旭创是全市场最早发布 400G/800G 光模块的厂家，我们预期将于今年年底最早出货 1.6T。下游客户对于光升级需求的加速利好光模块头部厂商，我们预期旭创将在 1.6T 时代持续保持领先。

研发能力突出，布局新技术路径：旭创在新技术路径硅光、LPO 等布局领先。旭创具备硅光芯片的设计能力，硅光 BOM 成本上相比传统方案有优势，我们预期硅光方案会在 800G、1.6T 时代渗透率提升。旭创硅光产品进度领先，2024 年 OFC 演示了 800G/1.6T 硅光模块。我们预期随着硅光技术路线逐渐成熟，更低成本的硅光方案渗透的过程中旭创持续受益。2024 年 OFC 旭创发布 1.6T-LPO-DR8 OSFP，完善低功耗产品矩阵。

估值与建议：受益于 AI 数据中心建设需求，光模块 800G 和 1.6T 加速迭代，业绩兑现能力强劲。我们预计公司 2024/2025 年归母净利润为 55/81 亿元，EPS 为 6.9/10.1 元，+163%/47% YoY，基于 2024/2025 年 30/21 倍 PE，首次覆盖给予目标价 210 元，“优于大市”评级。

风险：1) 产品升级迭代不及预期；2) 竞争加剧；3) 需求不及预期。

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光模块 TAM、产业链及竞争格局

光模块是真正受益全球 AI 建设浪潮的、处于 NVIDIA、Google 产业链上、随 AI 硬件建设有持续迭代成长逻辑的板块。

我们预计 GB200 将加速 1.6T 光模块的部署。英伟达明年的芯片出货核心看 GB200。我们预计 GB200 小规模生产将于 4Q24 开始，并且目前的能见度到 1Q25。我们预计 GB200 NVL 36 将在 2025 年成为主流产品，并乐观估计 2025 年将有 58,000 个机架的出货量，预测基于：1) 这款产品在训练和推理方面都具有竞争力；2) 相较于 GH200，GB200 的初始订单主要来自 CSP 和大型企业，采用范围更广，不仅仅是 AWS/Oracle。

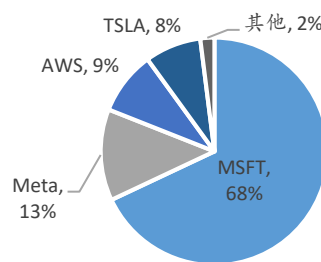
我们预测 2025 年 1.6T 光模块出货将超过 700 万只。目前，微软、Meta、AWS 和特斯拉占 GB200 订单的 95%以上，基于 CSP 和大型企业对构建更大集群的需求，我们认为向 1.6T 升级的动能强劲。我们预测至 2025 年（包含 2H24）B/X 系列出货量为 450 万颗，如果使用 IB 进行集群间的互联，按照 GPU/光模块比率 1:2.5，考虑最开始上 800G 及部分互联用不到 1.6T，我们预期 2025 年 1.6T 出货在 700 万只。光模块整体市场规模预计会在 1.6T 的带动下持续增长。

图1 全球光模块 TAM 预测

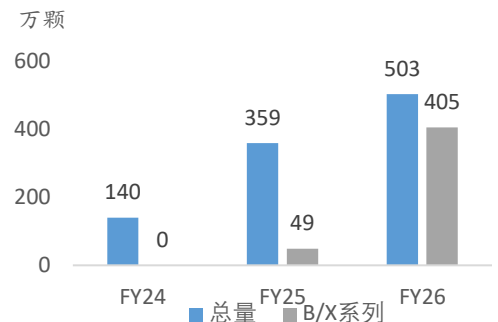
市场规模(USD)	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E
400G	50	127	554	1,291	1,470	1,082	3,045	2,643	2,642	2,364	2,023	1,951	1,949
800G	-	-	-	13	95	1,500	6,000	4,840	4,300	3,735	3,280	2,800	2,370
1600G	-	-	-	-	-	-	306	9,035	11,004	15,224	16,874	18,950	21,523
SUM	50	127	554	1,303	1,565	2,582	9,351	16,518	17,946	21,323	22,177	23,701	25,842
出货量(m units)	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E
400G	0.0	0.2	1.0	2.9	3.8	3.3	10.2	9.4	10.2	9.9	8.4	8.1	8.1
800G	-	-	-	0.0	0.1	2.0	10.0	8.8	8.6	8.3	8.2	8.0	7.9
1600G	-	-	-	-	-	-	0.20	7.0	9.2	13.8	16.1	19.0	22.4
SUM	0.0	0.2	1.0	2.9	3.9	5.3	20.4	25.2	27.9	32.0	32.7	35.1	38.4
YoY													
400G		275%	533%	207%	29%	-14%	212%	-7%	8%	-3%	-14%	-4%	0%
800G					900%	1900%	400%	-12%	-2%	-3%	-1%	-2%	-1%
1600G								3375%	32%	51%	16%	18%	18%
ASP(USD)	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E
400G	1,262	845	583	442	391	333	300	280	260	240	240	240	240
800G	-	-	-	1,265	946	750	600	550	500	450	400	350	300
1600G	-	-	-	-	-	-	1,531	1,300	1,200	1,100	1,050	1,000	960
YoY													
400G		-33%	-31%	-24%	-12%	-15%	-10%	-7%	-7%	-8%	0%	0%	0%
800G					-25%	-21%	-20%	-8%	-9%	-10%	-11%	-13%	-14%
1600G								-15%	-8%	-8%	-5%	-5%	-4%

资料来源: LightCounting, HTI 预测

图2 GB200 最初订单客户结构



英伟达 GPU 颗数预测 (FY 财年)



资料来源: HTI 预测

高速率光模块需求格局，市场集中度高

800G、1.6T 目前的需求以谷歌和 NVIDIA 为主。

图3 全球光模块需求格局

出货量(m)	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E
800G	-	-	-	0.0	0.1	2.0	10.0	8.8	8.6	8.3	8.2	8.0	7.9
Google	-	-	-	0.0	0.1	1.0	3.5	2.5	1.5	1.3	1.0	1.0	1.0
AWS	-	-	-	-	-	-	-	1.0	1.5	1.5	1.7	1.6	1.5
Meta	-	-	-	-	-	0.2	-	0.8	1.5	1.6	1.7	1.5	1.5
NV	-	-	-	-	-	0.8	6.0	2.8	1.8	1.3	1.2	1.0	1.0
MSFT	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5
Others	-	-	-	-	-	-	0.5	1.2	1.8	2.1	2.1	2.4	2.4
1600G	-	-	-	-	-	-	0.2	7.0	9.2	13.8	16.1	19.0	22.4
Google	-	-	-	-	-	-	0.1	2.5	4.0	4.5	4.8	5.0	5.5
AWS	-	-	-	-	-	-	-	0.5	0.2	1.5	2.0	3.0	4.0
Meta	-	-	-	-	-	-	-	0.3	0.2	1.5	2.0	3.0	4.0
NV	-	-	-	-	-	-	0.1	3.5	4.5	5.0	4.5	4.5	4.5
MSFT	-	-	-	-	-	-	-	0.3	0.2	1.0	2.0	2.5	3.0
Others	-	-	-	-	-	-	-	-	0.2	0.3	0.8	1.0	1.4

资料来源: LightCounting, HTI 预测

2022 年, 旭创与 Coherent 并列全球光模块市场榜首。其中, CR4 超过 50%, 旭创和 Coherent 分别获得近 14 亿美元 (约百亿元人民币) 的收入。

图4 全球光模块 Top 10 榜单

2010		2016		2018		2022	
Finisar	Opnext	Finisar	Hisense	1 Finisar	2 Innolight	Innolight & Coherent (tie)	
Sumitomo	Avago	Accelink	Acacia	3 Hisense	3 Hisense		
Avago	Source Photonics	FOIT (Avago)	FOIT (Avago)	4 Accelink	4 FOIT (Avago)	Cisco (Acacia)	
Fujitsu	JDSU	Oclaro	Innolight	5 Source Photonics	5 Source Photonics	Huawei (HiSilicon)	
JDSU	Emcore	Innolight	Sumitomo	6 Lumentum/Oclaro	6 Lumentum/Oclaro	Accelink	
Emcore	WTD	Sumitomo	Lumentum	7 Acacia	7 Acacia	Hisense	
WTD	NeoPhotonics	Lumentum	Source Photonics	8 Intel	8 Intel	Eoptolink	
NeoPhotonics		Source Photonics		9 AOI	9 AOI	HGG	
				10 Sumitomo	10 Sumitomo	Intel	
						Source Photonics	

资料来源: LightCounting

AI 加速光模块的升级迭代, 旭创进度行业领先

AI 推动了光模块更快的迭代升级。相比于通用计算, 人工智能计算对带宽的需求更大。往年的 AI 芯片/GPU 的升级通常需要两年时间, 目前英伟达为拉开和 AISC 的差距, 迭代升级缩短为一年。随着 GPU 的升级速度加快, 光收发器的带宽也随之加快进度。2023 年 800G 光模块供不应求, 2024 年 800G 增长势头强劲。随着 2024 年底 B100/200, 及明年的 X100 的推出, 带宽需求将进一步增加。此外, 1.6T 相比于 800G 而言, 成本和功耗在单位容量上下降, 我们预期客户倾向于升级。

旭创 1.6T 进展最快。旭创是全市场最早发布 400G/800G 光模块的厂家, 比同行早 1-2 年。新一代的光模块与上一代相比具备更低的功耗和成本。2024 年 OFC 展会上, Marvell 展出业界首款每通道 200G 的 DSP, 已经向客户送样; 博通和 Coherent 发布了每通道 200G 的 VCSEL, 博通、Lumentum 发布了 200G 每通道的 EML。旭创 2023 年发

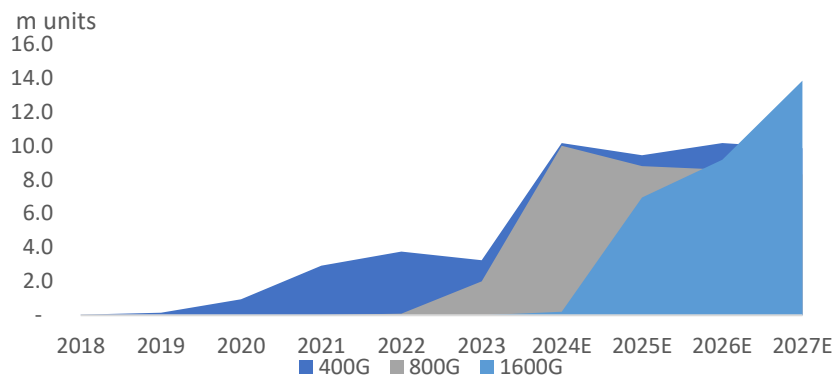
布 1.6T 光模块，目前产业端进展最快，预期于年底小批量出货，旭创也于 2024 年 OFC 上发布了 1.6T 的 LPO 方案，完善了低功耗产品矩阵，预期整个行业 1.6T 于 1H25 上量。

图5 AI 加速光模块的升级迭代

	25/100G	200G/400G	800G	1.6T
光模块	2016	2019	2022	2024
GPU			A/H/B 100	B100(3Q24) B200(4Q24)
DSP		100G	100/200G	200G(1Q24)
EML				200G(1Q24)
VCSEL				200G(1Q24)
交换机端口			400G	800G(2H24)
交换芯片容量		6.4T/12.8T/25.6T	25.6T/51.2T	51.2T(1Q24)

资料来源：旭创/博通/Coherent/Lumentum, HTI

图6 800G、1.6T 加速



资料来源：LightCounting, HTI 预测

产业链完善分工明确，模块设计生产环节绑定下游客户

光模块上游包括光、电芯片以及相关的光组件（陶瓷管套、光收发接口和光纤适配器等）。这些元件通过组装形成有源和无源光器件。中游是指将光电芯片和各种光组件组合封装成光模块的阶段。下游则包括光通信设备商、电信运营商以及数据中心和云服务提供商等。

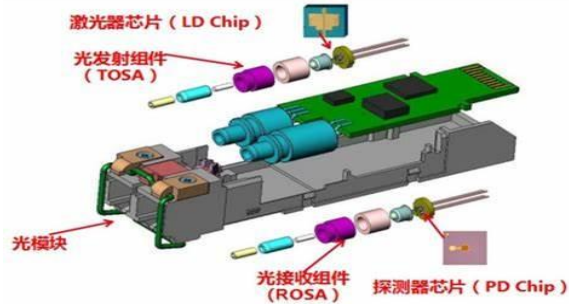
图7 光模块产业链



资料来源：HTI

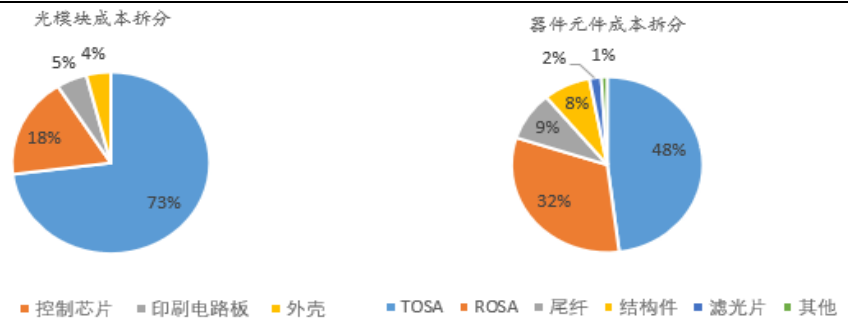
光模块目前主要采用可插拔技术路径，TOSA 和 ROSA 是光模块中最核心的器件。分别用于发射和接收信号。TOSA 包含 VCSEL、DFB、EML 等激光器芯片，ROSA 则包含 APD、PIN 等探测器芯片。光模块还包含发射器、接收器、集成电路、射频电路、数字控制和机械部件等元素。除此之外，DSP 是高速光模块中最重要的电芯片，用于处理和调节衰减光信号，以降低由于光纤偏振模色散等因素引起的失真，从而降低系统的误码率。

图8 光模块结构图



资料来源: HTI

图9 光模块成本图



资料来源: HTI

光模块新技术路径的迭代，LPO/CPO/硅光

硅光方案渗透提升，旭创硅光模块进度领先

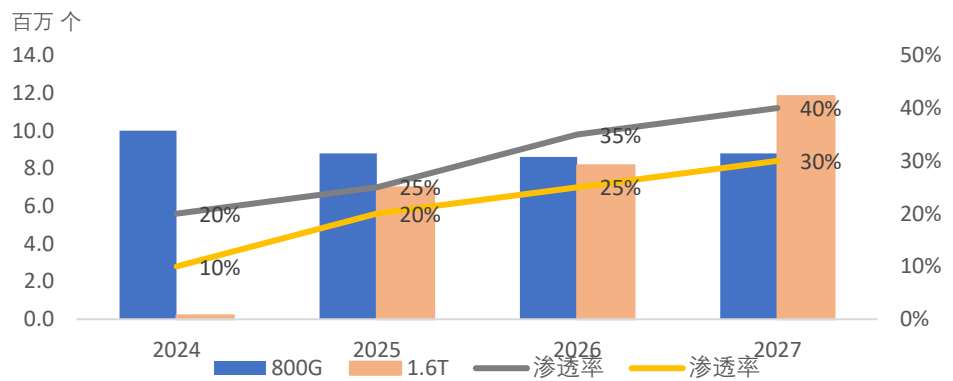
我们预期硅光在 800G/1.6T 渗透率会提升。我们预期硅光方案在 2024 年 800G 出货的渗透率为 20%，但暂时不会成为主流的解决方案，一方面受限于硅光的良率，另一方面，博通和 Coherent 已发布单通道 200G 的 VCSEL，一直到 1.6T 都有成本较低的多模方案可选。随着光模块速率往后升级，硅光方案的优势会更凸显。旭创具备硅光芯片的设计能力，行业内最先推出 800G 硅光模块。我们预期光模块向更高速率升级的过程中，旭创会持续受益。

图10 硅光/EML/VCSEL 成本对比

	硅光	EML	VCSEL
每通道预期最大可实现速率	200G	200G	200G
800G 模组	√	√	√
1.6T 模组	√	√	√
800G 模组单价	580	700	500
芯片成本	50	120	60
BOM	337	428	315
GM	42%	39%	37%

资料来源: HTI 预测

图11 800G/1.6T 硅光方案渗透率



资料来源: HTI 预测

LPO/CPO 渗透，旭创布局 1.6T LPO

DSP 近几年依然是数据中心光模块的主流解决方案。 LightCounting 认为，传统的可插拔模块将在未来 5 年甚至更长时间内继续主导市场。2026-2028 年，LPO/CPO 端口将占到 800G 和 1.6T 总部署端口的 30%以上。在今年的 OFC 展会上，行业头部光模块厂商展示了最新的 LPO 产品，旭创的 1.6T-LPO-DR8 OSFP，新易盛的 4x200G LPO，同时，新易盛的 8x100G LPO 进入量产阶段。

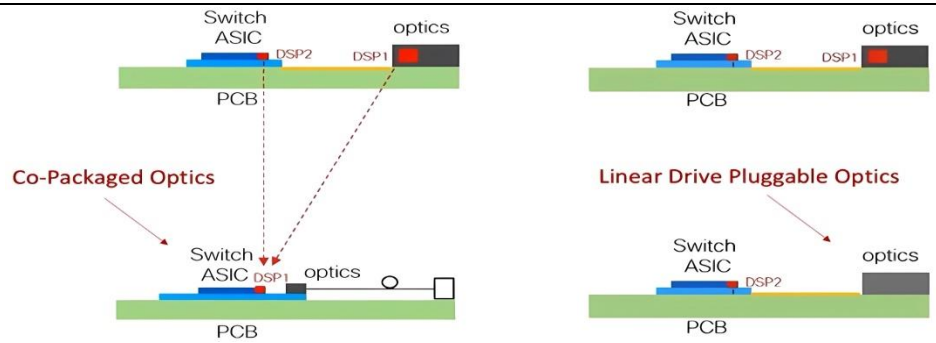
目前市场对于 3.2T 及以后的方案还处在探索阶段，需同时考虑技术和下游接受度。CPO 相比于可插拔技术路径而言具备更低的功耗和延迟，但是目前产业链不成熟，虽然省去了 DSP 的成本，但是将光模块及交换芯片封装在一起可能会带来维修成本的提升。相比而言，可插拔的技术路径目前有完善的产业链和较低的成本，我们预期 CPO 会在传统方案在功耗和延迟上出现瓶颈才会有大规模普及的动能。产业进展上，天孚通信于今年 OFC 会议上展出适配 800G/1.6T 和 CPO 光引擎系列组件产品。博通于今年 3 月宣布已经给客户发货全行业第一个 51.2T 的 CPO 产品。

图12 LPO/CPO 相关产品

	LPO/CPO 产品
旭创	1.6T-LPO-DR8 OSFP
新易盛	4x200G LPO, 8x100G LPO 进入量产阶段
天孚	800G/1.6T 和 CPO 光引擎系列组件产品

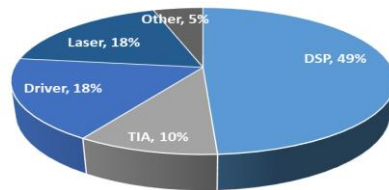
资料来源: OFC

图13 LPO/CPO 方案示意图



资料来源: HTI

图14 400G 光模块功耗图, DSP 占一半



资料来源: HTI

公司介绍

中际旭创(300308.SZ)是专业的高速光模块解决方案提供商,公司主要从事高端光通信收发模块以及光器件的研发、设计、封装、测试及销售,主要产品为中低速光通信模块、高速光通信模块、光组件。其全资子公司苏州旭创致力于高端光通信收发模块的研发、设计、封装、测试和销售;控股子公司成都储翰专注接入网光模块和光组件生产及销售。在 LightCounting 发布的 2022 年度光模块厂商排名中,中际旭创和 Coherent 并列全球第一。

图15 旭创历史沿革



资料来源: HTI, 公司官网

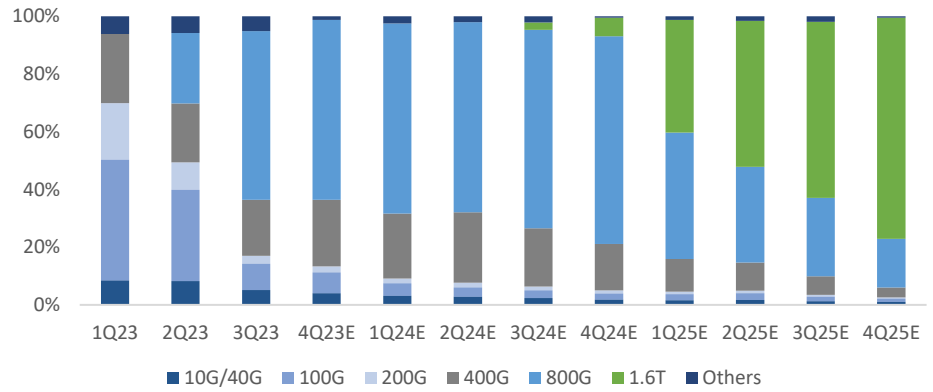
图16 公司十大股东明细

股东	持股比例
山东中际投资控股有限公司	11.29%
王伟修	6.20%
香港中央結算有限公司	5.27%
苏州益兴福企业管理中心(有限合伙)	3.98%
苏州云昌锦企业管理中心(有限合伙)	2.07%
中际旭创股份有限公司-第三期员工持股计划	1.40%
InnoLight Technology HK Limited	1.37%
易方达创业板交易型开放式指数证券投资基金	0.92%
苏州福睿晖企业管理中心(有限合伙)	0.68%
中证 500 交易型开放式指数证券投资基金	0.61%
合计	33.79%

资料来源: HTI, 公司官网

2023 年以来 ChatGPT 等生成式 AI LLM 的发布, AI 算力需求激增, 拉动光模块向 800G 及以上产品加速迭代升级。公司自 2023 年起, 800G 光模块取得了大量订单, 预计 1.6T 光模块产品将于 2024 年底有重点客户小批量出货, 在 1H25 年上量, 预期提升公司总体盈利能力。

图17 公司光模块营收拆分

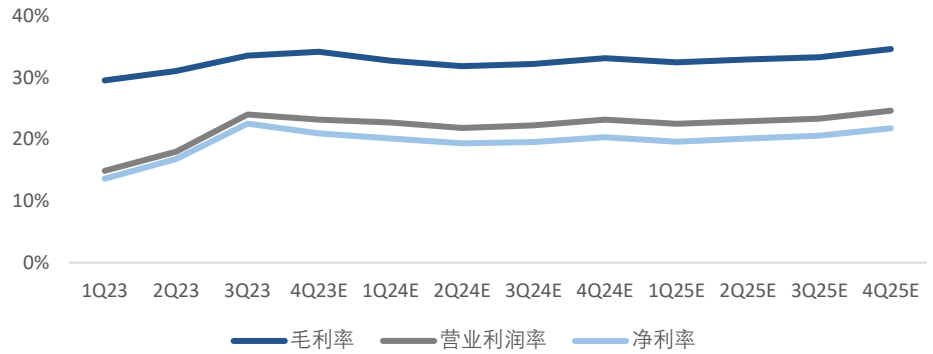


资料来源: HTI 预测

财务预测

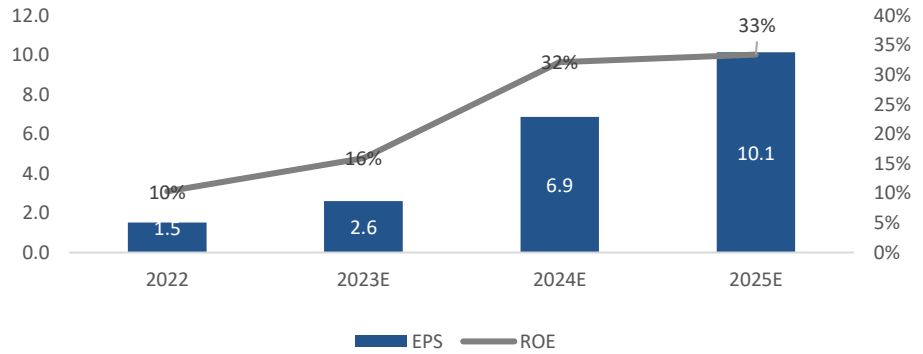
2023 年公司实现营业收入 107 亿元, 同比增长 11.23%; 实现营业利润 25 亿元, 同比增长 88.54%; 实现归母净利润 21.8 亿元, 同比增长 78.19%。受益于 800G 等高端产品出货比重的显著增加及产品设计的不断优化, 公司产品收入、毛利率、净利润率进一步提升。

图18 公司毛利率/营业利润率/净利率预测



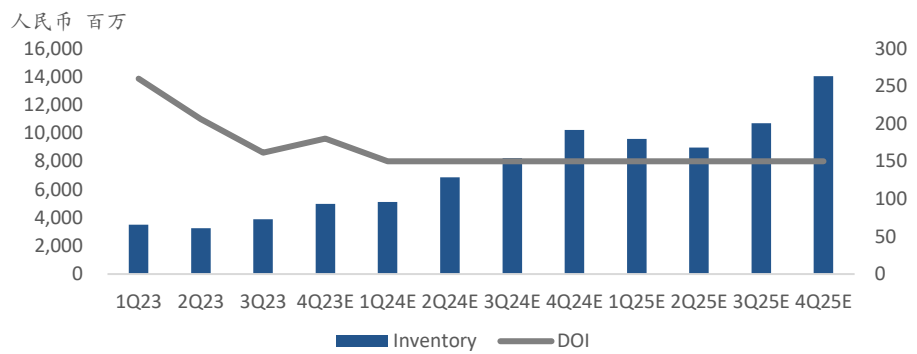
资料来源: HTI 预测

图19 公司 EPS/ROE 预测



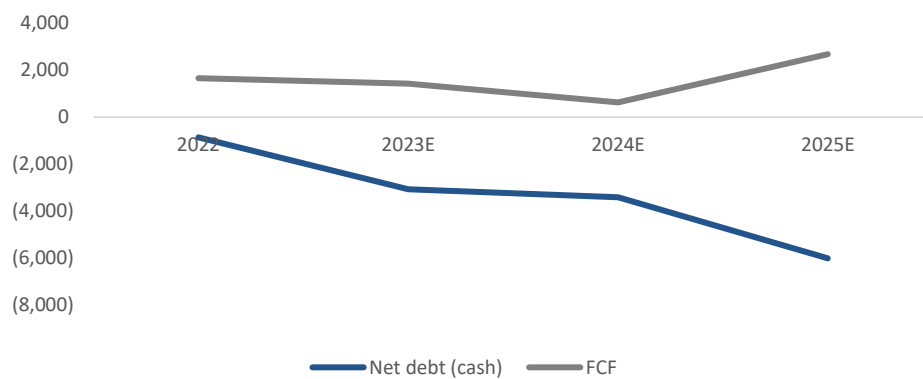
资料来源: HTI 预测

图20 公司存货和 DOI 预测



资料来源: HTI 预测

图21 公司现金流预测



资料来源: HTI 预测, 公司官网

图22 公司季度损益预测

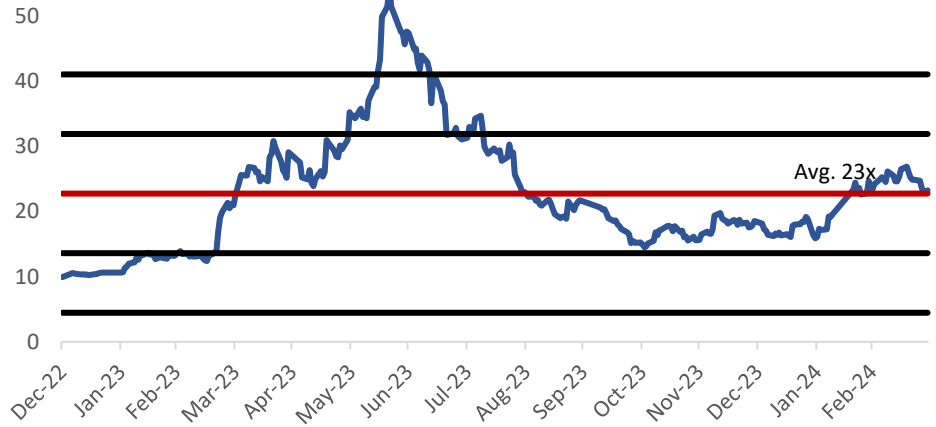
百万元	2023E	1Q24E	2Q24E	3Q24E	4Q24E	2024E	1Q25E	2Q25E	3Q25E	4Q25E	2025E
营业收入	10861	4634	6122	7395	9306	27457	8670	8185	9675	12916	39446
营业成本	-7319	-3118	-4172	-5011	-6219	-18519	-5833	-5464	-6516	-8540	-26353
毛利	3542	1517	1951	2384	3086	8938	2837	2721	3159	4376	13093
研发费用	-740	-278	-367	-444	-558	-1647	-520	-491	-581	-775	-2367
销售及管理费用	-523	-185	-245	-296	-372	-1098	-347	-327	-387	-517	-1578
营业费用	-1263	-463	-612	-739	-931	-2746	-867	-818	-968	-1292	-3945
营业利润	2279	1053	1338	1645	2156	6192	1970	1903	2191	3084	9148
其他营业收入	102	11	19	15	19	64	10	20	29	30	88
利润总额	2381	1064	1358	1659	2175	6256	1980	1922	2220	3114	9236
所得税	-265	-126	-161	-197	-258	-742	-235	-228	-263	-369	-1096
少数股东损益	-16	0	0	0	0	0	0	0	0	0	0
净利润	2099	938	1197	1463	1917	5514	1745	1694	1957	2744	8140
利润率											
毛利率	33%	33%	32%	32%	33%	33%	33%	33%	33%	34%	33%
营业利润率	21%	23%	22%	22%	23%	23%	23%	23%	23%	24%	23%
税率	11%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
净利润率	19%	20%	20%	20%	21%	20%	20%	21%	20%	21%	21%
增长率											
收入增长率	13%	152%	183%	144%	143%	153%	87%	34%	31%	39%	44%
毛利增长率	25%	179%	189%	135%	136%	152%	87%	39%	32%	42%	46%
营业利润增长率	56%	285%	243%	126%	143%	172%	87%	42%	33%	43%	48%
净利润增长率	72%	275%	229%	114%	139%	163%	86%	42%	34%	43%	48%

资料来源：HTI 预测，公司官网

估值和建议

受益于 AI 数据中心需求，光模块 800G 和 1.6T 上量，我们预计公司 2024/2025 年 EPS 为 6.9/10.1 元，+160%/47% YoY，基于 2024/2025 年 30/21 倍估值，首次覆盖给予目标价 210 元，“优于大市”评级。

图23 2-year forward PE



资料来源: Wind, HTI

图24 可比公司估值表

Company	Bloomberg Security	Market Cap Billion USD	Revenue (Million USD)			Net Profit (Million USD)			23-25 CAGR	PE			2023		
			2023E	2024E	2025E	2023E	2024E	2025E		2023E	2024E	2025E	GM	OPM	NM
中际旭创	300308 CH Equity	17.7	1594.1	3813.1	5478.6	290.8	765.8	1130.6	97%	60.9	24.0	16.0	33%	21%	20%
新易盛	300502 CH Equity	6.8	426.3	741.5	1004.3	93.0	174.1	242.6	62%	72.8	38.9	27.9	31%	24%	22%
天孚	300394 CH Equity	8.4	263.1	470.4	643.8	97.6	169.1	229.3	53%	86.3	49.8	36.7	54%	42%	38%
			2024E	2025E	2026E	2024E	2025E	2026E	24-26 CAGR	2024E	2025E	2026E			
Coherent	COHR US Equity	9.2	4619.8	5400.2	6012.8	292.6	534.9	673.8	52%	31.5	17.2	13.7	38%	19%	11%
Lumentum	LITE US Equity	3.2	1379.6	1655.9	1924.0	72.9	166.1	282.4	97%	43.8	19.2	11.3	43%	19%	18%
Fabrinet	FN US Equity	6.9	2842.7	3145.3	3499.0	304.9	334.4	377.0	11%	22.5	20.5	18.2	13%	11%	11%

资料来源: BBG, HTI

风险: 1) 产品升级迭代不及预期; 2) 竞争加剧; 3) 需求不及预期。

财务指标	来源: HTI 预测				资产负债表 (百万元)				
	Dec-22A	Dec-23E	Dec-24E	Dec-25E	Dec-22A	Dec-23E	Dec-24E	Dec-25E	
成长性					货币资金	2,831	5,037	5,674	8,268
营业收入增长率	25%	13%	153%	44%	存货	3,888	4,972	10,224	14,039
营业利润增长率	59%	56%	172%	48%	应收账款	1,565	2,099	5,099	7,077
净利润增长率	40%	72%	163%	48%	其他流动资产	1,303	1,031	1,031	1,135
利润率					流动资产	9,587	13,139	22,028	30,519
毛利率	29%	33%	33%	33%	固定资产	3,217	3,698	4,688	7,143
EBITDA利润率	20%	25%	24%	24%	其他非流动资产	3,753	3,355	3,544	3,605
营业利润率	15%	21%	23%	23%	非流动资产	6,970	7,052	8,232	10,747
净利润率	13%	19%	20%	21%	资产总额	16,557	20,013	30,260	41,267
投资回报率					短期债务	1,273	1,266	1,246	1,155
ROE	10%	16%	32%	33%	应付账款	1,378	2,762	6,816	9,359
ROA	7%	11%	22%	23%	其他流动负债	613	647	646	705
					流动负债	3,264	4,675	8,708	11,219
					长期借款	696	989	1,009	915
利润表 (百万元)	Dec-22A	Dec-23E	Dec-24E	Dec-25E	其他非流动负债	528	81	499	488
营业收入	9642	10861	27457	39446	非流动负债	1,224	1,070	1,507	1,403
营业成本	6816	7319	18519	26353	负债总额	4,488	5,745	10,215	12,622
毛利	2826	3542	8938	13093	实收资本	8,733	8,966	9,330	9,708
营业费用	1365	1263	2746	3945	留存收益	3,893	5,723	10,563	18,592
营业利润	1462	2279	6192	9148	股东权益	12,069	14,268	20,045	28,645
其他营业收入	-188	15	-48	-66	负债及股东权益总额	16,557	20,013	30,260	41,267
其他	103	56	90	81					
利息收入	38	97	113	160	现金流量表 (百万元)	Dec-22A	Dec-23E	Dec-24E	Dec-25E
利息费用	-63	-67	-91	-88	净利润	1,234	2,099	5,514	8,140
利润总额	1352	2381	6256	9236	折旧及摊销	445	445	445	445
所得税及少数股东损益	128	281	742	1096	运营资本变化	410	-234	-4,198	-3,250
净利润	1224	2099	5514	8140	其他	370	7	302	245
					经营活动现金流	2,449	2,314	2,138	5,836
					投资活动现金流	-1,553	-326	-1,583	-2,873
					融资活动现金流	-1,641	162	58	-410
					现金及等价物增加额	-681	2,214	637	2,595
					自由现金流	1,657	1,427	627	2,680

APPENDIX 1**Summary**

AI accelerated optical module upgrades, driving rapid growth in high-speed optical module TAM: Optical modules, positioned along the NVIDIA and Google chains, are truly benefiting from the global AI boom. We expect that GB200 NVL 36 will become a mainstream product by 2025, with an optimistic estimate of 58k racks shipped in 2025, driving the shipment of B/X series to 4.5m units by 2025 and accelerating the deployment of 1.6T optical modules. We expect global shipments of 1.6T to reach 7m units in 2025.

Close relationship with top customers: Google/NVIDIA's demand for high-rate optical modules leads the market. Innolight leads high-rate optical modules being the earliest manufacturer to release 400G/800G optical modules in the market and continuously benefiting from product iteration. we expect Innolight to start 1.6T shipment in late 2024.

Outstanding R&D Capabilities preparing new technology: Innolight leads in new technology roadmap such as silicon photonics (SiPh) and LPO. SiPh has lower BOM costs, which we expect penetration rate will increase in 800G and 1.6T era. Innolight released 1.6T-LPO-DR8 OSFP at OFC, and will continue to benefit from SiPh penetration.

Valuation and recommendations: we expect 2024/2025 EPS to be RMB6.9/10.1, TP RMB210 based on 21x 2025 PE

Risks: 1) New product promotion falls short of expectations; 2) Competition intensifies; 3) Production capacity release falls short of expectations.

附录 APPENDIX

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分析师股票评级

优于大市, 未来 12-18 个月内预期相对基准指数涨幅在 10%以上, 基准定义如下

中性, 未来 12-18 个月内预期相对基准指数变化不大, 基准定义如下。根据 FINRA/NYSE 的评级分布规则, 我们会将中性评级划入持有这一类别。

弱于大市, 未来 12-18 个月内预期相对基准指数跌幅在 10%以上, 基准定义如下

各地股票基准指数: 日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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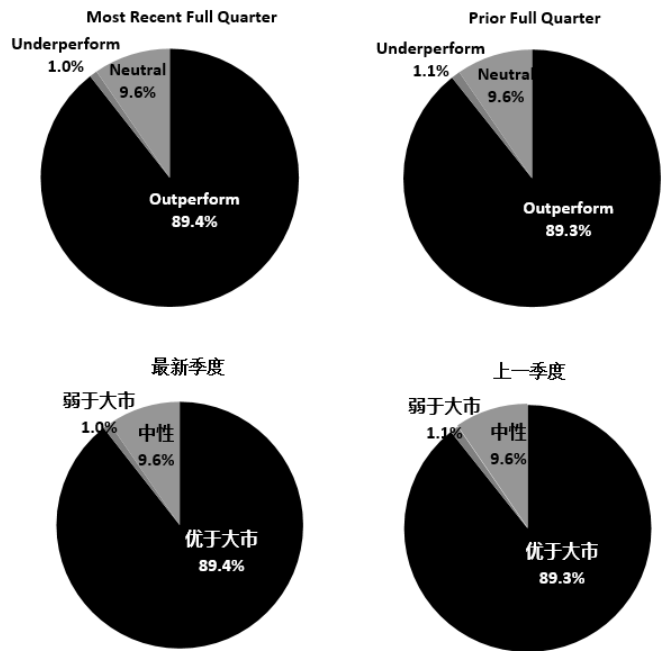
Outperform: The stock's total return over the next 12-18 months is expected to exceed the return of its relevant broad market benchmark, as indicated below.

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截至 2023 年 12 月 31 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	89.4%	9.6%	1.0%
投资银行客户*	3.9%	5.1%	5.6%

*在每个评级类别里投资银行客户所占的百分比。

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只有根据 FINRA/NYSE 的评级分布规则, 我们才将中性评级划入持有这一类别。请注意在上表中不包含非评级的股票。

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卖出, 未来 12-18 个月内预期相对基准指数跌幅在 10%以上, 基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

Haitong International Equity Research Ratings Distribution, as of December 31, 2023

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	89.4%	9.6%	1.0%
IB clients*	3.9%	5.1%	5.6%

*Percentage of investment banking clients in each rating category.

BUY, Neutral, and SELL in the above distribution correspond to our current ratings of Outperform, Neutral, and Underperform.

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