

# 沃格光电 WG Tech (JiangXi) Group (603773 CH)

## 首次覆盖：玻璃基重塑公司竞争实力，Mini 玻璃基率先进入量产

Glass Substrates Reshapes Industry Competitiveness, with GCB Mini LED Leading in Mass Production: 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	Rmb31.19
目标价	Rmb45.40
HTI ESG	4.6-4.7-4.5
E-S-G: 0-5, (Please refer to the Appendix for ESG comments)	

市值	Rmb6.97bn / US\$0.98bn
日交易额 (3 个月均值)	US\$25.55mn
发行股票数目	204.10mn
自由流通股 (%)	66%
1 年股价最高最低值	Rmb32.88-Rmb15.87

注：现价 Rmb31.19 为 2025 年 08 月 22 日收盘价



资料来源：Factset

	1mth	3mth	12mth
绝对值	0.3%	0.4%	0.9%
绝对值 (美元)	0.3%	0.4%	0.9%
相对 MSCI China	-2.6%	-8.7%	-41.1%

Rmb mn	Dec-24A	Dec-25E	Dec-26E	Dec-27E
Revenue	2,221	2,976	4,043	5,290
Revenue (+/-)	22%	34%	36%	31%
Net profit	-122	13	253	480
Net profit (+/-)	n.a	n.a	1885%	90%
Diluted EPS (Rmb)	-0.55	0.06	1.14	2.15
GPM	17.1%	20.2%	22.9%	25.5%
ROE	-9.8%	1.0%	20.9%	75.2%
P/E	n.a	545	27	14

资料来源：公司信息, HTI

(Please see APPENDIX 1 for English summary)

**深耕光电玻璃精加工，玻璃基线路板重塑公司核心竞争能力。**沃格光电成立于 2009 年，以 FPD 液晶显示面板精加工业务起家。2018 年公司上市后，基于拥有的核心材料开发工艺开启产品化转型战略，向新一代半导体显示、半导体封装、CPI/PI 膜材等产品领域扩展。2022 年公司聚焦半导体先进封装载板与第三代半导体显示 (Mini /Micro LED) 两大方向，分别成立了湖北通格微和江西德虹两家全资子公司。当前公司业务包括光电玻璃精加工业务、背光及显示模组、显示触控模组、高端光学膜材模切、玻璃基 TGV 多层线路板及玻璃光学器件共五大板块。公司围绕新一代显示与半导体两大业务模块，已形成覆盖光电玻璃精加工、玻璃基 Mini/Micro LED，以及玻璃基高算力芯片载板、射频器件玻璃基板、光通讯模块玻璃基板等多领域的产品体系，成为中国领先的玻璃基线路板及相关电子器件研发、制造企业，也是全球少数拥有玻璃基线路板全程工艺能力和制备装备的公司。

**玻璃基板前期投入带来当前盈利压力，Mini 放量盈利拐点有望逐步显现。**根据公司半年度业绩预告，1H25 预计实现营业收入 11.5~13.2 亿元，+10.36~26.68% YoY；预计亏损 4500~6500 万元，亏损主因：1）虽然光电玻璃精加工业务和高端光学膜材模切两块传统业务处于盈利状态，但由于公司在推动玻璃基线路板行业应用和未来发展需提前布局产能带来相应的折旧压力；2）由于新项目的投入以及和客户多个项目的同时合作开发，也同步导致公司研发投入、管理费用、市场推广等费用增加，对公司当期损益产生一定影响。

**从 Mini 到 Micro，玻璃基重塑高端显示市场。**2025 年，公司持续推进玻璃基线路板在 Mini/Micro LED 新型显示、5G-A、6G 通讯、光模块和半导体先进封装等领域应用的项目验证和转量产进程。  
**(1) Mini LED：2025 为玻璃基 Mini LED 技术商用落地元年，短期大尺寸 TV 市场将贡献主力需求。**玻璃基板技术顺应先进显示大尺寸、高分区的发展趋势，在 65 寸及以上尺寸成本及性能优势格外显著。我们分析，分区数越高、玻璃基性价比优势越大；至 4608 分区，玻璃基 Mini LED 可直接对标 OLED 显示效果，价格更优并兼具超薄特性。我们认为，玻璃基线路板在高端 Mini LED 背光应用拐点已至，随着良率成本与规模效应的持续改善，在高阶 TV、显示器有望先行，中长期在笔电、车载等领域渗透潜力较大。根据 Omdia 数据，2024 年全球 TV 出货量 2 亿台，若估算其中高端 TV 出货量约 3000 万台，玻璃基 Mini-LED 渗透达 10%，即可实现 300 万台出货量，对应数百万平方产品需求。

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截至目前，公司全资子公司江西德虹已具备一期年产 100 万平方米玻璃基 Mini LED 基板产能，并具备后段灯板和模组部分产能配套。从客户角度，公司与海信合作的大圣 G9 电竞显示器已实现量产，RS 项目也进入批量生产阶段，TV 端的产品应用解决方案亦有望推进下一步量产。此外，公司与未布局 OLED TV 且主打高端市场的头部日系品牌亦有望合作。我们判断，短期大尺寸 TV 市场将贡献玻璃基 Mini LED 主力需求。

**(2) Micro LED：韩系客户进展值得期待。**玻璃基板搭配被动驱动的方案透过行列扫描方式点亮 Micro LED 显示，具有矩阵结构简单、技术成熟、PWM 脉宽调制等特点。和有机基板材料相比，玻璃基平整性和易拼接性，在 P1.0 以下的微间距显示领域，作为 Micro LED 芯片封装基板，采用玻璃通孔技术可以大幅降低载板的成本、功耗，同时提升后段封装良率，实现整机产品规模降本。截至目前，公司全资子公司湖北通格微生产的玻璃基 TGV 多层线路板在 Mini/Micro LED 直显产品有所应用，部分产品已小批量供货。大客户合作角度，公司与头部韩系品牌积极研发 P0.625 的巨量通孔玻璃（TGV Glass），且钻研其结合主动驱动技术的可能性，共同带动 Micro LED（COG）大型显示市场发展。我们认为，未来 2-3 个月良率爬升情况和年内产品进展值得期待。

**玻璃基板成为先进封装优选载体，通格微产能持续投入。**随 AI 算力芯片持续向大尺寸、高集成度演进，封装基板亦向大尺寸、高叠层方向发展，封装芯片由芯片/载板的片状结构中不同组成部分间的 CTE 差异造成的翘曲问题日渐突出。相对于有机材料，玻璃 CTE 更接近于硅，能有效对抗封装过程中的翘曲，成为先进封装技术的优选载体。湖北通格微是公司玻璃基 TGV 多层线路板和玻璃光学器件等产品的实施主体，具备全球领先的 TGV 玻璃基板加工能力（玻璃基通孔、RDL 线路导通以及 SAP 双面多层线路堆叠技术），已具备可实现通孔孔径最小至 3 微米，深径比高达 150:1，支持高达四层的线路堆叠，可替代传统硅基 TSV 技术的玻璃基 TGV 技术，能广泛应用在高算力芯片、射频器件、直显基板、微流控芯片等领域。2024 年，湖北通格微已完成新建一期年产 10 万平米产能，并已进入小批量供货阶段，实现营收 203 万元。1H25，湖北通格微基于其生产的玻璃基 TGV 线路板产品与客户多个项目在持续开展送样验证，包括玻璃基线路板在 5G-A、6G 通讯射频器件、CPO 光电共封、大算力芯片的 Chiplet 先进封装等应用开发，实现营收约 800 万元。我们分析，以 2-3 年维度观察，玻璃基在半导体先进封装、6G 射频等领域有望进一步迎来产业化拐点，公司的玻璃基板方案乃至全玻璃结构有望迎来先机。

**首次覆盖我们给予公司“优于大市”评级，对应目标价 45.4CNY，有 45.6%的上行空间。**2025 年为玻璃基商业化元年，公司计划投入 10 亿人民币资金扩增玻璃基板、固晶（Die Bonding）、打件（SMT）产能，总投资年产能约为 400 万片玻璃基板。我们预计公司 2025-2027 年营收分别为 29.76、40.43、52.90 亿元，归母净利润分别为 0.13、2.53、4.8 亿元。参考可比公司，同时考虑玻璃基在 Mini LED、Micro LED、先进封装、6G 等领域的应用潜力，我们给予沃格光电 2026 年 40XPE，对应目标价 45.4 CNY，有 45.6% 的上行空间，首次覆盖给予“优于大市”评级。

**风险：**新技术发展不及预期的风险，客户进度延期的风险。

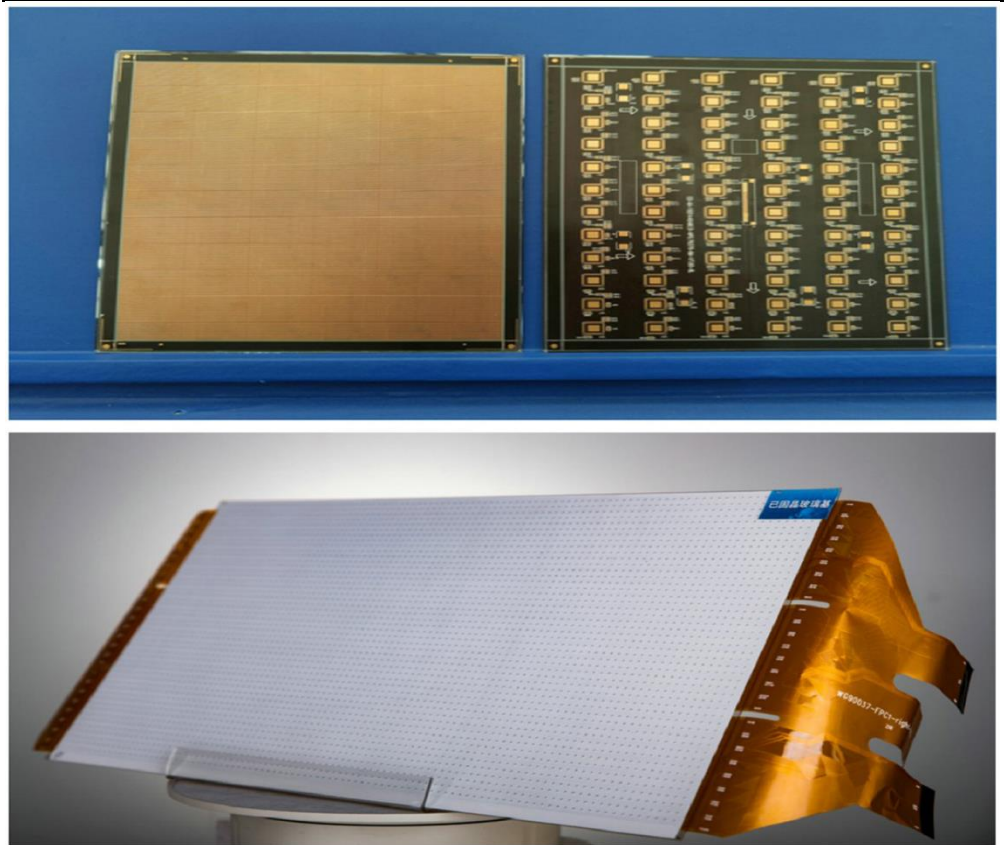
### 玻璃基板：载版未来发展趋势，高端显示/先进封装应用可期

玻璃基线路板目前主要应用领域包括 Mini 背光、Micro 直显和 IC 先进封装载板，玻璃作为上述领域新材料的技术迭代应用受到行业广泛关注。

**玻璃基重塑高端显示市场。**玻璃基线路板与其他基板材料相比，由于产品结构和工艺制程能以更低成本实现更细线路，同时由于其与芯片硅基几乎一致的热膨胀系数，能提升下游芯片封装良率，并且可以封装更小的发光芯片，从而在高分区、超薄显示产品领域能不断实现降本和节能降耗，显示效果达到与 OLED 媲美，并在亮度、寿命、护眼功能，以及成本方面与 OLED 显示形成一定竞争优势。玻璃基 Mini LED 背光技术在 1000 分区到 2000 分区甚至更高分区数的推出，有望使 LCD 显示进入 BT.2020 的 4K/8K 时代，形成千亿级市场应用空间。

对于 Mini 背光，玻璃基板技术顺应先进显示大尺寸、高分区的发展趋势，在 65 寸及以上尺寸成本及性能优势格外显著。我们分析，分区数越高、玻璃基性价比优势越大；至 4608 分区，玻璃基 Mini LED 可直接对标 OLED 显示效果，价格更优并兼具超薄特性。对于 Micro 直显，和有机基板材料相比，玻璃基平整性和易拼接性，在 P1.0 以下的微间距显示领域，作为 Micro LED 芯片封装载板，采用玻璃通孔技术可以大幅降低载板的成本、功耗，同时提升后段封装良率，实现整机产品规模降本。

图1 Mini/Micro LED 玻璃基板



资料来源：公司官网，HTI

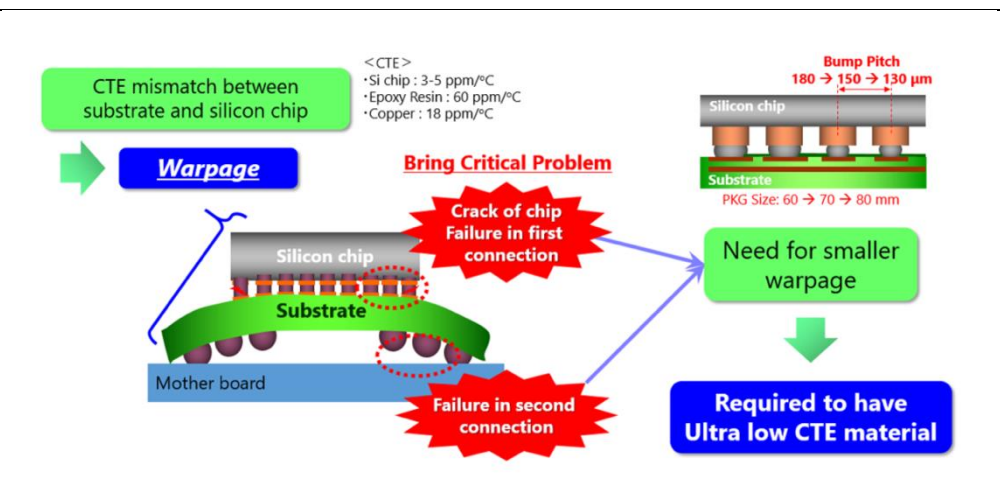


（1）Mini LED：公司全资子公司江西德虹已具备一期年产 100 万平米玻璃基 Mini LED 基板产能，并具备后段灯板和模组部分产能配套。从客户角度，公司与海信合作的大圣 G9 电竞显示器已实现量产，RS 项目也进入批量生产阶段，TV 端的产品应用解决方案亦有望推进下一步量产。此外，公司与未布局 OLED TV 且主打高端市场的头部日系品牌亦有望合作。我们判断，短期大尺寸 TV 市场将贡献玻璃基 Mini LED 主力需求。

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**玻璃基板是先进封装优选载体。**从产品结构来看，玻璃基基于 TGV 技术的玻璃基 IC 载板其主要是用玻璃基替代有机基板材料，利用玻璃通孔（TGV）中介的优良的高频电学特性、更简单的工艺、更低成本、更低功耗以及更高稳定性等优点，TGV 技术目前在 2.5D/3D 先进封装领域受到广泛关注。从行业角度，随 AI 算力芯片持续向大尺寸、高集成度演进，封装基板亦向大尺寸、高叠层方向发展，封装芯片由芯片/载板的片状结构中不同组成部分间的 CTE 差异造成的翘曲问题日渐突出。相对于有机材料，玻璃 CTE 更接近于硅，能有效对抗封装过程中的翘曲，成为先进封装技术的优选载体，玻璃基板在先进封装领域的应用是全球科技企业高度关注的发展趋势。

图2 硅芯片、载板不同组成部分间的 CTE 差异造成翘曲



资料来源：《FCBGA 基板关键技术综述及展望》（方志丹等），Resonac 官网，HTI

图3 不同材料关键参数对比

Material	E (GPa)	CTE (ppm/°C)	Poisson's ratio	Material model
Glass (High CTE)	74	9.8	0.23	Elastic
Glass (Low CTE)	77	3.8	0.22	Elastic
Silicon	130	2.7	0.28	Elastic
FR-4	24	16	0.3	Elastic
Solder	Temp. dep.	22	0.34	Visco-plastic
Copper	121	17.3	0.3	Elastic-plastic

资料来源：《Large low-CTE glass package-to-PCB interconnections with solder strain-relief using polymer collars》（Gary Menezes 等），HTI



湖北通格微是公司玻璃基 TGV 多层线路板和玻璃光学器件等产品的实施主体，具备全球领先的 TGV 玻璃基板加工能力（玻璃基通孔、RDL 线路导通以及 SAP 双面多层线路堆叠技术），已具备可实现通孔孔径最小至 3 微米，深径比高达 150:1，支持高达四层的线路堆叠，可替代传统硅基 TSV 技术的玻璃基 TGV 技术，能广泛应用在高算力芯片、射频器件、直显基板、微流控芯片等领域。2024 年，湖北通格微已完成新建一期年产 10 万平米产能，并已进入小批量供货阶段，实现营收 203 万元。1H25，湖北通格微基于其生产的玻璃基 TGV 线路板产品与客户多个项目在持续开展送样验证，包括玻璃基线路板在 5G-A、6G 通讯射频器件、CPO 光电共封、大算力芯片的 Chiplet 先进封装等应用开发，实现营收约 800 万元。我们分析，以 2-3 年维度观察，玻璃基在半导体先进封装、6G 射频等领域有望进一步迎来产业化拐点，公司的玻璃基板方案乃至全玻璃结构有望迎来先机。

公司情况：深耕光电玻璃精加工，集团化经营 2 大模块 5 大板块

沃格光电成立于 2009 年，以 FPD 液晶显示面板精加工业务起家。2018 年公司上市后，基于拥有的核心材料开发工艺开启产品化转型战略，向新一代半导体显示、半导体封装、CPI/PI 膜材等产品领域扩展。2022 年公司聚焦半导体先进封装载板与第三代半导体显示（Mini /Micro LED）两大方向，分别成立了湖北通格微和江西德虹两家全资子公司。当前公司业务包括光电玻璃精加工业务、背光及显示模组、显示触控模组、高端光学膜材模切、玻璃基 TGV 多层线路板及玻璃光学器件共五大板块。

公司围绕新一代显示与半导体两大业务模块，已形成覆盖光电玻璃精加工、玻璃基 Mini/Micro LED，以及玻璃基高算力芯片载板、射频器件玻璃基板、光通讯模块玻璃基板等多领域的产品体系，成为中国领先的玻璃基线路板及相关电子器件研发、制造企业，也是全球少数拥有玻璃基线路板全制程工艺能力和制备装备的公司。

图4 公司新型显示/半导体先进封装产业布局

 新型显示	 半导体先进封装
<p><b>产品应用：</b></p> <p>以玻璃基为核心材料，全力布局Mini LED背光和Micro LED直显</p> <p>在显示效果、轻薄化、成本、工艺制程能力、材料性能、节能环保等方面具有领先优势</p> <p>可广泛应用于笔电、工控、车载、消费电子等领域</p> <p><b>技术优势：</b></p> <p>驱动方式可选：AM与PM两种驱动方式可选，灵活适用</p> <p>精密线路技术：最小线宽8um，满足高分区密集布线，可实现多分区、超高对比度</p> <p>固晶技术：封装转移可应对多种LED晶片尺寸，可适用COG、COB、POB、POG等形式</p> <p>基板拼接技术：基板高平整度、线路高精度优势，可实现大尺寸单板背光封装，减少拼接</p> <p>封胶技术：可实现整面封胶、围坝+透明胶、单点封胶多种封胶形式</p> <p>轻薄化：板厚灵活，厚度可薄至0.15~0.2mm，实现轻薄化</p> <p><b>产业化进展：</b></p> <p>2022年3月设立江西德虹，注册资本6.3亿元</p> <p>规划产能年产600万平方米。已建成投产一期年产100万平方米产能，并完成批量出货</p>	<p><b>产品应用：</b></p> <p>以玻璃基板为核心材料，产品可以广泛应用于半导体2.5D/3D等Chiplet先进封装载板、高性能计算（AI、超级电脑、数据中心）、感知（MEMS、生物感应器件）、6G通讯及低轨卫星通讯用天线类射频器件、光通信CPO光电共封等领域</p> <p><b>技术优势：</b></p> <p>TGV巨量通孔：效率高达5000Via/s，最小孔径3um</p> <p>PVD镀膜：实现了稳定、高附着力镀膜，铜厚可达10um</p> <p>玻璃薄化：拥有国际上领先的玻璃薄化技术，为超薄玻璃基板提供支持</p> <p>精密线路制作：掌握了成熟稳定的玻璃基板图形化和绝缘技术</p> <p>全栈服务：设计、生产、测试、服务一站式解决方案</p> <p><b>产业化进展：</b></p> <p>2022年6月设立湖北通格微，注册资本3亿元</p> <p>规划产能年产100万平方米，已建成一期年产10万平方米产能，并完成小批量出货</p>

资料来源：公司官网，HTI

**公司股权结构稳定，创办人担任实控人。**截至 2025 年 4 月 21 日，公司实控人及创办人易伟华持股数占总股本比例达 28.73%，其余股东占股本比例均低于 5.5%。易伟华主要负责公司产品经营战略及投资运营的整体规划，在光电子精密元器件、光电显示等行业拥有近 20 年经验。

**目前，公司采用集团化经营的方式，强化集团与各分子公司的协同效应。**2021 年，公司开启集团化元年，收购控股北京宝昂、汇晨电子、兴为科技。2022 年，公司成立全资子公司湖北通格微和江西德宏。目前，公司旗下有 10 余家分子公司，分布东莞、新余、深圳、北京、成都、天门、廊坊、香港、日本等地。我们重点关注的子公司具体包括：

(1) 江西德虹：是公司布局第三代半导体显示（Mini/Micro LED）的子公司。已具备一期年产 100 万平方米玻璃基 Mini LED 基板产能，并完成后段灯板和模组部分产能配套。目标产能为 500 万平方米。

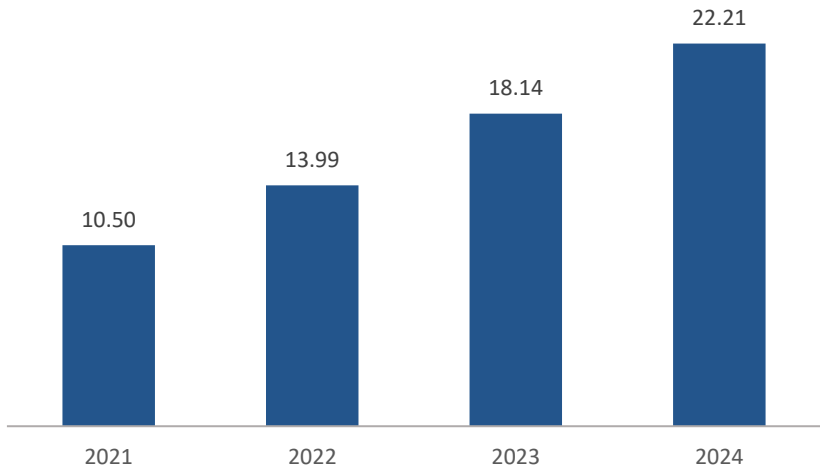
(2) 湖北通格微：是公司玻璃基 TGV 多层线路板和玻璃光学器件等产品的实施主体。2024 年，湖北通格微已完成新建一期年产 10 万平米产能，并已进入小批量供货阶段，实现营收 203 万元。1H25，湖北通格微基于其生产的玻璃基 TGV 线路板产品与客户多个项目在持续开展送样验证，包括玻璃基线路板在 5G-A、6G 通讯射频器件、CPO 光电共封、大算力芯片的 Chiplet 先进封装等应用开发，实现营收约 800 万元。

(3) 北京宝昂：为客户提供以光学膜材为核心的一体化解决方案。主营业务涵盖 LCD、OLED、M-LED 显示类型产品中所用多种光学膜产品的生产和销售。北京宝昂成立以来，先后布局了功能性模切 TAPE、OCA 光学胶、偏光片、背光膜材、OLED 制程专用保护膜五大主力业务，并成为了多家国际国内面板厂商的重要合作伙伴。2024 年底，北京宝昂联合韩国合作伙伴共同推出的 OLED 上下保护膜正式量产，并成功完成知名面板厂产品验收，用于生产国际手机龙头客户的高端 OLED 显示屏。

### 财务数据：玻璃基板前期投入带来当前盈利压力，Mini 放量盈利拐点有望逐步显现

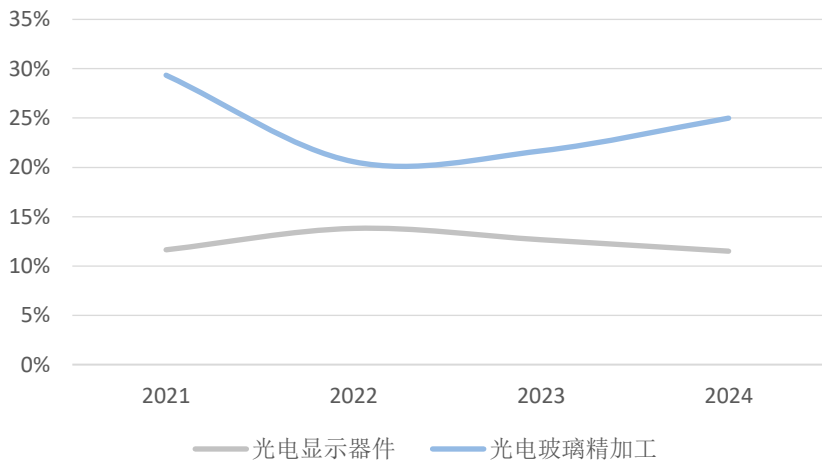
根据公司半年度业绩预告，1H25 预计实现营业收入 11.5~13.2 亿元，+10.36~26.68% YoY；预计亏损 4500~6500 万元，亏损主因：1) 虽然光电玻璃精加工业务和高端光学膜材模切两块传统业务处于盈利状态，但由于公司在推动玻璃基线路板行业应用和未来发展需提前布局产能带来相应的折旧压力；2) 由于新项目的投入以及和客户多个项目的同时合作开发，也同步导致公司研发投入、管理费用、市场推广等费用增加，对公司当期损益产生一定影响。

图5 公司收入情况 (亿元)



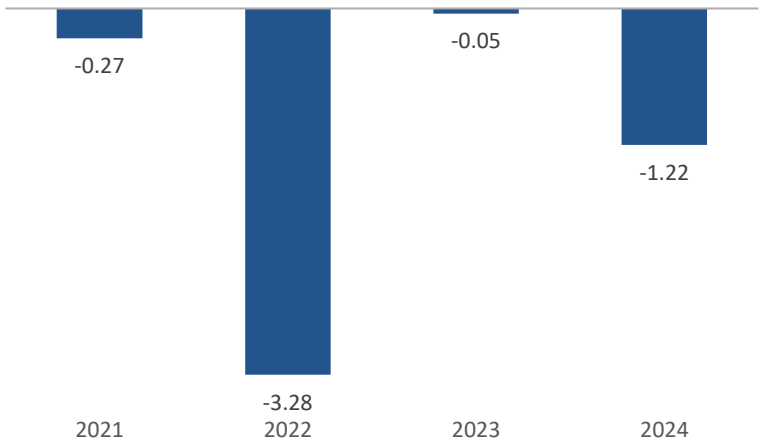
资料来源：公司公告，HTI

图6 公司主营业务毛利率情况 (%)



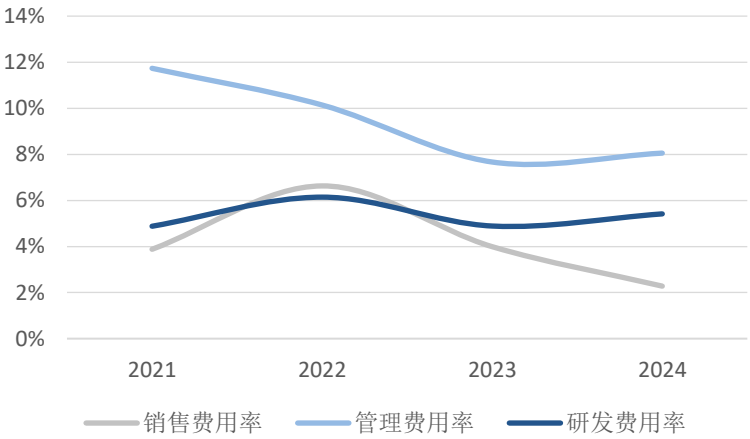
资料来源：公司公告，HTI

图7 公司历年归母净亏损（亿元）



资料来源：公司公告，HTI

图8 公司各项费用率统计



资料来源：公司公告，HTI



财务预测与估值

财务预测

**Mini/Micro LED:** Mini 玻璃基率先进入量产，新业务有望贡献第二增长曲线。我们认为，2025 为玻璃基 Mini LED 技术商用落地元年，且短期大尺寸 TV 市场将贡献玻璃基 Mini LED 主力需求。基于 2024 年全球 TV 出货量 2 亿台假设，若估算其中高端 TV 出货量约 3000 万台，玻璃基 Mini-LED 渗透达 10%，即可实现 300 万台出货量，对应数百万平方产品需求。公司全资子公司江西德虹已具备一期年产 100 万平方米玻璃基 Mini LED 基板产能，并具备后段灯板和模组部分产能配套，未来目标产能为 500 万平/年。此外，公司全资子公司湖北通格微生产的玻璃基 TGV 多层线路板在 Mini/Micro LED 直显产品有所应用，部分产品已小批量供货，且与韩系客户进展值得期待。随公司后续产能爬坡及良率提升、规模效应释放下的利润率优化，Mini/Micro LED 有望成为未来三年营收及净利润增长的重要驱动因素。

**光电玻璃精加工:** 公司深耕 FPD 光电玻璃精加工（玻璃薄化、镀膜、切割、黄光）业务 10 余年，与国内知名面板企业建立稳定合作。未来随公司玻璃基板在先进封装领域应用落地，后续有望进一步贡献玻璃光电精加工业务营收，并优化毛利率水平。我们假设公司光电玻璃精加工业务 25/26/27 年收入增速分别为 20%/30%/30%，毛利率微幅上涨，25/26/27 年毛利率分别为 22%/23%/24%。

**光电显示器件:** 2024 年，受北京宝昂增长驱动，公司营业收入同比增长 22.45%。2025 年起，随下游需求回暖，我们预计公司光电显示器件贡献稳健。我们假设公司光电显示器件业务 25/26/27 年收入增速分别为 10%/10%/10%，毛利率持稳。

基于以上，我们预测公司 2025-2027 年盈利如下表：

图9 公司收入拆分及盈利预测（亿元）							
	2021	2022	2023	2024	2025E	2026E	2027E
营业收入	10.50	13.99	18.14	22.21	29.76	40.43	52.90
营业成本	8.18	10.88	14.47	18.40	23.74	31.19	39.43
毛利润	2.32	3.11	3.67	3.81	6.02	9.24	13.47
营业费用	2.33	3.51	3.49	4.11	5.21	6.05	7.92
营业利润	-0.10	-2.69	0.36	-0.54	0.69	3.08	5.40
利润总额	-0.09	-2.84	0.37	-0.61	0.62	3.04	5.34
所得税	0.08	0.21	0.05	0.30	0.19	0.18	0.22
净利润	-0.17	-3.05	0.31	-0.91	0.43	2.86	5.12
少数股东损益	0.10	0.24	0.36	0.32	0.30	0.33	0.32
归母净利润	-0.27	-3.28	-0.05	-1.22	0.13	2.53	4.80

资料来源：Wind，HTI 预测

基于以上，我们预测公司 2025-2027 年归母净利润分别 0.13、2.53、4.8 亿元。

估值

首次覆盖我们给予公司“优于大市”评级，对应目标价45.4CNY，有45.6%的上行空间。2025年为玻璃基商业化元年，公司计划投入10亿人民币资金扩增玻璃基板、固晶(Die Bonding)、打件(SMT)产能，总投资年产能约为400万片玻璃基板。我们预计公司2025-2027年营收分别为29.76、40.43、52.90亿元，归母净利润分别为0.13、2.53、4.8亿元。参考可比公司，同时考虑玻璃基在Mini LED、Micro LED、先进封装、6G等领域的应用潜力，我们给予沃格光电2026年40XPE，对应目标价45.4 CNY，有45.6%的上行空间，首次覆盖给予“优于大市”评级。

图10 可比公司估值表

代码	名称	总市值 (亿元)	归母净利润(亿元)				PE(倍)			
			2024	2025E	2026E	2027E	2024	2025E	2026E	2027E
600552.SH	凯盛科技	126.67	1.40	2.5	3.2	3.8	90.4	51.6	40.1	33.3
600363.SH	联创光电	292.61	2.41	6.0	7.4	9.6	121.3	48.5	39.5	30.3
均值							105.8	50.0	39.8	31.8

注：收盘价为2025年08月22日价格，PE基于WIND一致预期。  
资料来源：WIND，HTI

风险：新技术发展不及预期的风险，客户进度延期的风险。

## 财务报告分析和预测

利润表	2023	2024	2025E	2026E	2027E	财务指标	2023	2024	2025E	2026E	2027E
营业收入	1,813.6	2,220.8	2,976.1	4,042.9	5,290.3	成长性					
减:营业成本	1,447.0	1,840.0	2,374.2	3,118.7	3,943.2	营业收入增长率	29.7%	22.5%	34.0%	35.8%	30.9%
营业税费	14.9	19.8	26.6	36.1	47.3	营业利润增长率	n.a	n.a	n.a	348.6%	75.1%
销售费用	72.4	50.6	67.9	92.2	120.6	净利润增长率	n.a	n.a	n.a	1885.1%	89.5%
管理费用	139.0	178.8	224.8	202.1	264.5	EBITDA增长率	-37.1%	-9.3%	82.7%	84.1%	45.0%
研发费用	88.7	120.3	146.3	198.8	260.1	EBIT增长率	-56.2%	-45.7%	294.2%	136.9%	58.0%
财务费用	33.8	41.6	55.8	75.8	99.2	NOPLAT增长率	-121.9%	-130.4%	-576.3%	316.2%	69.5%
资产减值损失	-24.6	-40.5	-32.5	-32.5	-35.2	投资资本增长率	12.8%	8.8%	23.0%	10.3%	6.7%
加:公允价值变动收益	7.0	-0.9	23.4	24.4	22.5	净资产增长率	2.3%	-6.9%	2.9%	-3.4%	-42.7%
投资和汇兑收益	5.4	-2.7	-2.7	-2.7	-2.7	利润率					
营业利润	36.1	-53.8	68.7	308.4	540.1	毛利率	20.2%	17.1%	20.2%	22.9%	25.5%
加:营业外净收支	0.5	-6.7	-6.8	-4.3	-5.9	营业利润率	2.0%	-2.4%	2.3%	7.6%	10.2%
利润总额	36.6	-60.6	62.0	304.1	534.1	净利率	-0.3%	-5.5%	0.4%	6.3%	9.1%
减:所得税	5.2	30.0	18.8	18.0	22.3	EBITDA/营业收入	11.3%	8.4%	11.4%	15.5%	17.2%
归母净利润	-4.5	-122.4	12.8	253.3	480.2	EBIT/营业收入	4.9%	2.2%	6.4%	11.1%	13.4%
资产负债表	2023	2024	2025E	2026E	2027E	运营效率					
货币资金	639.5	765.1	238.1	323.4	423.2	固定资产周转天数	198	197	161	123	97
交易性金融资产	67.3	31.2	31.2	31.2	31.2	流动营业资本周转天数	89	57	62	78	77
应收账款	959.6	1,045.2	1,641.4	2,195.9	2,661.5	流动资产周转天数	357	329	269	243	233
应收票据	54.8	70.5	97.5	135.9	165.0	应收账款周转天数	188	162	162	171	165
预付账款	14.9	20.4	25.2	121.7	56.2	存货周转天数	26	21	20	22	20
存货	139.6	122.9	215.8	267.9	311.0	总资产周转天数	698	669	545	444	386
其他流动资产	40.9	87.3	60.2	62.8	70.1	投资资本周转天数	375	339	293	251	208
可供出售金融资产	-	-	-	-	-	投资回报率					
持有至到期投资	-	-	-	-	-	ROE	-0.3%	-9.8%	1.0%	20.9%	75.2%
长期股权投资	99.7	58.6	58.6	58.6	58.6	ROA	0.8%	-2.0%	0.9%	5.3%	8.6%
投资性房地产	-	-	-	-	-	ROIC	3.4%	-0.9%	4.0%	13.5%	20.8%
固定资产	1,127.0	1,303.5	1,351.5	1,418.2	1,418.0	费用率					
在建工程	251.0	448.5	403.6	363.3	326.9	销售费用率	4.0%	2.3%	2.3%	2.3%	2.3%
无形资产	107.6	116.9	112.9	108.9	104.9	管理费用率	7.7%	8.1%	7.6%	5.0%	5.0%
其他非流动资产	313.8	364.3	334.9	318.4	316.5	研发费用率	4.9%	5.4%	4.9%	4.9%	4.9%
资产总额	3,815.7	4,434.4	4,570.9	5,406.2	5,943.0	财务费用率	1.9%	1.9%	1.9%	1.9%	1.9%
短期债务	762.9	826.7	921.1	1,321.5	2,536.3	四费/营业收入	18.4%	17.6%	16.6%	14.1%	14.1%
应付账款	617.6	873.0	1,050.3	1,454.9	1,730.5	偿债能力					
应付票据	101.4	60.0	148.3	213.3	169.7	资产负债率	59.7%	67.7%	67.8%	73.7%	86.3%
其他流动负债	191.6	246.4	207.5	215.2	223.1	负债权益比	148.0%	209.6%	210.3%	280.1%	629.6%
长期借款	424.8	753.6	597.7	580.7	264.4	流动比率	1.15	1.07	0.99	0.98	0.80
其他非流动负债	178.9	242.5	172.8	198.1	204.5	速动比率	1.06	1.01	0.90	0.90	0.73
负债总额	2,277.1	3,002.2	3,097.7	3,983.7	5,128.5	利息保障倍数	2.62	1.16	3.40	5.93	7.16
少数股东权益	162.8	177.6	208.0	208.0	176.4	分红指标					
股本	171.4	223.1	223.1	223.1	223.1	DPS(元)	0.05	0.05	0.01	1.36	4.73
留存收益	1,205.6	1,031.7	1,041.9	991.3	415.0	分红比率	-226.5%	-9.1%	20.0%	120.0%	220.0%
股东权益	1,538.6	1,432.1	1,473.1	1,422.4	814.5	股息收益率	0.1%	0.2%	0.0%	4.4%	15.2%
现金流量表	2023	2024	2025E	2026E	2027E	业绩和估值指标	2023	2024	2025E	2026E	2027E
净利润	31.3	-90.6	12.8	253.3	480.2	EPS(元)	-0.02	-0.55	0.06	1.14	2.15
加:折旧和摊销	130.8	148.7	150.9	177.6	199.3	BVPS(元)	6.16	5.61	5.67	5.44	2.86
资产减值准备	3.0	40.5	-	-	-	PE(X)	-1,535.2	-57.0	545.3	27.5	14.5
公允价值变动损失	-7.0	0.9	23.4	24.4	22.5	PB(X)	5.1	5.6	5.5	5.7	10.9
财务费用	29.8	47.4	55.8	75.8	99.2	P/FCF	30.1	53.0	-11.9	18.7	5.9
投资收益	-5.4	2.3	2.7	2.7	2.7	P/S	3.8	3.1	2.3	1.7	1.3
少数股东损益	35.9	31.8	30.5	32.7	31.7	EV/EBITDA	31.3	35.2	24.6	13.9	10.4
营运资金的变动	71.4	-56.1	-471.5	-236.8	-235.5	EV/EBIT	72.6	136.5	44.1	19.4	13.3
其他	-119.7	2.1	-	-	-	CAGR(%)	109.0%	-278.1%	-152.2%	109.0%	-278.1%
经营活动产生现金流量	170.1	127.0	-195.5	329.7	600.0	PEG	-14.1	0.2	-3.6	0.3	-0.1
投资活动产生现金流量	-381.9	-527.4	-175.6	-227.3	-183.9	ROIC/WACC	0.4	-0.1	0.4	1.5	2.3
融资活动产生现金流量	440.8	401.5	-155.9	-17.0	-316.3	REP	8.6	-29.8	7.0	2.0	1.3

资料来源: WIND, HTI

## APPENDIX 1

## Summary

**Founded in 2009, WG Tech is a leader in glass-based technology.** The company started with precision processing for FPD LCD panels. After its listing in 2018, WG Tech launched a productization transformation strategy, leveraging its core material-processing know-how to expand into emerging areas such as next-generation semiconductor displays, semiconductor packaging, and CPI/PI films. In 2022, the company sharpened its focus on two strategic directions — advanced semiconductor packaging substrates and third-generation semiconductor displays (Mini/Micro LED) — and established two wholly owned subsidiaries, Hubei Tongge Microcircuit and Jiangxi Dehong, to drive these businesses.

**The upfront investment in GCB is exerting pressure on current profitability, while the profit inflection point from GBC Mini LED is expected to gradually emerge.** According to the company's 1H25 earnings guidance, revenue is projected at RMB 1.15~1.32bn, representing a YoY increase of 10.36~26.68%. Net loss is expected at RMB 45~65mn, mainly due to two reasons: 1) Although the company's traditional businesses — optical glass precision processing and high-end optical film die-cutting — remain profitable, the proactive capacity build-out for GCB (to capture future industry applications) has resulted in additional depreciation expenses. 2) Simultaneous investments in new projects and joint development with multiple customers have led to higher R&D spending, administrative costs, and marketing expenses, exerting pressure on short-term earnings.

Currently, WG Tech operates across five major segments: Optoelectronic glass precision processing, backlight and display modules, display touch modules, high-end optical film die-cutting, glass-based TGV multilayer PCBs and optical devices. Centering on next-generation displays and semiconductors, WG Tech has built a diversified product portfolio spanning optoelectronic glass processing, glass-based Mini/Micro LEDs, high-performance computing chip substrates, RF device glass substrates, and optical communication glass substrates. It has become one of China's leading developers and manufacturers of GCB and related electronic devices — and among the very few globally with full-process capabilities and in-house equipment for GCB.

**Mini LED:** 2025 marks the commercialization of glass substrate Mini LED, with large-size TVs (65"+) as the primary demand driver. GCB outperform PCB beyond 2,000 dimming zones, achieving OLED-like display quality at 4,608 zones with lower cost and ultra-thin form factor. Subsidiary Jiangxi Dehong has 1 million m<sup>2</sup> annual capacity; projects with Hisense and other leading brands are already in mass production. Also, WG Tech has potential cooperation opportunities with a leading Japanese brand that has not entered the OLED TV segment but is positioned in the high-end market.

**Micro LED:** Glass substrates with TGV technology offer cost, power, and yield advantages over organic substrates in sub-P1.0 fine-pitch displays. Subsidiary Hubei Tongge Microcircuit has begun small-scale shipments, and collaboration with a leading Korean brand on P0.625 TGV glass (with potential active-driving integration) could catalyze large-display Micro LED adoption.

We expect large-size TVs to drive near-term Mini LED demand, while yield ramp-up in the next 2–3 months and further product milestones will be key to unlocking Micro LED growth.

**Glass Substrates for Advanced Packaging:** Glass CTE closely matches silicon, mitigating warpage in high-stack, large-size AI chips, making it the preferred carrier over organic materials. Hubei Tongge Microcircuit, the company's main production arm for glass-based TGV multilayer PCBs and optical devices, possesses globally leading TGV glass substrate processing capabilities. In 2024, Hubei Tongge Microcircuit completed its first-phase capacity of 100,000 m<sup>2</sup>, entering small-volume shipments and generating RMB 2.03 million in revenue. In 1H25, the subsidiary continued sending samples and validating multiple customer projects with its glass-based TGV PCBs, including applications in 5G-A/6G RF devices, CPO optoelectronic co-packaging, and high-performance chiplet advanced packaging, achieving RMB 8 million in revenue. Over 2–3 years, glass substrates are expected to reach an industrialization inflection point in advanced semiconductor packaging and 6G RF applications, positioning the company for early-mover advantage.

**We initiate coverage on WG Tech with an “Outperform” rating, with a target price of 45.4 CNY, implying a 45.6% upside.** We maintain that 2025 marks the inaugural year of GCB commercialization. We estimate that WG Tech's revenue in 25-27 will be 2.98/4.04/5.29bn, respectively; and its net profit in 25-27 will be 13/253/480mn, respectively. Based on peer valuation and GCB's potential in Mini/Micro LED, advanced packaging, and 6G, we assign the company a 40X 2026 PE, corresponding to a target price of 45.4 CNY, with a 45.6% upside.

**Risks:** Slower new technology development; delays in customer projects.

## **APPENDIX 2**

### **ESG Comments**

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#### **Social:**

foster employee well-being and engages with local communities through responsible practices.

#### **Governance:**

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## 附录 APPENDIX

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## 截至 2025 年 6 月 30 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	92.6%	7.2%	0.2%
投资银行客户*	2.9%	4.1%	0.0%

\*在每个评级类别里投资银行客户所占的百分比。

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买入，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。

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.

## 截至 2025 年 3 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	92.2%	7.5%	0.3%
投资银行客户*	3.3%	3.5%	0.0%

Haitong International Equity Research Ratings Distribution,  
as of June 30, 2025

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	92.6%	7.2%	0.2%
IB clients*	2.9%	4.1%	0.0%

Haitong International Equity Research Ratings Distribution,  
as of March 31, 2025

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	92.2%	7.5%	0.3%
IB clients*	3.3%	3.5%	0.0%

\*Percentage of investment banking clients in each rating category.

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

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