



致茂電子股份有限公司

2024年第4季法人說明會

財務長 應正

董事長兼總經理 黃欽明

2025年2月24日

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- 公司簡介
- 財務數據
- 營運概況
- 問與答

Chroma

公司簡介

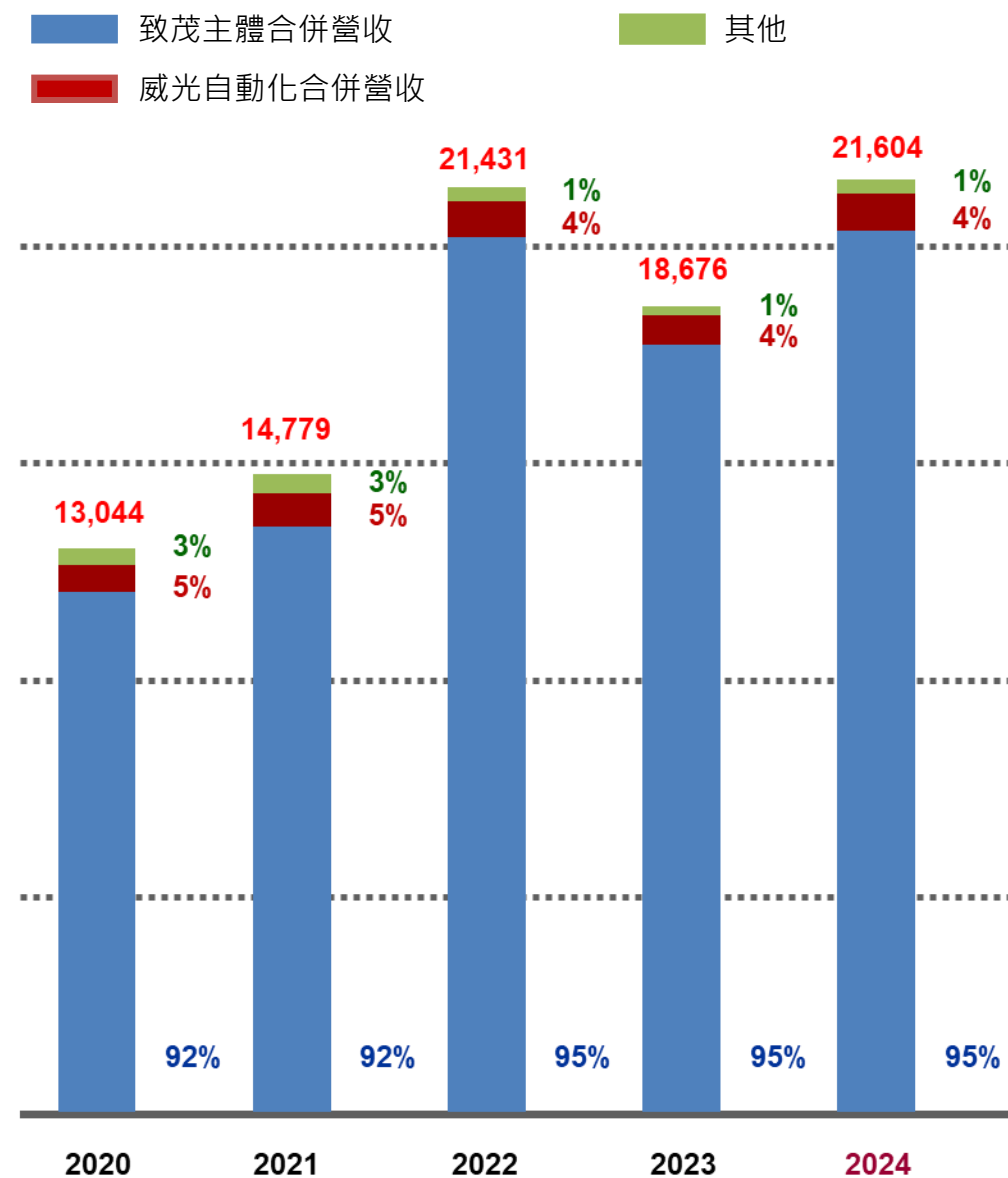
Test
and
Auto
Solution
providers

公司簡介

- 致茂電子成立於1984，為擁有自有品牌及設計之自動化量測解決方案供應商。商品包含提供電力電子、半導體及潔淨科技產業等相關之檢測儀器與設備及整合性自動化測試解決方案。
- 經營宗旨：精密、可靠、創新。
- 致茂集團包含致茂測試設備主體及威光自動化兩大事業體。
- 2024年合併營收為216億新台幣。
- 2024年淨利為53億新台幣。
- 致茂集團截至2024年12月底員工總數為3,582人。

致茂電子歷年合併營收佔比

Chroma

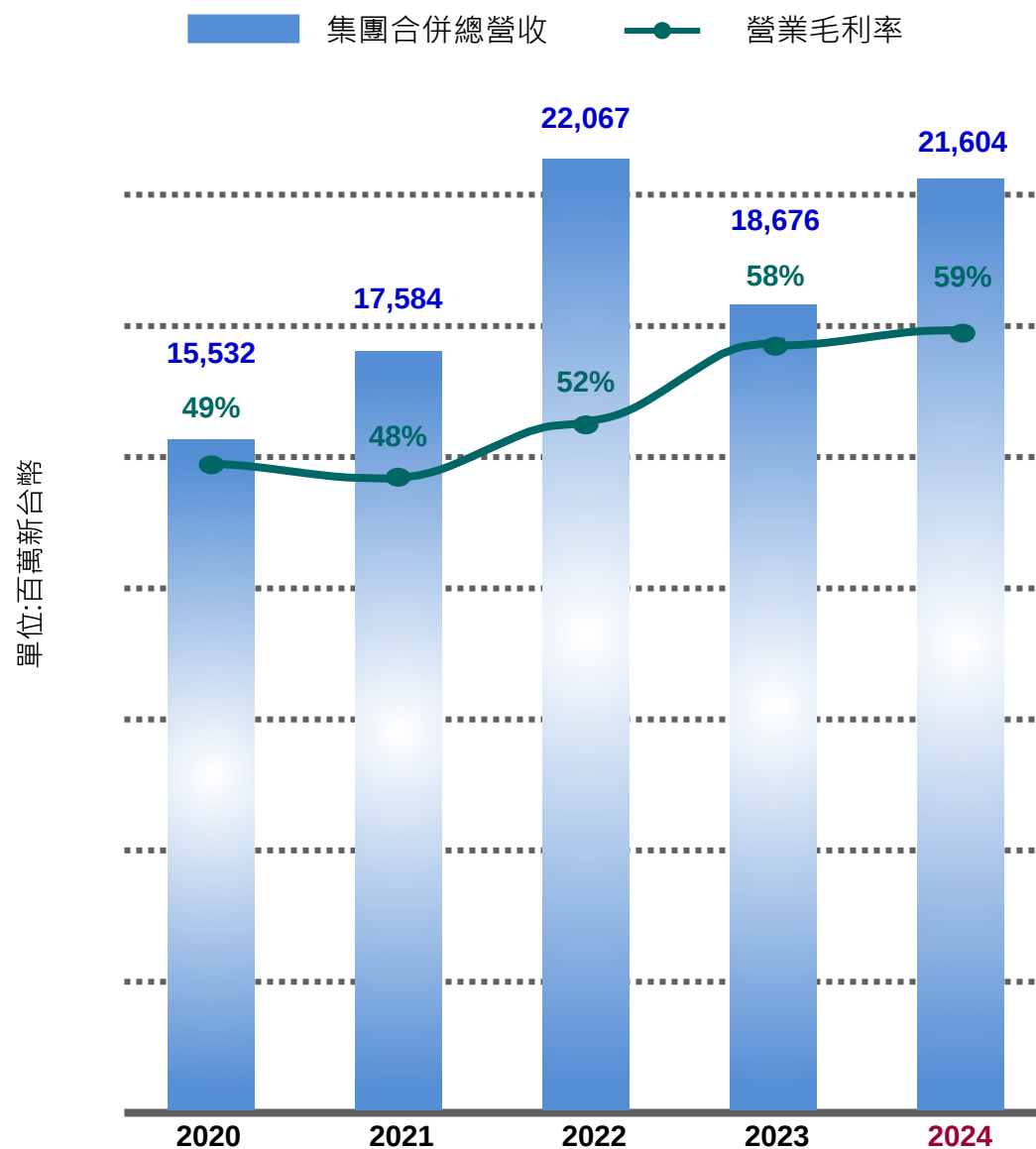


單位:百萬元新台幣

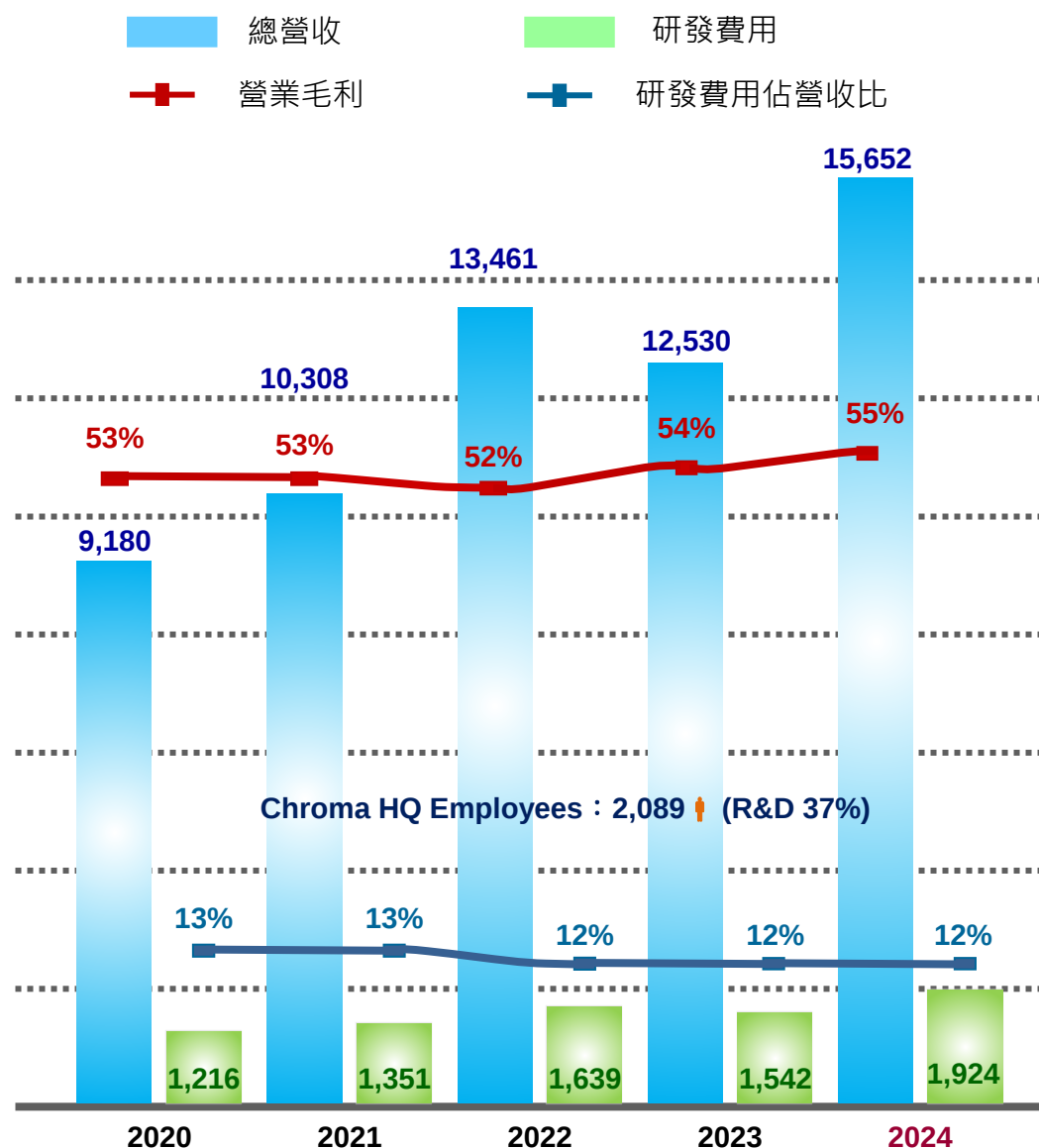
* 上述2020~2022年之營收未含日茂新材料，該事業體已於2022年3月底結束。

財務表現

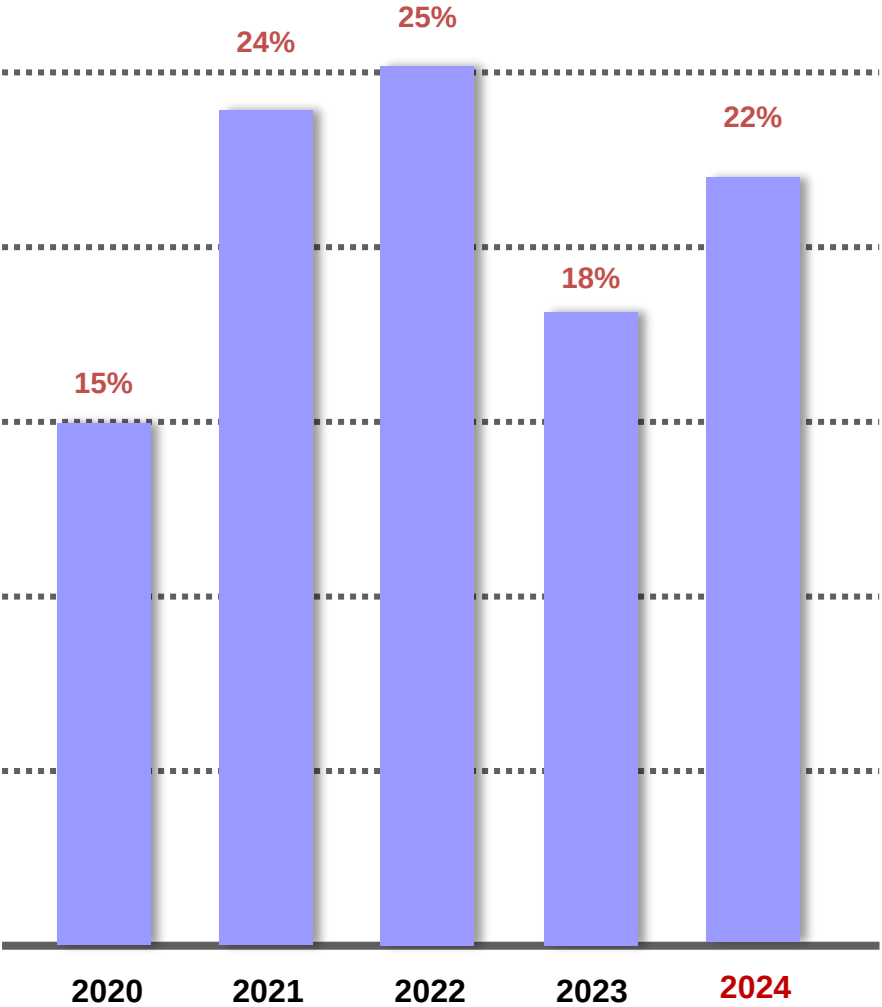
集團合併營收 / 營業毛利率



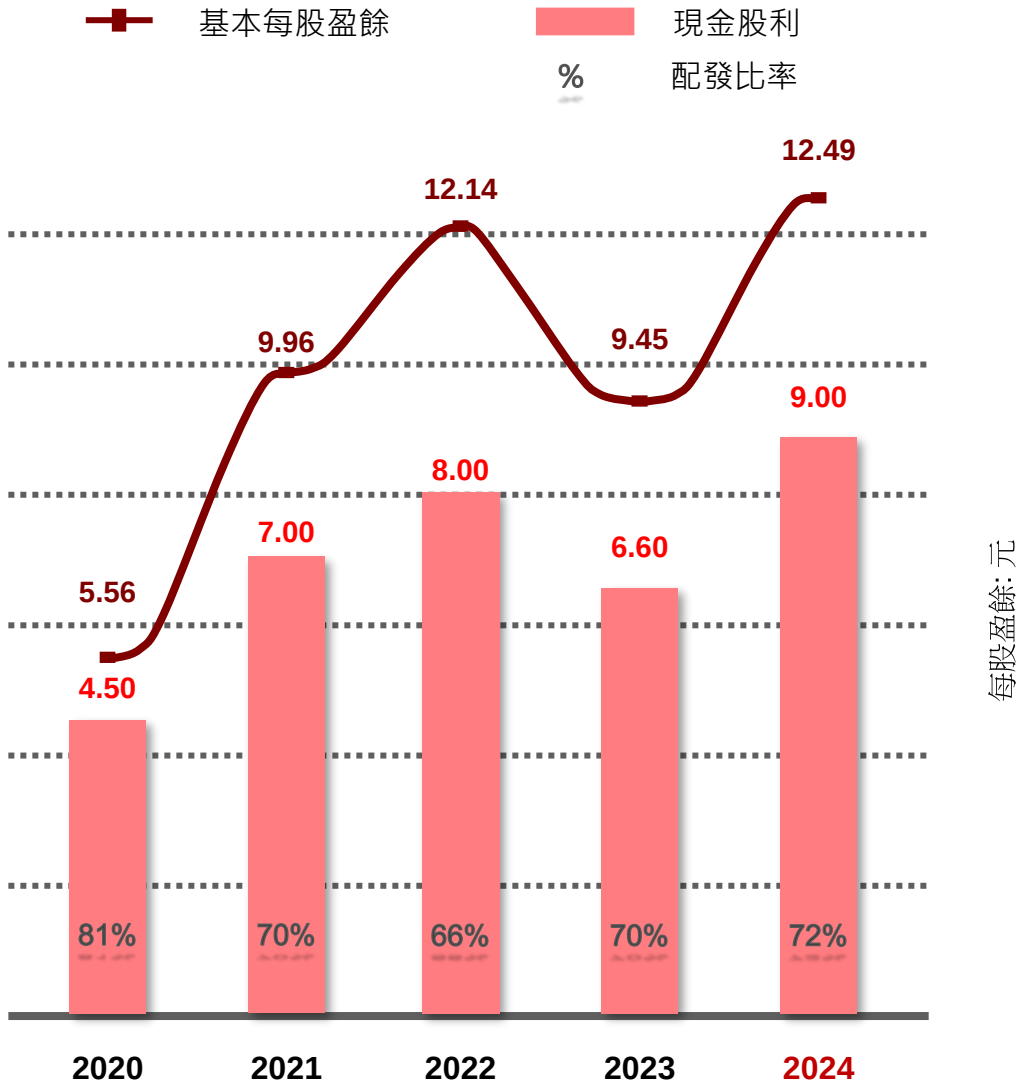
母公司營收 / 營業毛利率 / 研發費用佔比



股東權益報酬率



股利政策



* 2024年之現金股利將於股東會決議後配發

財務數據



2024年第4季合併損益表摘要



合併損益表

(單位: 佰萬新台幣, 除每股盈餘為新台幣元)

	2024.4Q	%	2024.3Q	%	QoQ %	2023.4Q	%	YoY %
淨營業收入	6,039	100%	5,632	100%	7%	5,025	100%	20%
量測儀器事業部之合併營收(淨額)	5,755	95%	5,170	92%	11%	4,913	98%	17%
威光自動化作事業部之合併營收	211	4%	384	7%	(45%)	44	1%	380%
其他	73	1%	78	1%	(6%)	68	1%	7%
營業成本	(2,432)	(40%)	(2,326)	(41%)	5%	(2,446)	(49%)	(1%)
營業毛利	3,607	60%	3,306	59%	9%	2,579	51%	40%
營業費用								
推銷管理費用	(1,364)	(23%)	(1,290)	(23%)	6%	(1,094)	(22%)	25%
研發費用	(684)	(11%)	(508)	(9%)	35%	(451)	(9%)	52%
營業淨利	1,559	26%	1,508	27%	3%	1,034	20%	51%
營業外收入及支出	380	6%	237	4%	60%	(16)	-	n/a
稅前淨利	1,939	32%	1,745	31%	11%	1,018	20%	90%
所得稅費用	(403)	(7%)	(295)	(5%)	37%	(193)	(4%)	109%
本期淨利	1,536	25%	1,450	26%	6%	825	16%	86%
淨利歸屬於:								
本公司業主	1,476	24%	1,426	25%	4%	799	16%	85%
非控制權益	60	1%	24	1%	150%	26	-	131%
	\$ 1,536	25%	\$ 1,450	26%	6%	\$ 825	16%	86%
每股盈餘 (基本)	\$ 3.49		\$ 3.39		3%	\$ 1.89		85%
每股盈餘 (稀釋)	\$ 3.45		\$ 3.36		3%	\$ 1.87		85%

2024年全年累計合併損益表摘要



合併損益表	2024	%	2023	%	YoY %
(單位: 佰萬新台幣, 除每股盈餘為新台幣元)					
淨營業收入	21,604	100%	18,676	100%	16%
量測儀器事業部之合併營收(淨額)	20,419	95%	17,787	95%	15%
威光自動化事業部之合併營收	872	4%	658	4%	33%
其他	313	1%	231	1%	35%
營業成本	(8,858)	(41%)	(7,919)	(42%)	12%
營業毛利	12,746	59%	10,757	58%	18%
營業費用					
推銷管理費用	(5,065)	(23%)	(4,327)	(23%)	17%
研發費用	(2,199)	(11%)	(1,757)	(10%)	25%
營業淨利	5,482	25%	4,673	25%	17%
營業外收入及支出	1,226	6%	493	3%	149%
稅前淨利	6,708	31%	5,166	28%	30%
所得稅費用	(1,308)	(6%)	(1,070)	(6%)	22%
本期淨利	5,400	25%	4,096	22%	32%
淨利歸屬於:					
本公司業主	5,264	24%	3,979	21%	32%
非控制權益	136	1%	117	1%	16%
	\$ 5,400	25%	\$ 4,096	22%	32%
每股盈餘 (基本)	\$ 12.49		\$ 9.45		32%
每股盈餘 (稀釋)	\$ 12.38		\$ 9.37		32%

資產負債摘要及財務指標

集團合併 (單位：佰萬新台幣)	2024. 12月	2023. 12月	+ / - %
資產負債摘要			
現金及流動金融資產	5,040	4,794	5%
存貨	5,458	4,675	17%
短期負債	1,417	2,136	- 34%
長期負債	2,108	990	113%
股東權益	25,450	22,517	13%
總資產	37,308	33,482	11%
存貨週轉天數	209	217	
應收帳款週轉天數	87	87	
應付帳款週轉天數	118	128	
淨負債資產比(%)	Net Cash	Net Cash	
股東權益報酬率 (%) ●	22%	18%	
資產報酬率 (%) ●	15%	12%	

現金流量 (單位：佰萬新台幣)	2024	2023	同期比較
未計利息稅項折舊及攤銷	7,528	5,973	26%
營業現金流入	4,784	3,408	40%
自由現金流量 ●●	2,893	2,014	44%

- 股東報酬率及資產報酬率皆已年化。
- 自由現金流量 = 營運活動之淨現金流入 + (投資活動之淨現金流出)。

營運概況



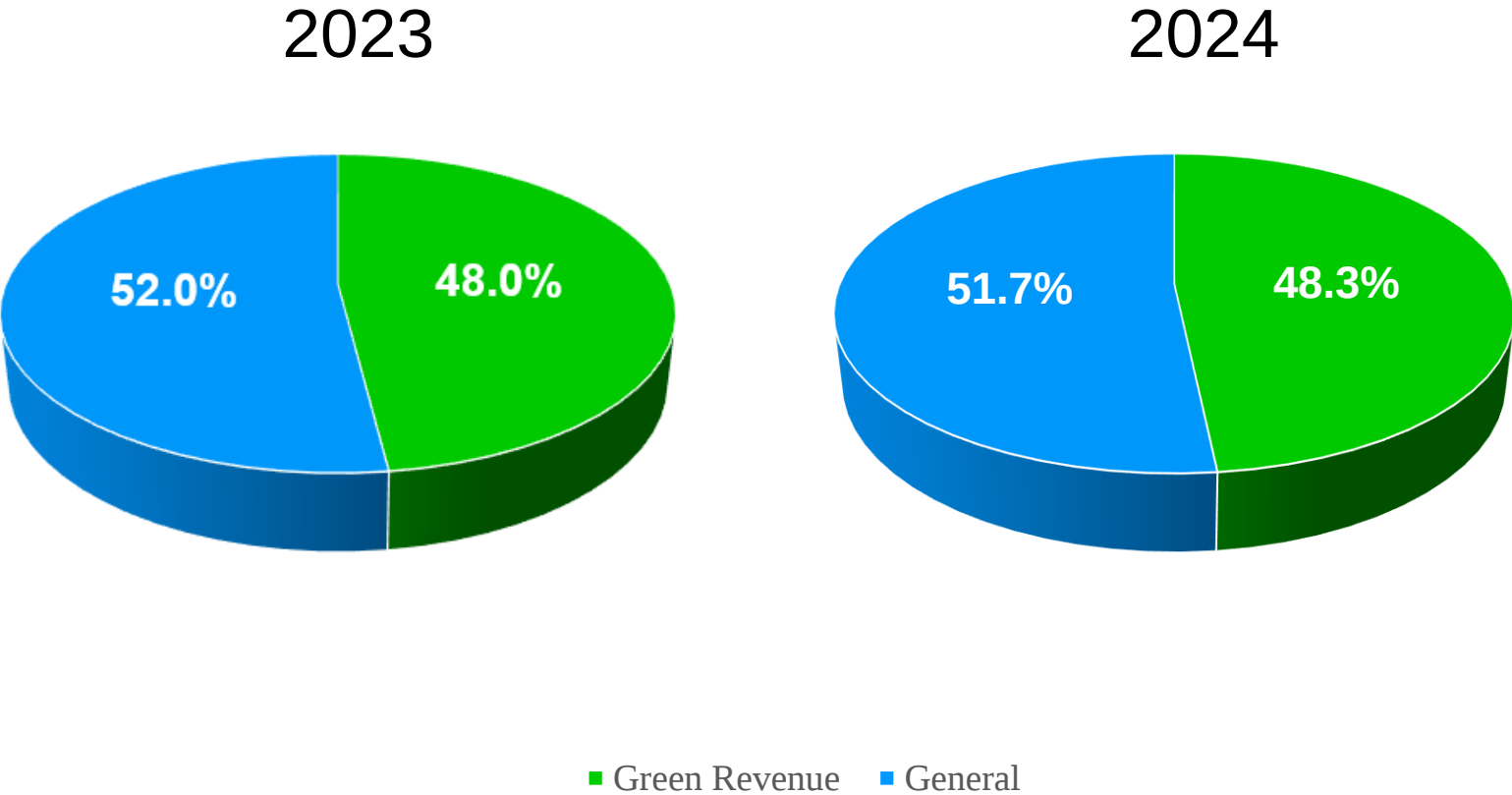
2024年第4季及全年產品銷售佔比與合併營收明細

(單位: 百萬新台幣)

	2024.4Q	%	QoQ	YoY	2024	%	YoY	2023	%
量測及自動化檢測設備	1,687	40%	(3%)	12%	6,825	44%	(16%)	8,078	64%
半導體 / Photonics 測試解決方案	2,086	50%	14%	141%	6,974	45%	135%	2,963	24%
Turnkey Solutions	146	3%	39%	(15%)	685	4%	51%	454	4%
其它	275	7%	(15%)	(25%)	1,168	7%	13%	1,035	8%
母公司營業收入	4,195	100%	5%	45%	15,652	100%	25%	12,530	100%
+ 量測事業體海外據點及測試設備相關子公司	1,560		31%	(22%)	4,767		(9%)	5,257	
致茂電子檢測設備事業體 (含海外量測事業子公司)	5,755	95%	11%	17%	20,419	95%	15%	17,787	95%
威光自動化	211	4%	(45%)	380%	872	4%	33%	658	4%
其他	73	1%	(6%)	7%	313	1%	35%	231	1%
集團營收	6,039	100%	7%	20%	21,604	100%	16%	18,676	100%

2025年營運展望

- 致茂電子集團2024年累計(存續營業事業體)之合併營收創歷史新高達216億新台幣，較2023年同期成長16%。母公司量測設備事業體同創新高全年累計營收達156億新台幣，較2023年增長25%。2024年主要增長來自於半導體 / Photonics檢測事業，較同期成長135%。
- 2025年展望：
 - ✓ 2025年主要增長仍來自於半導體及Photonics測試解決方案。
 - ✓ 客戶認證之先進封裝應用之Metrology設備將於2025起逐季挹注營收。
 - ✓ AI 人工智慧晶片 / HPC 高速運算，優化升級之車用及顯卡晶片及ASIC產能擴充將帶動SLT檢測設備需求。
 - ✓ 量測及自動化檢測設備將於今年由趨緩轉為成長。
 - ✓ 新推出之AR眼鏡生產製造所需之Turnkey Solution已於去年下半年受客戶採用並陸續交貨，此供貨需求將持續至2025年。



Note: Revenues are classified according to FTSE Russell’s Green Revenues Classification System (GRCS).

Technology & Solution Milestones

High Precision Test Solutions

3650-S2



- 768pin
- 12 slots
- 15kVA
- Floating
- LB electronics
- IC: SiC/Power/logic

3380 MXADO



NEW

Designed for High Quality Audio Testing

- 8 WG and 8 WD channels
- 6Vpp audioband
- High-performance bandwidth: 100kHz (WG) and 22kHz (WD)

Applications:

- Wired/wireless/Bluetooth audio devices, headphones, speakers

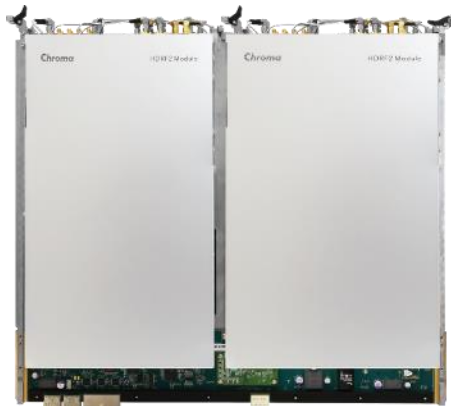


2023

2024

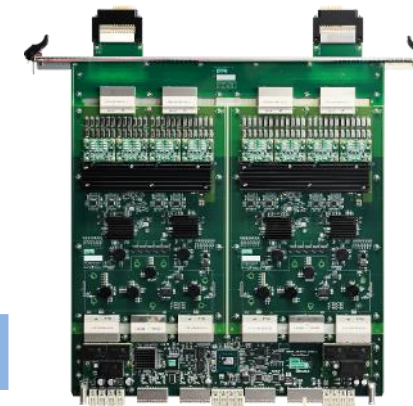
2025

3680 HDRF2



- Internally Integrated
- One-touch engagement
- 4 Vector Signal Transceivers
- 32 RF ports
- 6Ghz Software Defined Radio
- 200Mhz bandwidth
- Supports various protocols: Bluetooth 5.2, Wi-Fi 6, LoRa, GPS

3650-S2 HTMU



NEW

Advanced Performance for Timing Test

- 16 channels
- High precision with nSec-level accuracy
- Supports multiple testing modes

Applications:

- PMIC, industrial control chips, logic chips



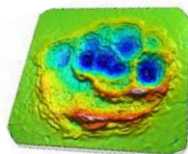
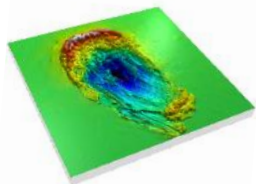
IC: SiC / Power / Logic / Wireless

7980

2D/3D Metrology Measurement System

2D/3D Metrology

- XY / Z Resolution: 30nm / 0.05nm
- Sensor: **BLiS Technology**
- Light Source: **Multiple** Light Sources
- Applications:
 - ✓ Probe Mark
 - ✓ 3D Surface Profile

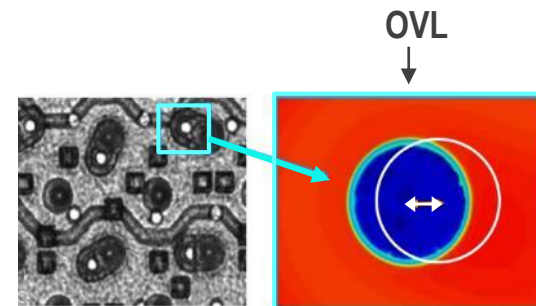


7981

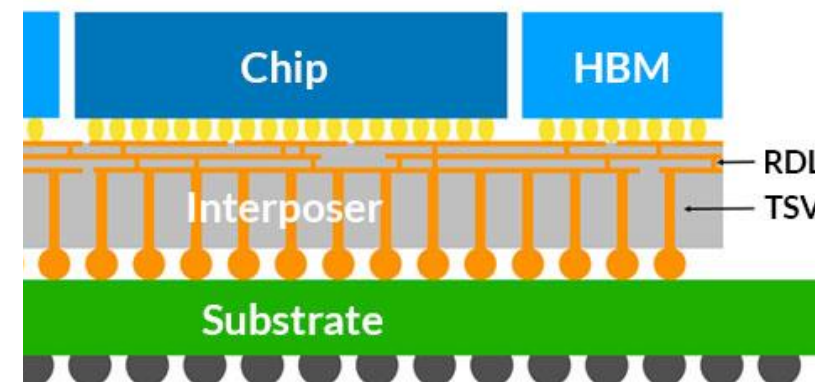
2D/3D Metrology Measurement System

2D/3D Metrology

- XY / Z Resolution: 30nm / 0.05nm
- Sensor: **BLiS Technology**
- Light Source: **Multiple** Light Sources
- Applications:
 - ✓ RDL: $\geq 2 \mu\text{m}$, AR3
 - ✓ TSV: $\geq 5 \mu\text{m}$, AR15
 - ✓ OVL $\leq 0.2 \mu\text{m}$
 - ✓ 8", 12" Si Wafers



NEW



Advanced Packaging: InFO, CoWoS, 3D IC

BLiS: Broadband Light integrated System
Muti-Sensors with different functions are integrated.

Temperature-forcing Systems



- $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$ @Tc
- Up to **1,200W** power dissipation



- $-70^{\circ}\text{C} \sim +150^{\circ}\text{C}$ @Tc
- Up to **1,000W** power dissipation



NEW

- $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$ @Tc
- Up to **2,900W** power dissipation



2021

2023

2024

2025

Hybrid Tri-temp Test Handler



- 3x3~120x120mm
- $-70 \sim +150^{\circ}\text{C}$ @Tc, up to **1.2kw** dissipation
- 500 kgf contact
- TSD (Tj) available

Model 3110 Gen2

ENG Single Site Test Module



- 3x3~120x120mm
- $-40 \sim +150^{\circ}\text{C}$ @Tc, up to **1.8kw** dissipation
- 500 kgf contact
- TSD (Tj) available

Model 3210

FT & SLT Hybrid Test System



- 5x5~120x120mm
- 4~24 sites
- $-40 \sim +150^{\circ}\text{C}$ @Tc, up to **1.5kw/site** dissipation
- 500 kgf/site contact
- TSD (Tj) available
- Warpage detection
- OHT integration

Model 3200

Advanced packaging of AI/HPC, automotive, IoT, cloud, network and data center chips

Test requirement trend:

- Higher frequency
- Thinner die thickness
- Smaller die size and pad pitch

Frequency: <220MHz
Die thickness: >7.6μm
Die size: >0.7mmX0.6mm

Frequency: 300MHz
Die thickness: 5.5μm
Die size: 0.5mmX0.5mm

2023

2024

2025

Crystal Wafer Probing System



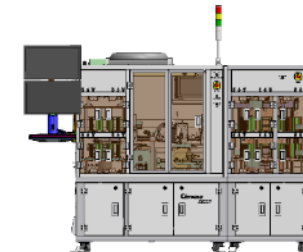
Model 58216
(250B VNA)
Frequency: 220MHz
Min. die pitch: 0.4mm

In-process Wafer Inspection System



Model 7945
Depth of focus at 2X mag.: 90μm
Min. die size: 0.075mmX0.075mm

Crystal Wafer Frequency Sorter



NEW

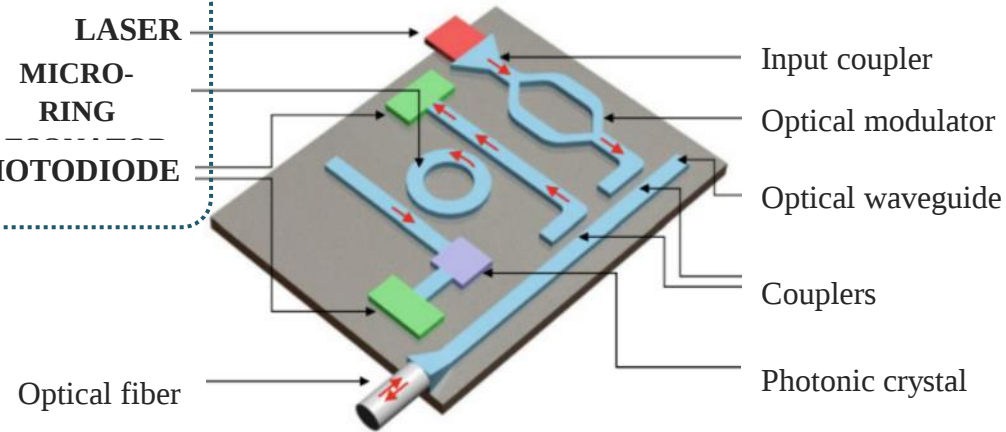
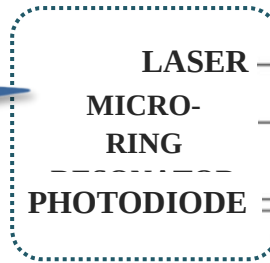
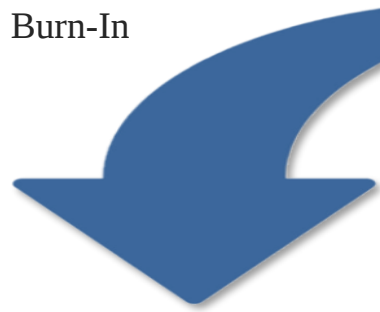
Model 58217
Frequency :300 MHz
Hardware Bin Number: 10 bins



Consumer/Automotive Sensing, LiDAR



Active SiPh Device
Burn-In



DUT: **SiPh Device**

Reliability Test Series

58604 Series

- 125 °C / 200 °C
- $\pm 7\text{ V} / \pm 7.5\text{ V}$
- $\pm 500\text{ mA}$
- 1,792 channels
- 1 nA meas. Res.



58606 Series

- 200 °C
- $\pm 80\text{ V}$
- $\pm 2\text{ mA}$
- 1,792 channels



SiPh Electrical Test

**Optical &
Thermal Rack**

Model
+ 58604C

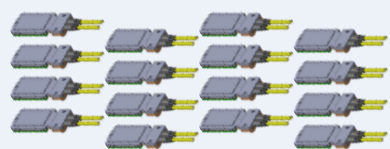
Light-feeding
with Laser Source
Module



Co-Packaged Optics (CPO) Assembly & Sorting Solution

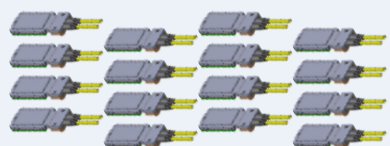
INPUT

Optical Engines



ASIC

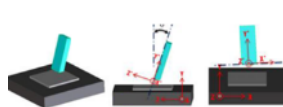
Optical Engines



ASIC

•
•
•

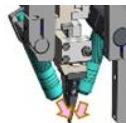
Fiber Array Unit



FAU & EPIC Alignment



Gel Dispensing



UV Curing



Binning



Model 58623

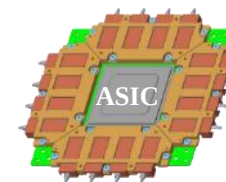
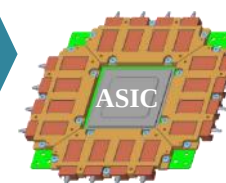
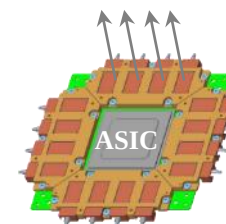
Photonics IC Assembly and Sorting System

- Auto FAU miniMT plug in/out
- Auto Passive + Active alignment
- Auto gel dispensing + UV curing
- Auto Binning

* Tier-1 High throughput solution in the market

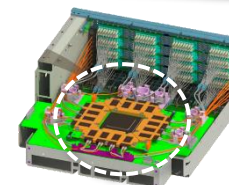
OUTPUT

Optical Engines



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•
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Switch



CPO modules
deployed in switches



Rack



Data Center

Technology & Solution Milestones

High Power Test Solutions

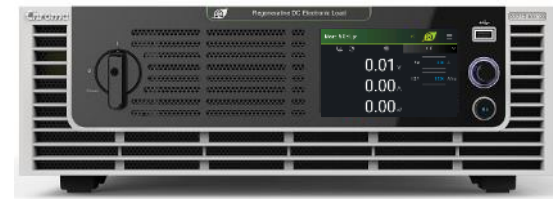
Regenerative AC Load



Model 63800R Series

- Programmable AC Load with energy regen
- High Power Density: 15kW/3UH, Eff:90%
- 9kW-15kW, 350VLN

Regenerative DC Load



Model 63700 Series

- Programmable DC Load with energy regen
- High Power Density: 18kW/3UH, Eff:93%
- 18kW, 600/1200/1800V

2022

2023

2024

2025

Regenerative Grid Simulator



Model 61800-100HV

- High power AC source with energy regen
- Optional regen AC Load
- Parallel up to 1MVA
- 105kVA, 500VLN-800VLN

Bidirectional DC Power Supply

Model 62000D-HL Series

- 8x Wide Range Output Dual Output Range
 - High range: 2000V/480A/360kW
 - Low range: 650V/1440A/360kW
- High power density
- Battery & Fuel Cell & Solar array simulation



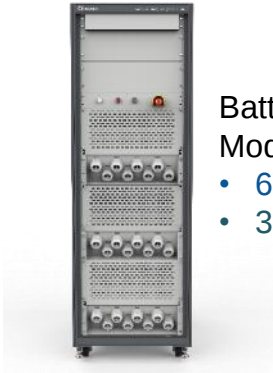
High Power
xEV Cell Test Solution



Battery Reliability Test System
Model 17010H

- 6V, 300A,
- 600A (peak current)

High Power
xEV Cell Test Solution



Battery Reliability Test System
Model 17010H

- 6V, 200A
- 300A (peak current)



2023

2024

2025

Auxiliary Measurement Solution



Multi-channel voltage/temperature
Data Logger
Model A172013/A172014

DVA Cell Test Solution



Ultra-high precision CDC
Prog. Charge/Discharge Tester
Model 17208M-5-12C

- 5V, 12A

Battery Cell/Lithium-ion Capacitor/Super Capacitor

Regenerative Battery Pack Test System



Model 17020E

- 10kW, 60V
- 10kW, 100V
- 10kW, 200V

Applications:

- E-Scooter battery pack
- E-vehicle battery module



Regenerative Battery Pack Test System



Model 17040

- 300kW 1000V 750A
- 360kW 1000V 900A
- 500kW 1000V 1200A
- 600kW 1000V 1500A

Applications:

- E-vehicle battery pack
- ESS battery pack

Regenerative Battery Pack Test System

Model 17040E

- 200kW 1700V 400A
- 200kW 850V 600A

Applications:

- E-vehicle battery pack
- ESS battery pack



Turnkey Solution

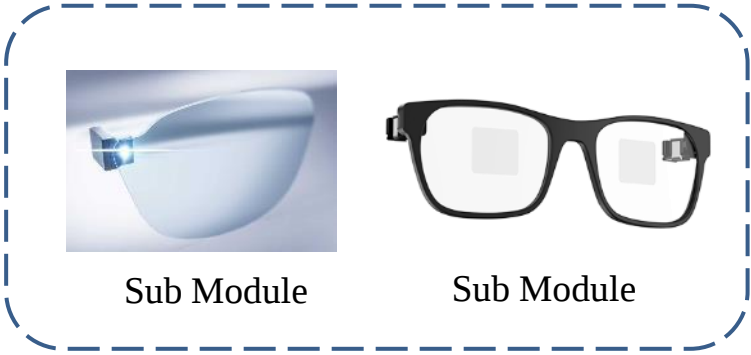
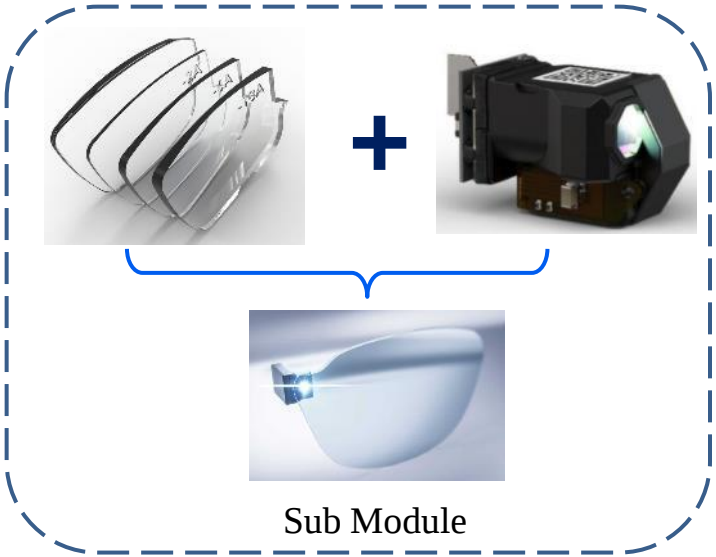
NED Test and Automation Turnkey Solution



Waveguide



Light Engine



**Waveguide/Eyepiece
IQ Test System**



- Model 5742-F
- OMM: PA Alignment
 - Projector: Light Source Simulation
 - **Auto Rx lens Changer**



**Projector
IQ Test System**



- Model 5742-B
- Auto Contact
 - OMM: BS **AA Alignment**



**Precision Assembly/
Testing System**



- Model 5742-A
- OMM: PA/AA **Alignment**
 - **Precision Assembly**



**Sub Module
IQ Test System**



- Model 5742-C
- OMM: PA Alignment
 - Projector: Light Source Simulation
 - Auto Rx lens Changer



Note: All the above equipment apply **Chroma Colorimeter** to proceed **Image Quality Test**



Thank You