The background of the slide is a composite image. The left side features a close-up, colorful view of a microchip with various red, green, and blue rectangular regions. The right side shows a group of scientists in white lab coats working in a laboratory, with one person holding a test tube. A bright, glowing orange and yellow light streak curves across the top of the image.

Advanced Echem Materials Company Ltd.

(Stock code : 4749)



December 23, 2024

- AEMC's statements of its current expectations are forward-looking statements subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements.
- AEMC makes no representation or warranty regarding such forward-looking statements. Except as required by law, AEMC undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events, or otherwise.



Mission

-Establish upstream and downstream supply chains

Our mission is to establish Taiwan's independent technology in specialty chemicals for advanced semiconductor processes and through collaboration, enhance the global competitiveness of the local specialized materials industry, both upstream and downstream.



Vision

-Expand the variety of lithography materials and increase market share

Our vision is to enhance Synthesis, Purification, Formulation, and process technologies to meet customer needs, assist in yield improvement deliver exceptional added value, and become an innovative specialty chemical company with global competitiveness.

Awards

TSMC Excellent Performance Award, 2022
Excellent Material Development and Production Support in Litho Materials

Awards

National Industrial Innovation Award, 2023

Agenda

4749



Company Introduction

- ✓ Board of Directors
- ✓ Development History and Key Milestones
- ✓ Main Production Base



R&D Strategy

- ✓ R&D Strategy
- ✓ Product Roadmap



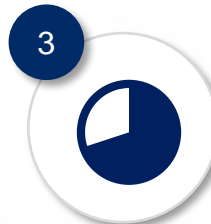
Main Products

- ✓ Semiconductor Manufacturing Process
- ✓ Semiconductor Specialty Chemicals
- ✓ Display Specialty Chemicals
- ✓ Peer Product Comparison
- ✓ Photoresist Materials Market



Operating Results

- ✓ Financial Highlights
- ✓ Major Customer



Business Advantage

- ✓ Integrating Upstream From Formulation Technology
- ✓ Supply Chain Strategic Alliance
- ✓ Quick Response and Steep Learning curve
- ✓ Excellent Quality Control and Self Designed Manufacturing Technology



ESG Performance

- ✓ Energy Efficiency and Carbon Reduction
- ✓ Social Participation
- ✓ Talent Sustainability
- ✓ Friendly Workplace
- ✓ Corporate Governance



1.Company Introduction

**Chairman
Wen-Hsiung Chan**

Yanwen Asset
Management
Consulting Inc.

Master, International
Business Management,
National Taiwan University

Director, Oleader Technologies
Director, SciWin Synthesis
Laboratories
Director, Sunplus Technology
Director, iCatch Technology,

**Director/
General Manager
Kuang-Lung Kuo**

Yanwen Asset Management
Consulting Inc.

PhD., Applied Chemistry,
National Chiao Tung University

General Manager, AEMC
Director, SciWin Synthesis
Laboratories

**Director
Chuan-Cheng Hung**

Chang Wah
Electromaterials Inc.

BS., Mechanical
Engineering, Hong Kong
Polytechnic University.

Chairman, Chang Wah
Electromaterials
Chairman, Chang Wah
Technology

**Director
Hung-Ren Juang**

Master, Accounting,
Soochow University

Chairman, Innolux
Corporation(Former)
Chairman, GIS-KY(Former)

**Director
Hsin-Hsin Li**

An Kai Jia investment
Inc.

Master, Finance from the
EMBA program, National
Taiwan University.

Chairman, Kiwi Technology
SBI Holdings Inc

**Independent
Director
Wen-Gu Huang**

Ph.D., Technology Application
and Human Resource
Development, National Taiwan
Normal University.

Independent Director
, Chang Wah Technology
Direct General, Export
Processing Zone
Administration, MOEA(Former)

**Independent
Director
Cheng-Min Chuang**

Ph.D., Business
Administration, University of
Washington in Seattle

Professor, National Taiwan
University
Research fellow, National
Taiwan University's Research
and Development Center for
Medical Devices

**Independent
Director
Chih-Yang Chang**

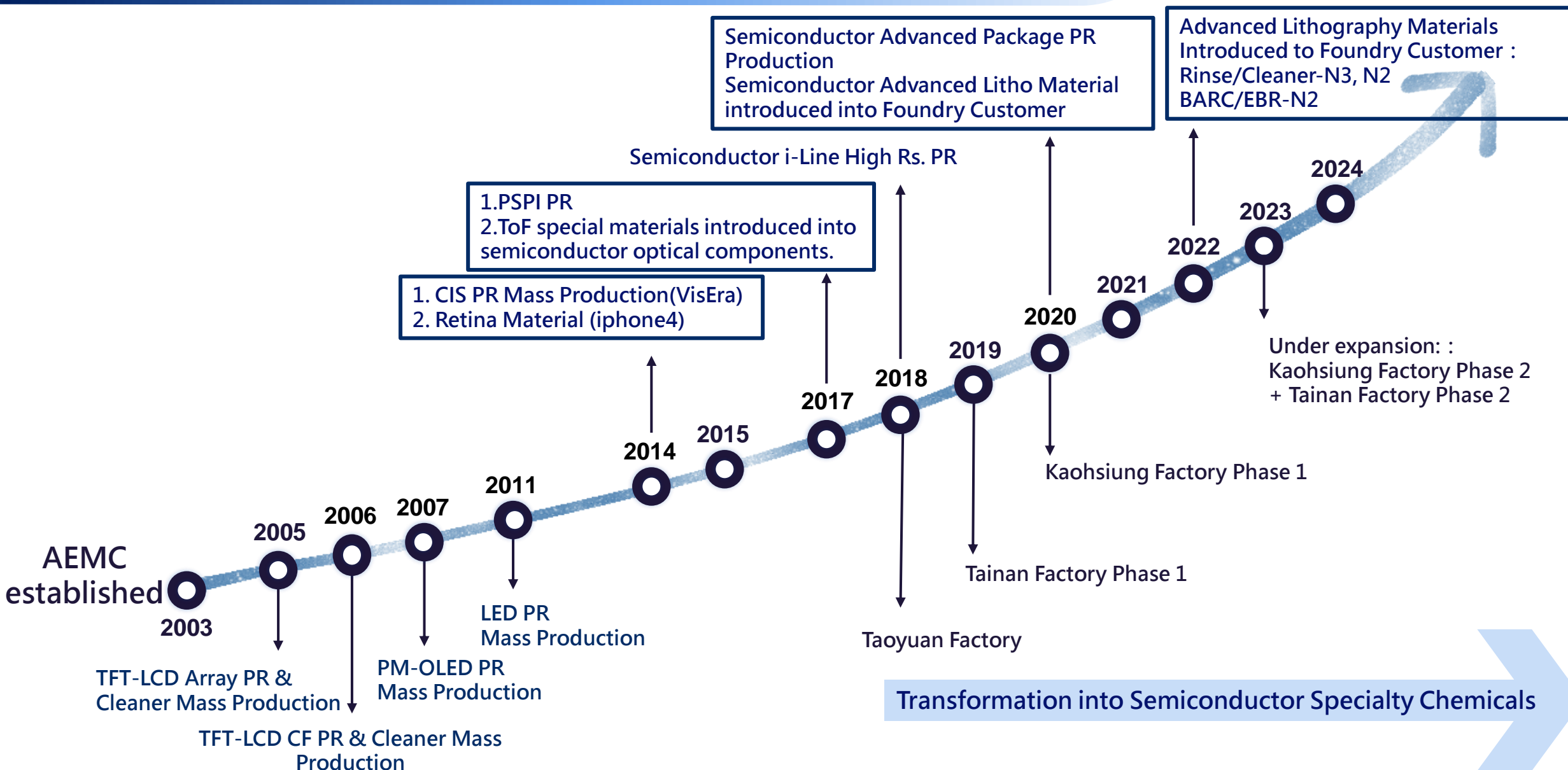
Master, Hawaii Pacific
University.

Director, Earth Education
Foundation

**Independent
Director
Tammy Wang**

Master, Business Administration,
University of Maryland

Managing Director, DBS Bank
Independent Director,
ShinyBrands



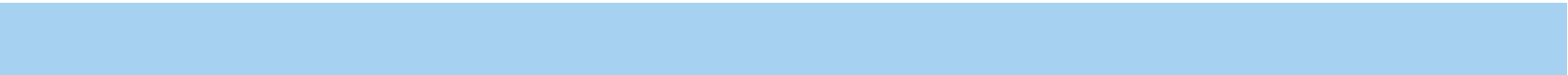


Number of Employees

Total Employees : 421 (2024.11)
R&D Team : 119(2024.11)

2018	2019	2020	2021	2022	2023	2024	2025	2026
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Taoyuan Factory



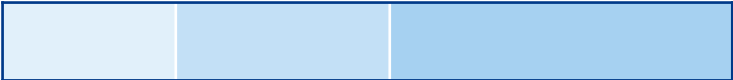
Construction

Verification

Tainan Factory Phase I
Phase II

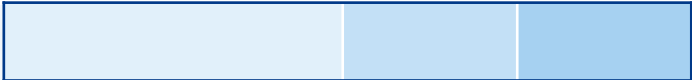


Mass
production



2025Q1

Kaohsiung Factory Phase I
Phase II



2026Q1

Taoyuan Factory
HQ with R&D Center



Investment of NTD 550 million
Aspire Park, Taoyuan
Factory Area : 8,393 m²

- Display Specialty Chemicals
- R&D Center

Tainan Factory



Phase1 Investment of NTD 300 million
Phase2 Investment of NTD 80 million
Tree Valley Park, Tainan
Factory Area : 2,926 m²

- Semiconductor Specialty Chemicals

Kaohsiung Factory



Phase 1 Investment of NTD 1.12 billion
Phase 2 Planned Investment of NTD 1.69 billion
Southern Taiwan Science Park, Kaohsiung
Factory Area : Phase 1 10,106 m² and Phase 2 14,469 m²

- Semiconductor Specialty Chemicals

Since 2019, capital expenditures in the semiconductor material have exceeded 3 billion NTD, with cumulative R&D investments reaching 1.1 billion NTD, totaling over 4 billion NTD.



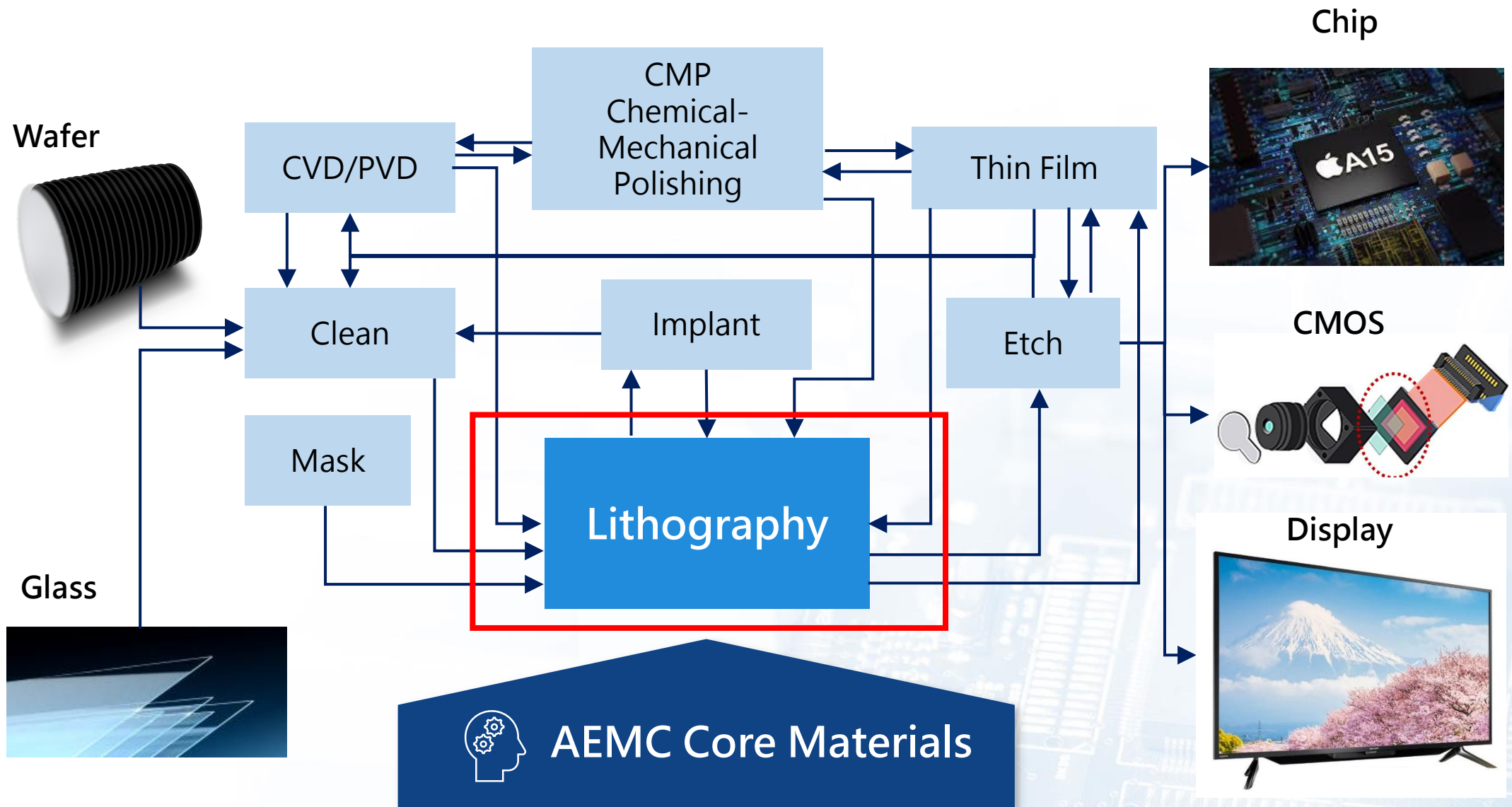
2. Main Products

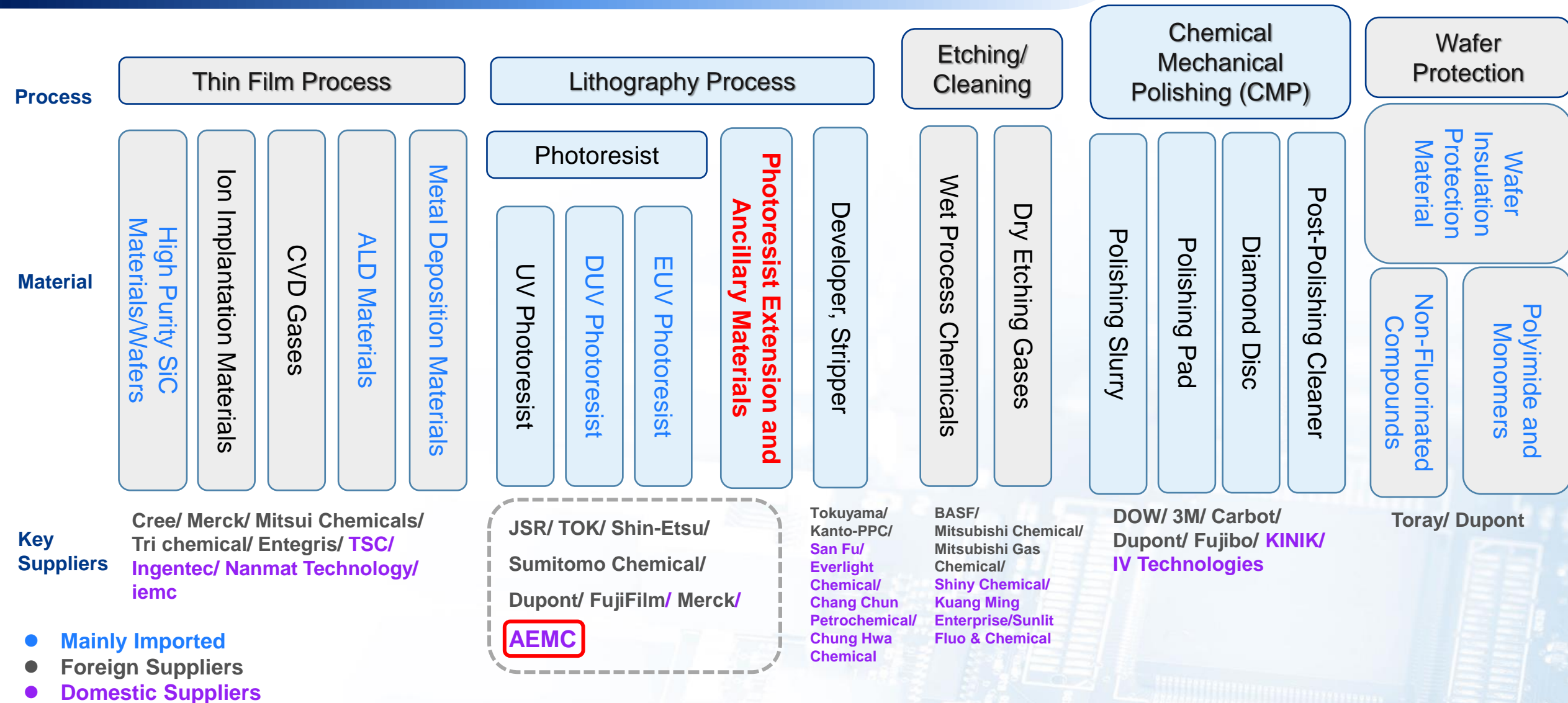
Semiconductor Specialty Chemicals :

- (1) Advanced node materials
- (2) Optical component materials

Display Specialty Chemicals :

- (1) LCD PR
- (2) Micro-LED PR



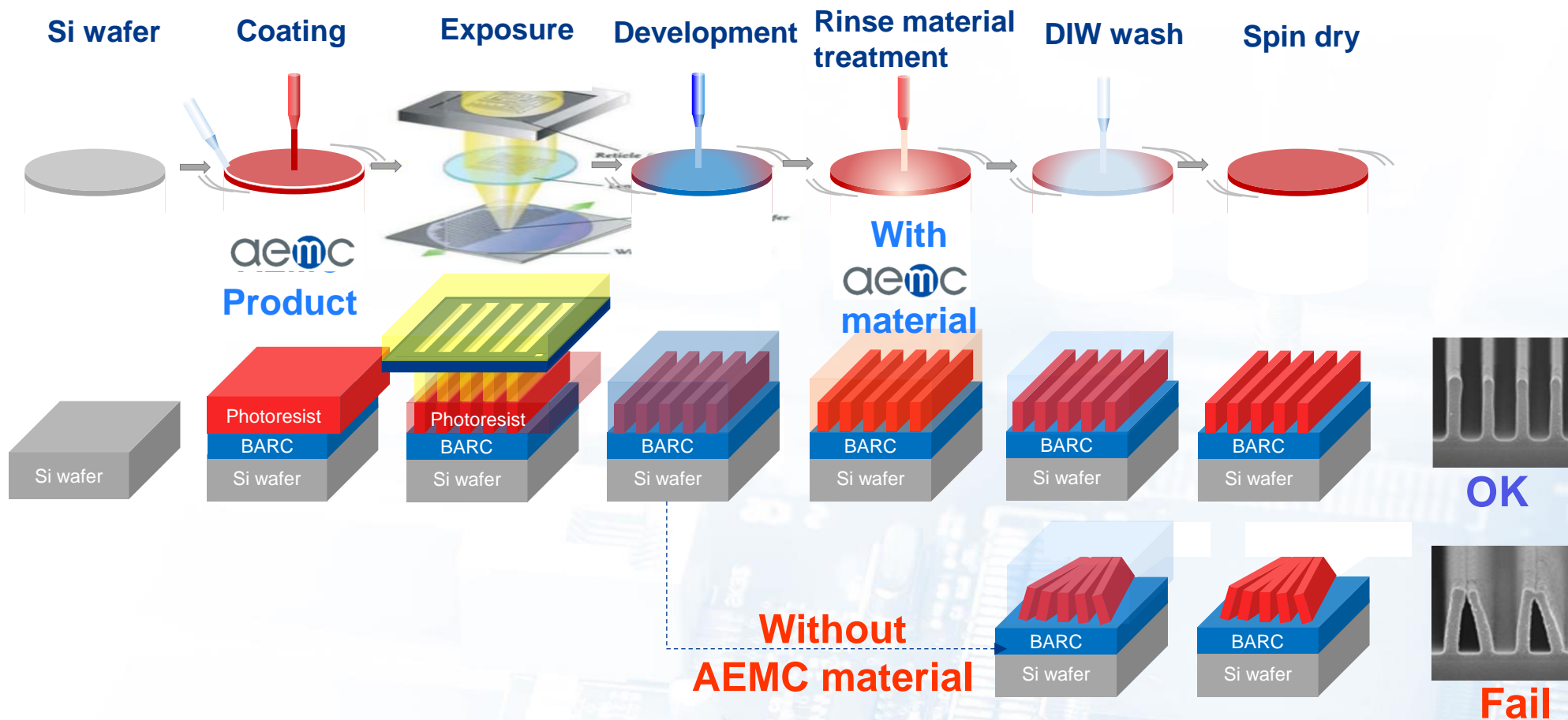


- Mainly Imported
- Foreign Suppliers
- Domestic Suppliers

Industry Demand Items: High Purity SiC Materials/Wafers, ALD Materials,
 Photoresist Extension and Ancillary Materials, Insulation Protection Materials for Wafers.

產品

- √ Rinse Material
- √ BARC
- √ EBR
- √ Developer
- √ Cleaner



Benefits

- ✓ Straightforward process
- ✓ Pattern collapse mitigation
- ✓ Defect reduction

Infusing Professional Resources to Enhance Supplier's R&D Capabilities

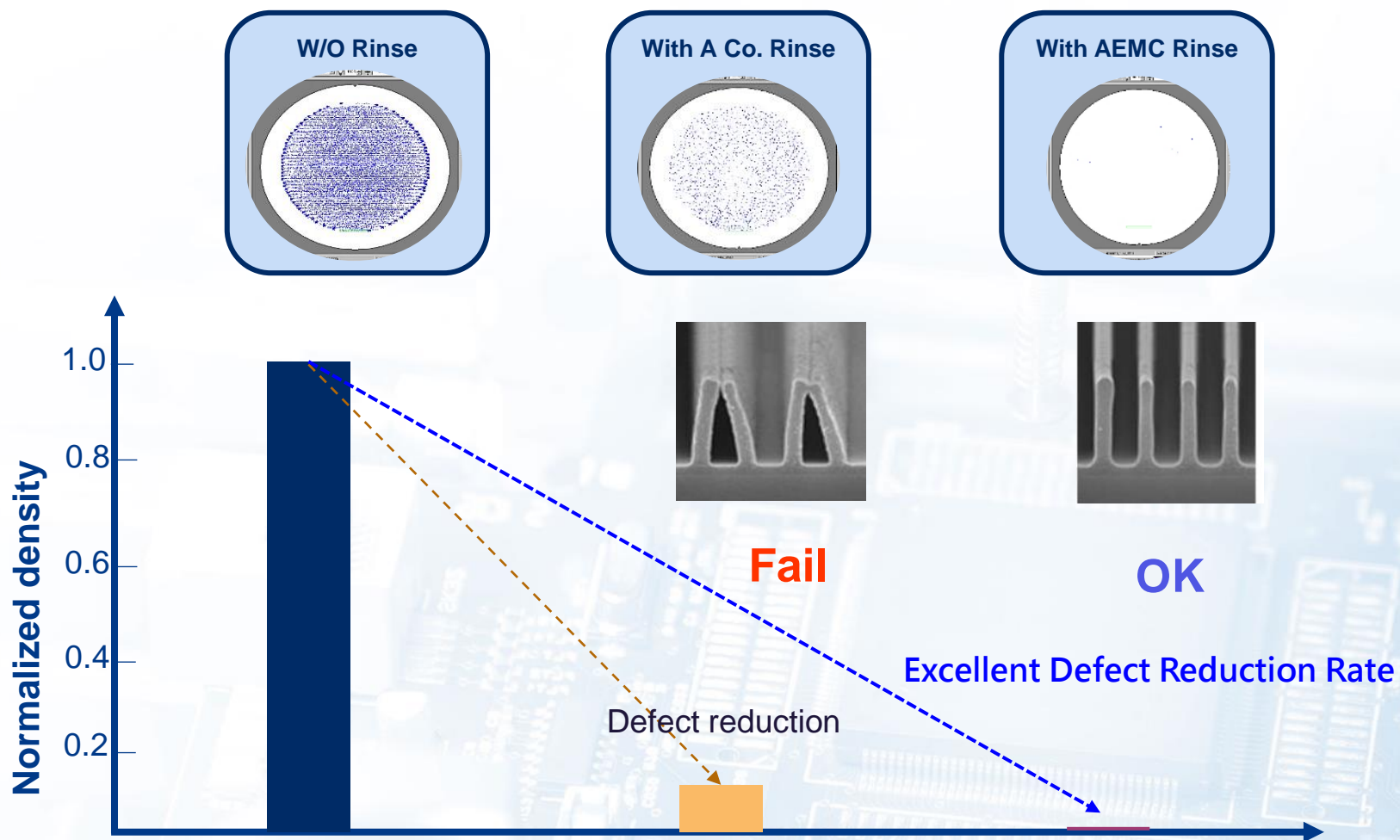
Lithography is a critical process in semiconductor manufacturing and is one of the core technologies that ensures chip quality and stability. Due to the high threshold for material research and production technology, the Lithography process has traditionally relied on imported materials. In 2019, in order to enhance the research and development capabilities and production efficiency of the domestic supply chain, TSMC's Material Supply Chain Management (MSCM) collaborated extensively with the Nano Patterning Technology Division (NPTD) to launch the 'Supplier Raw Material Technology Guidance Program'. Offering expert guidance on the seven major aspects of Lithography process materials, including technology development, quality assurance analysis, data calibration, sample verification, factory configuration, tank optimization, and production expansion planning. The program has not only effectively reduced the supplier's line setup and product verification time by 50%, but its material quality also surpasses TSMC's process standards, further improving yield rates and strengthening the competitiveness of the supplier in all aspects. This initiative has laid a solid foundation for the development of the domestic Lithography process material supply chain.



Source: Foundry Customers' ESG Website
<https://esg.tsmc.com/en/update/responsibleSupplyChain/caseStudy/42/index.html>

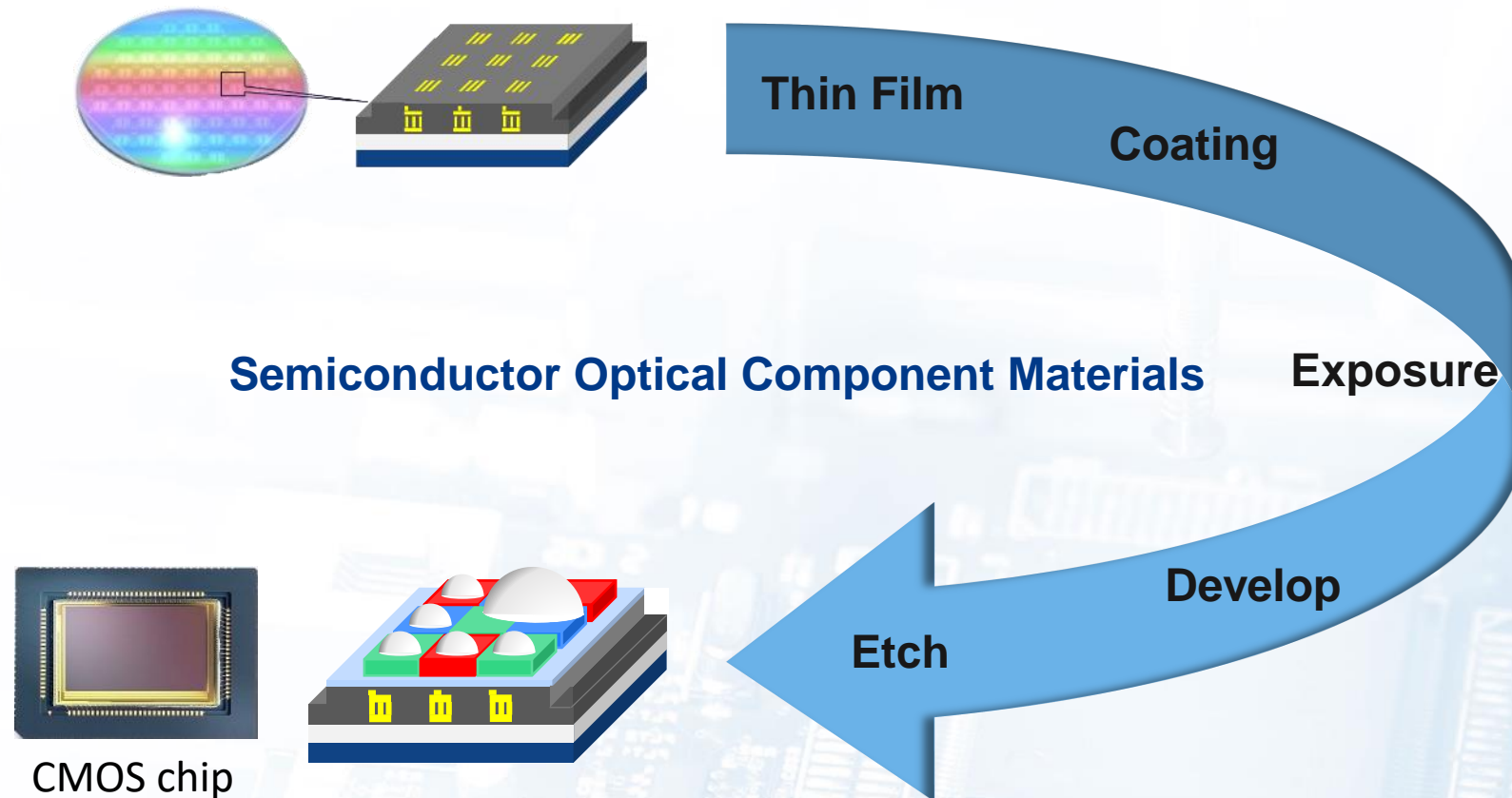
Defect comparison

The performance of AEMC's Rinse materials ranks No. 1 in the world.



AEMC Product

- ✓ Over Coat PR
- ✓ Adhesive Promoter
- ✓ Photo Resist
- ✓ Micro lens PR
- ✓ Micro lens Protection PR



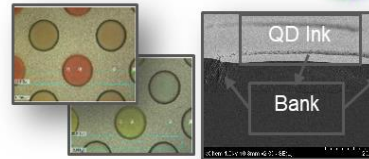
TFT-LCD PR Materials



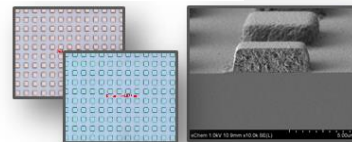
- TFT LCD PR
- CF PR



QD Ink
Resolution: 30~50 μ m
Color Gamut
(NTSC>120%)



QD PR
Resolution: 3~5 μ m
Color Gamut
(NTSC>120%)



Micro LED QD Key Materials



- QD Ink/PR
- Gray/White Block Layer PR
- Release Layer PR
- Bottom Fill Gel
- Low-Temperature PR
- High/Low Refractive Index Materials

Industry	Category	Product	Application
Semiconductor Specialty Chemicals	Advanced Litho Process	Rinse	Litho Process Yield Improvement
		EBR	Litho Process Wafer Edge Cleaning
		Cleaner	Litho Process Pipeline Cleaning
		Developer	Litho Process Development
		BARC	Litho Process Anti-Reflective Coating
	Optical Component	Image Sensor Material	Litho Process Adhesion Promotion
		Micro-Optical Component Material	Litho Process Film Deposition Pattern Alignment
Display Specialty Chemicals	TFT	Photoresist	Photolithographic Imaging Component Fabrication
	CF	Photoresist	Photolithographic Imaging Filters RGB/BM
	Micro LED	Photoresist	Inkjet Printing Photolithography Imaging

Mass production V
Under verification O

Litho Process Materials		AEMC	BASF	MERCK	JSR	SHIN ETSU	FUJIFILM	TOK	Sumitomo	Nissan Chemical	DOW
		TW	DE	DE	JP	JP	JP	JP	JP	JP	US
Photoresist	CIS	V					V				
	G/I-line	V		V	V	V	V	V	V		
	KrF	O		V	V	V	V	V	V		V
	ArF	O		V	V	V	V	V	V		V
	EUV				V	V		V	V		
Peripheral Materials	BARC	V								V	V
	Rinse	V		V							
	Cleaner	V	V								
	Developer	V						V			
	EBR	V	V	V	V			V			
	Insulation layer materials	O								V	

Note: Compiled by Mega Securities, based on the company's official website and public information.
The materials above focus on the front-end process of semiconductors.

Global Semiconductor Market
697 Billion USD

Semiconductor Materials Market
79.4 Billion USD
(11.4% of Global Market)

Focused Market of
aemc

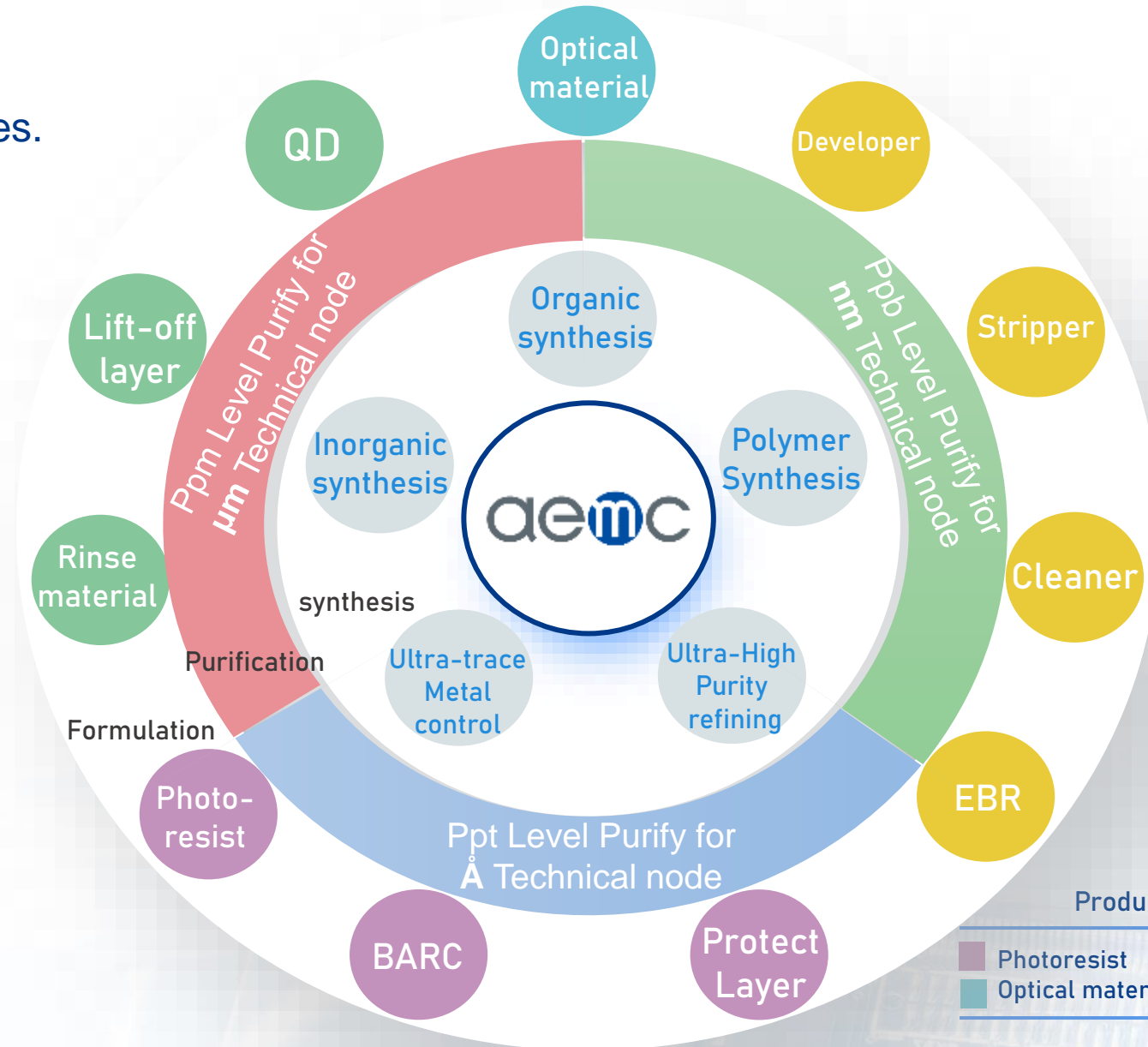
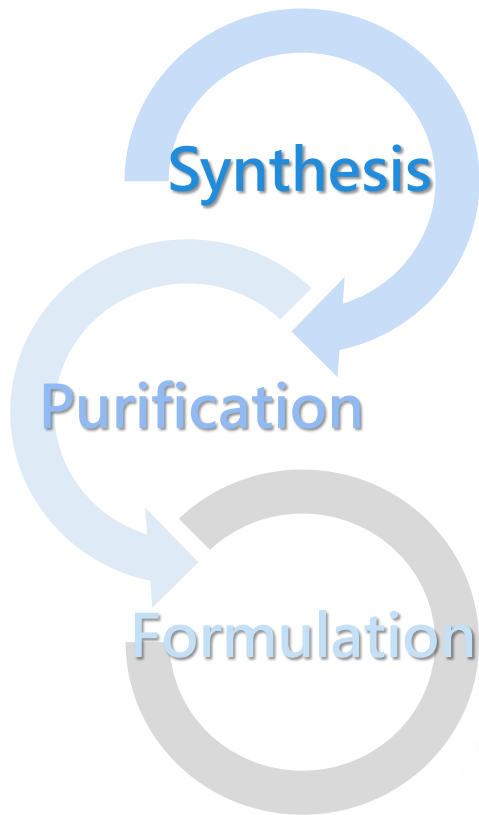
Photoresist and Photoresist Extension
and Ancillary Materials Market
6.7 Billion USD

Sources: WSTS (2024), TECHCET (2021), Estimate by AEMC



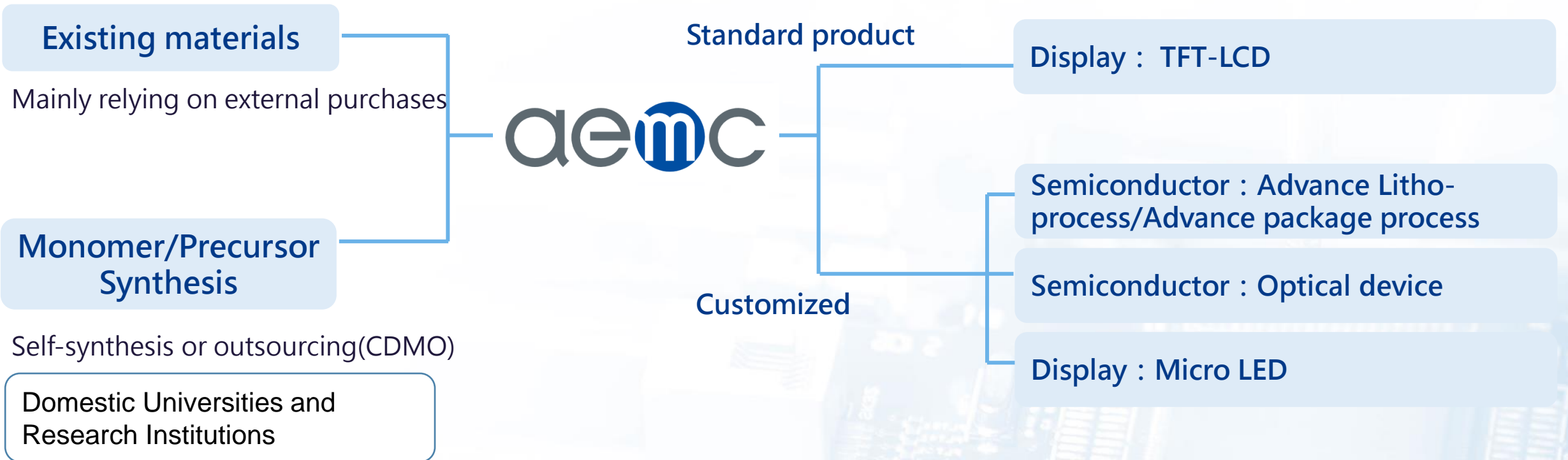
3.Business Advantages

20 Years of Materials and
>1,000 Formulations Databases.



Product Segment

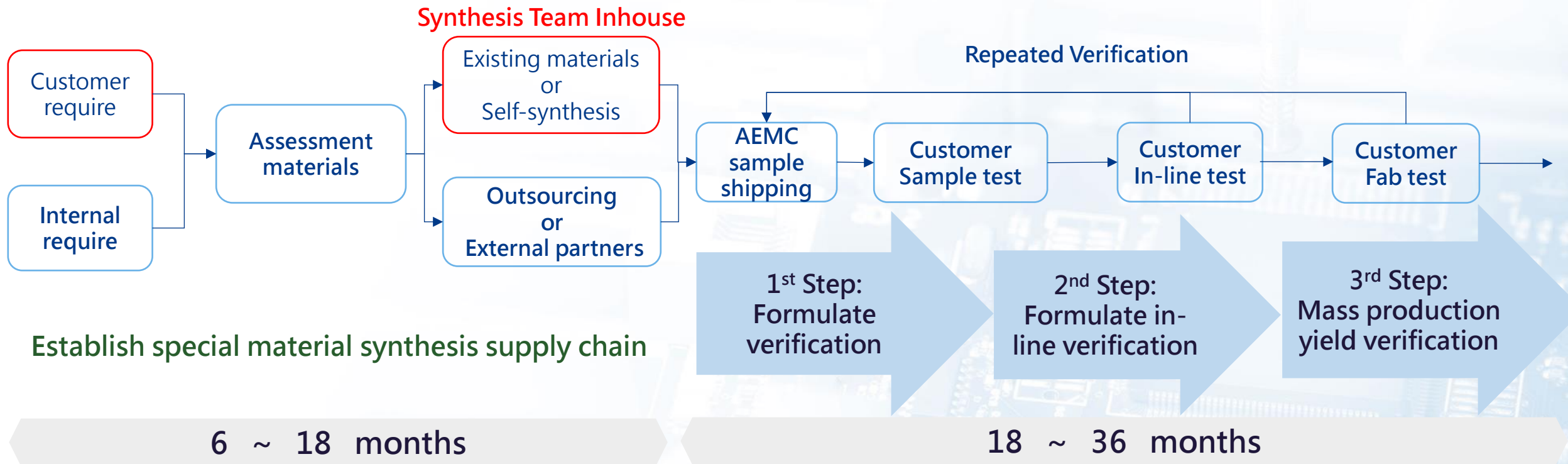
Photoresist	Functional material
Optical material	Specialty chemical



Higher response speed / Sample delivery frequency
Customized development

Raw material Synthesis

Purification and Formulation



Excellent Quality Control

✓ Quality Control Equipment and Systems:

1. Building Equipment of the Same Level as Customers
2. Ultra-Trace Impurity Control to Meet the Requirements of Advanced Semiconductor Processes: Evolving from ppb (10^{-9}) to ppt (10^{-12}) levels
3. Intelligent Quality Monitoring System: Automated Product Inspection and Integrated Quality Data Analysis

Self Designed Manufacturing Technology





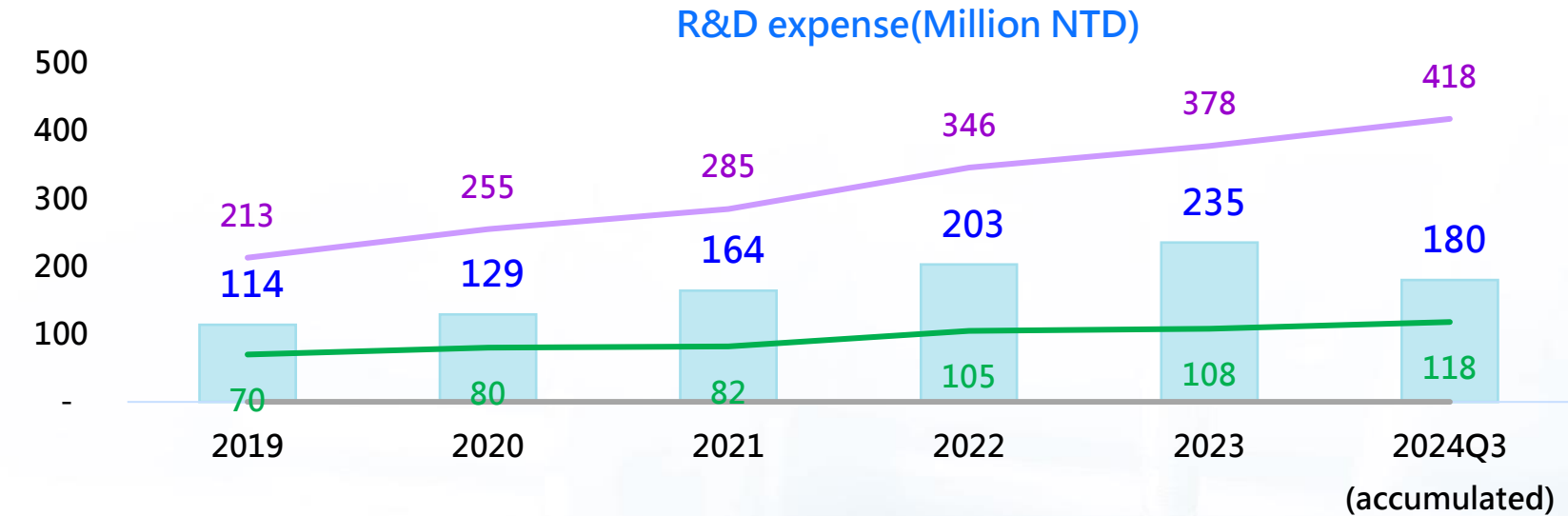
4.R&D Strategy



Since 2018, the accumulated R&D investment in semiconductor material development has reached 1,108 million NTD.

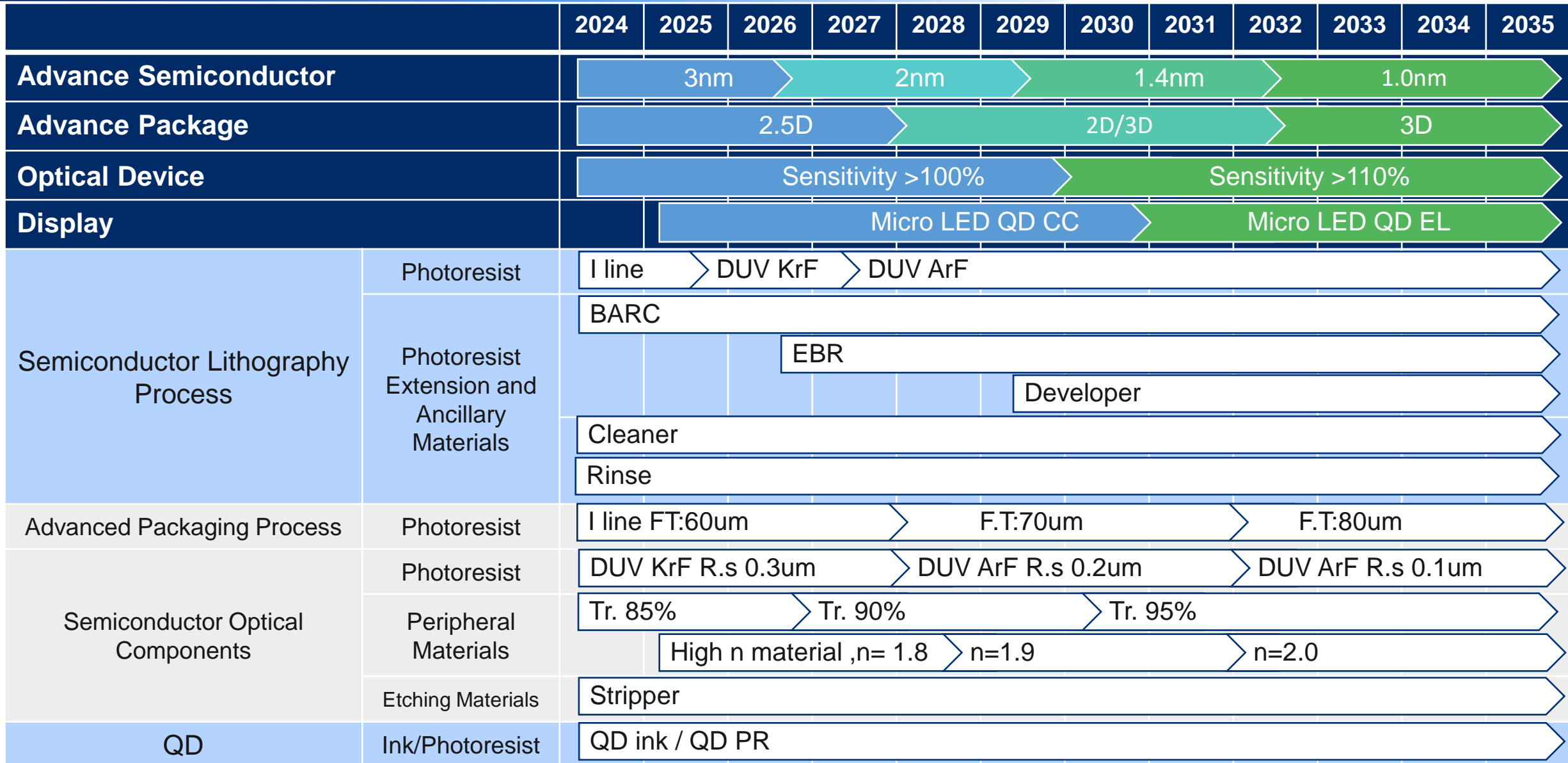


A total of 94 active patents have been obtained
*Including a total of 115 patents that have expired over the years.



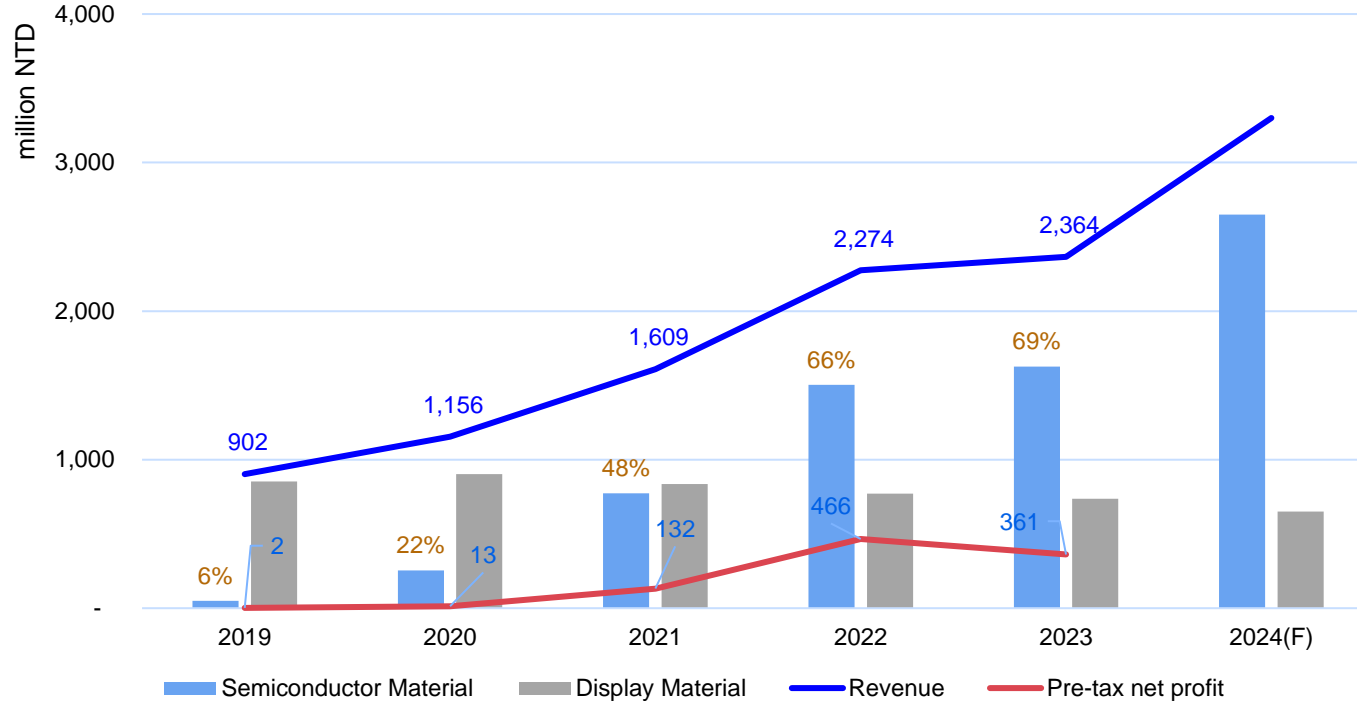
Unit: Million NTD

Year	2019	2020	2021	2022	2023	2024Q3 (accumulated)
R&D expense	114	129	164	203	235	180
Number of R&D Personnel	70	80	82	105	108	118
Total Number of Employees	213	255	285	346	378	418
Percentage of Revenue	12.6%	11.2%	10.2%	8.9%	9.9%	7.5%
Revenue	902	1,156	1,609	2,274	2,364	2,407





5. Operating Results



The revenue for semiconductor materials grew

FY2019
50 million NTD

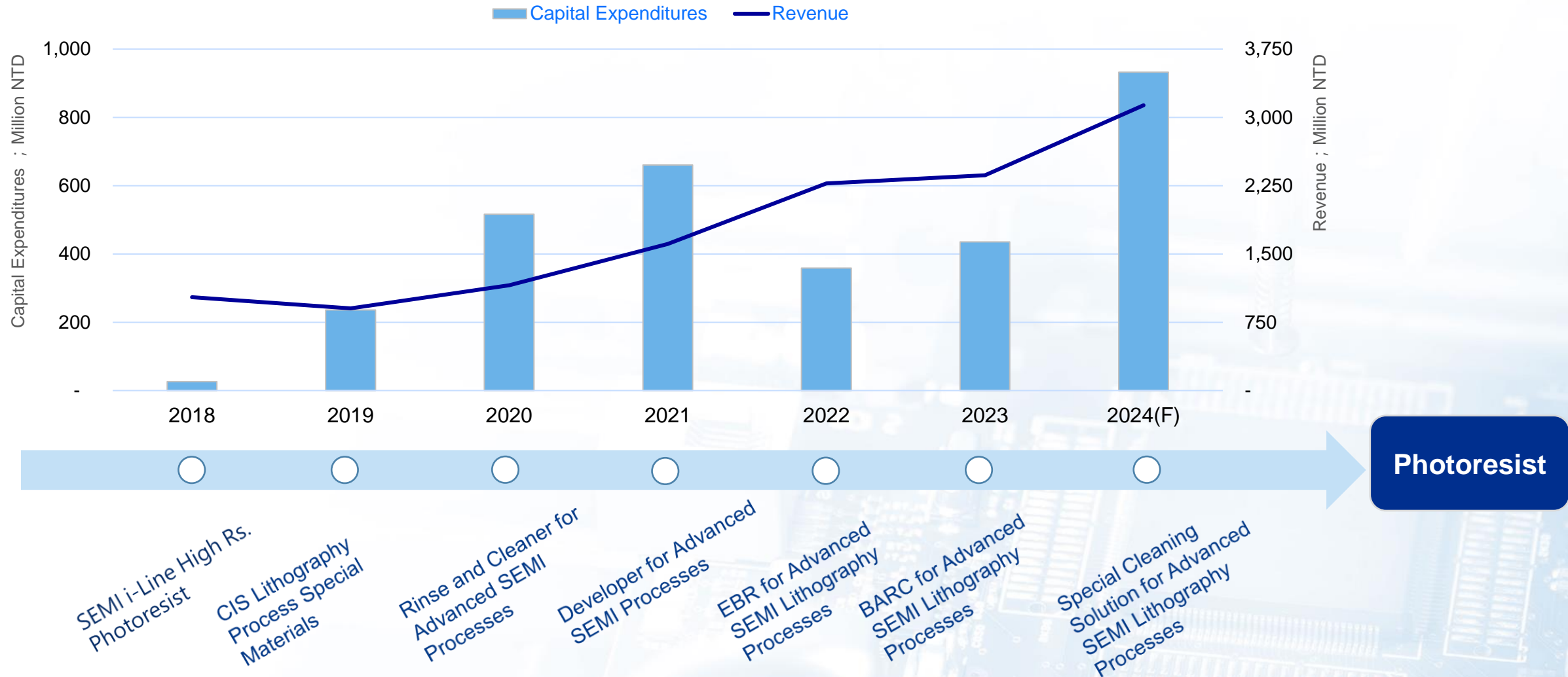


FY2024
2.65 billion NTD

	2019	2020	2021	2022	2023	2024Q3 (accumulated)
Revenue	902,466	1,155,590	1,609,310	2,274,422	2,364,382	2,406,633
Gross Profit	266,671	297,287	422,167	723,053	694,252	856,375
Operating Income	7,423	(6,442)	52,685	295,186	224,802	446,785
Non-Operating Income and Expenses	(5,429)	19,719	79,773	170,771	136,634	183,004
Pre-tax Net Income	1,994	13,277	132,458	465,957	361,436	629,789
EPS	0.03	0.21	1.62	5.01	3.91	6.39

Thousand NTD

Since 2018, the company has transitioned to semiconductor materials development, with cumulative capital expenditures exceeding 3 billion NTD.







AUO

INNOLUX
群創光電


RAYSTAR

WS 

 **CTC**
深 超 光 電

 **PhiChem®**



6. ESG Performance



Awarded a certificate of appreciation by a major wafer foundry customer for the **'Supplier Energy Saving and Carbon Reduction Guidance Program'**



1919 Food Bank

Employees voluntarily organize and participate in ESG activities.



Participation in Environmental Sustainability



Blood Donation Campaign



- Established the 'New Materials Scholarship'
- Founded the 'New Immigrant Children Scholarship'
- Actively participated in 'Industry-Academia Cooperation'

Diversity and Inclusion

2024/6 4 Foreign employees from different nationalities are employed in Taiwan

Gender Equality

- Female employees > 35%
- Female managers at or above the managerial level > 30%
- Female managers in the R&D department > 50%

Diverse Employee Benefits

Free employee meals, child care allowances, housing subsidies, etc.

- 4 Independent directors, accounting for more than 44%
- 2 Female directors, accounting for more than 22%
- Sustainability Report to be issued in 2025





Thank You.