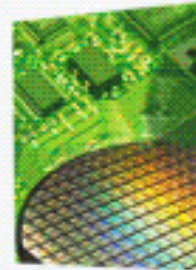
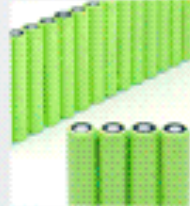


turnkey **Test** and **Auto** **mation**
Solution provider™



————— CHROMA ATE INC. —————

2020.4Q Earnings Conference Call

Paul Ying, CFO

Leo Huang, Chairman & CEO

25th February, 2021

Disclaimer

This presentation contains some forward-looking statements that are subject to substantial risks and uncertainties. Typically, these statements contain words such as “anticipate”, “believe”, “could”, “estimate”, “expect”, “intend”, “plan”, “forecast”, “project”, “predict”, “potential”, “continue”, “may”, “should”, “will”, and “would” or similar words. You should consider these forward-looking statements carefully because such statements are only our expectations or projections about future events, and actual results may differ materially from those expressed or implied by such statements. The forward-looking statements in this presentation include, but are not limited to, growth rates for various markets estimated by third party sources, future products and technology development, widespread market acceptance of the hosted delivery model, future revenue growth and profitability. You should be cautioned that the forward-looking statements are no guarantee of our future performance. The forward-looking statements contained in this presentation are made only as of the date of this presentation and we undertake no obligation to update the forward-looking statements to reflect subsequent events or circumstances, except as required by law.

This presentation and the information contained herein are the property of Chroma Ate Inc.

- **Corporate Profile**
- **Financial Review**
- **Operation Highlights**
- **Q&A**

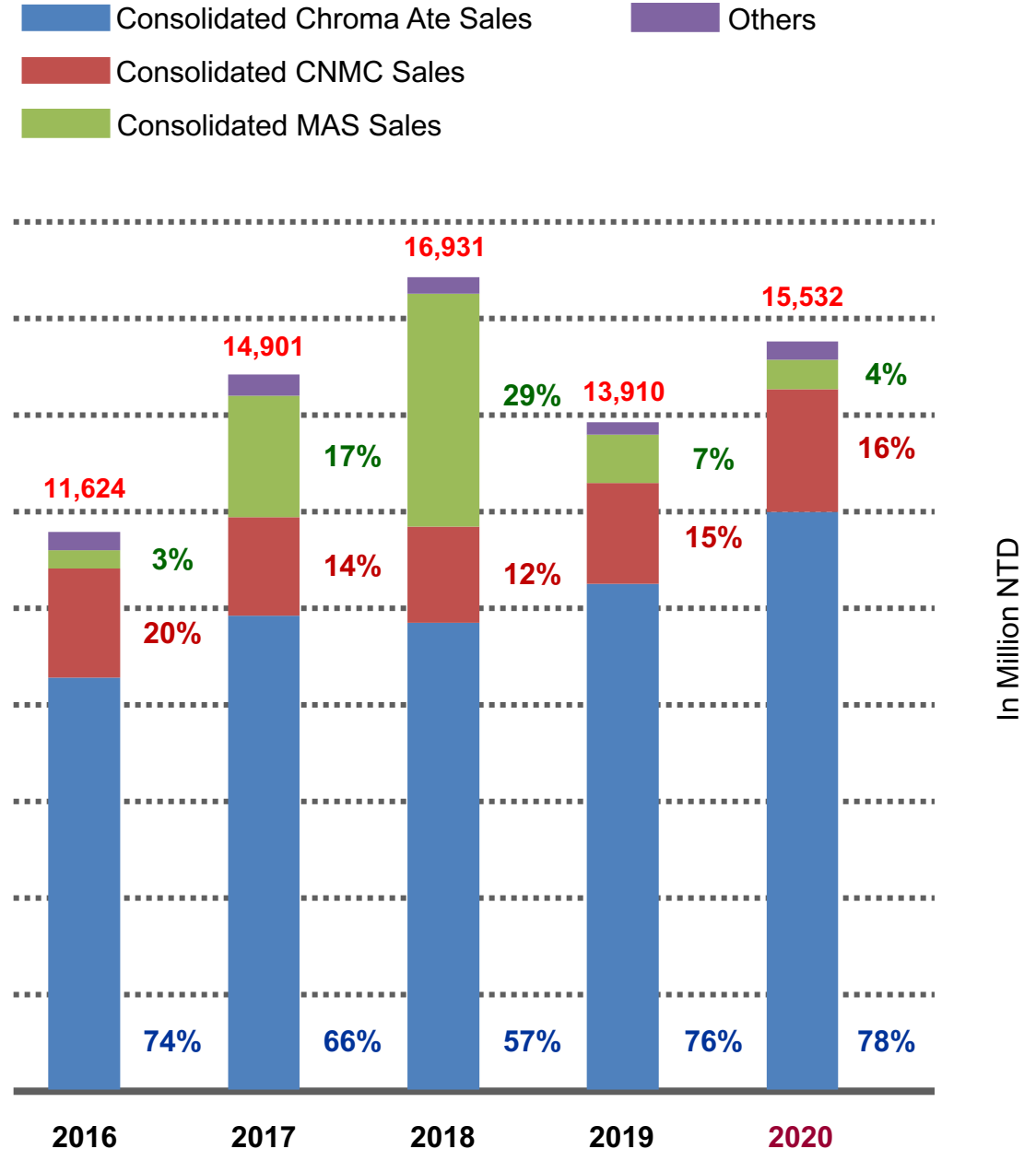
Chroma

**CORPORATE
PROFILE**

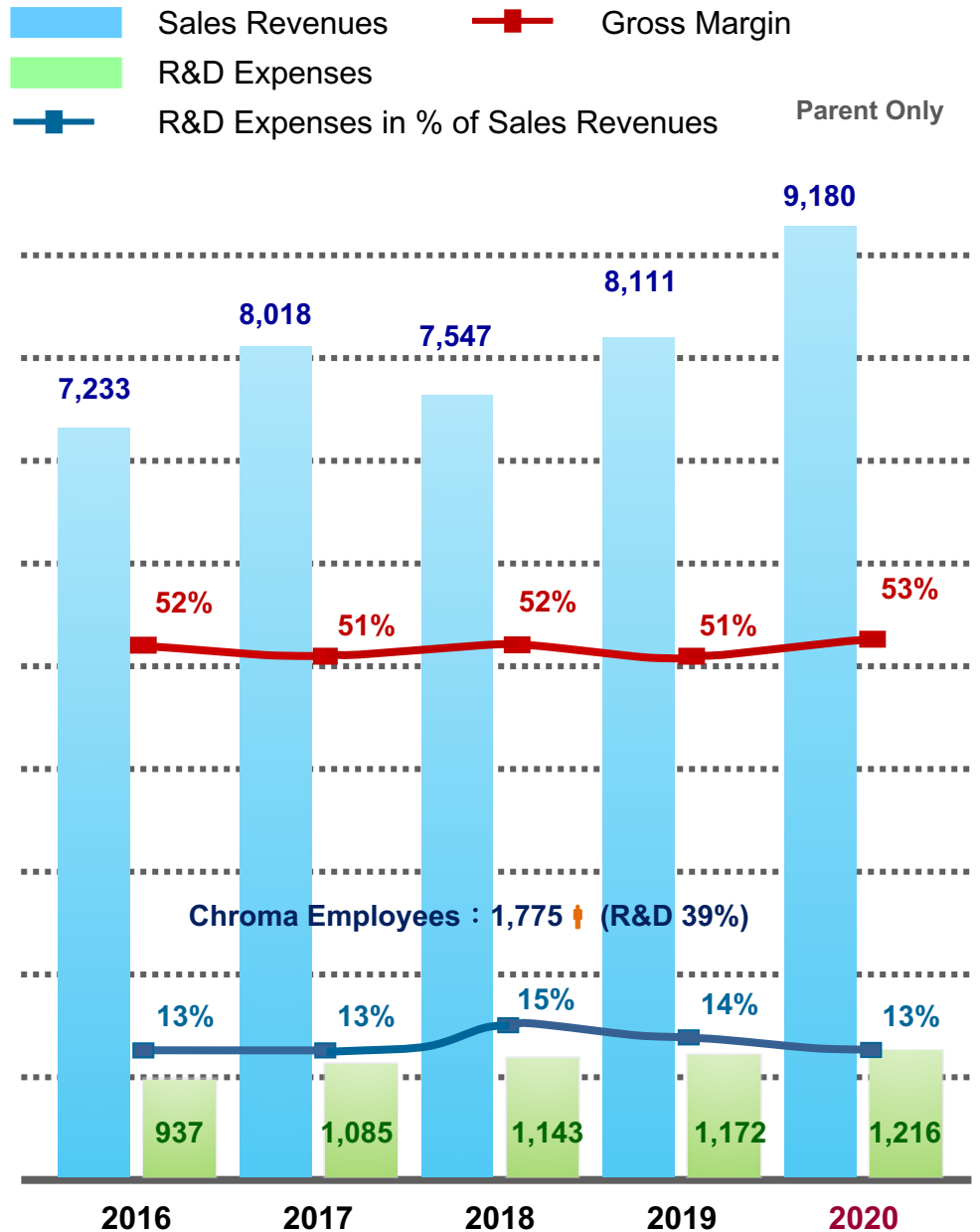
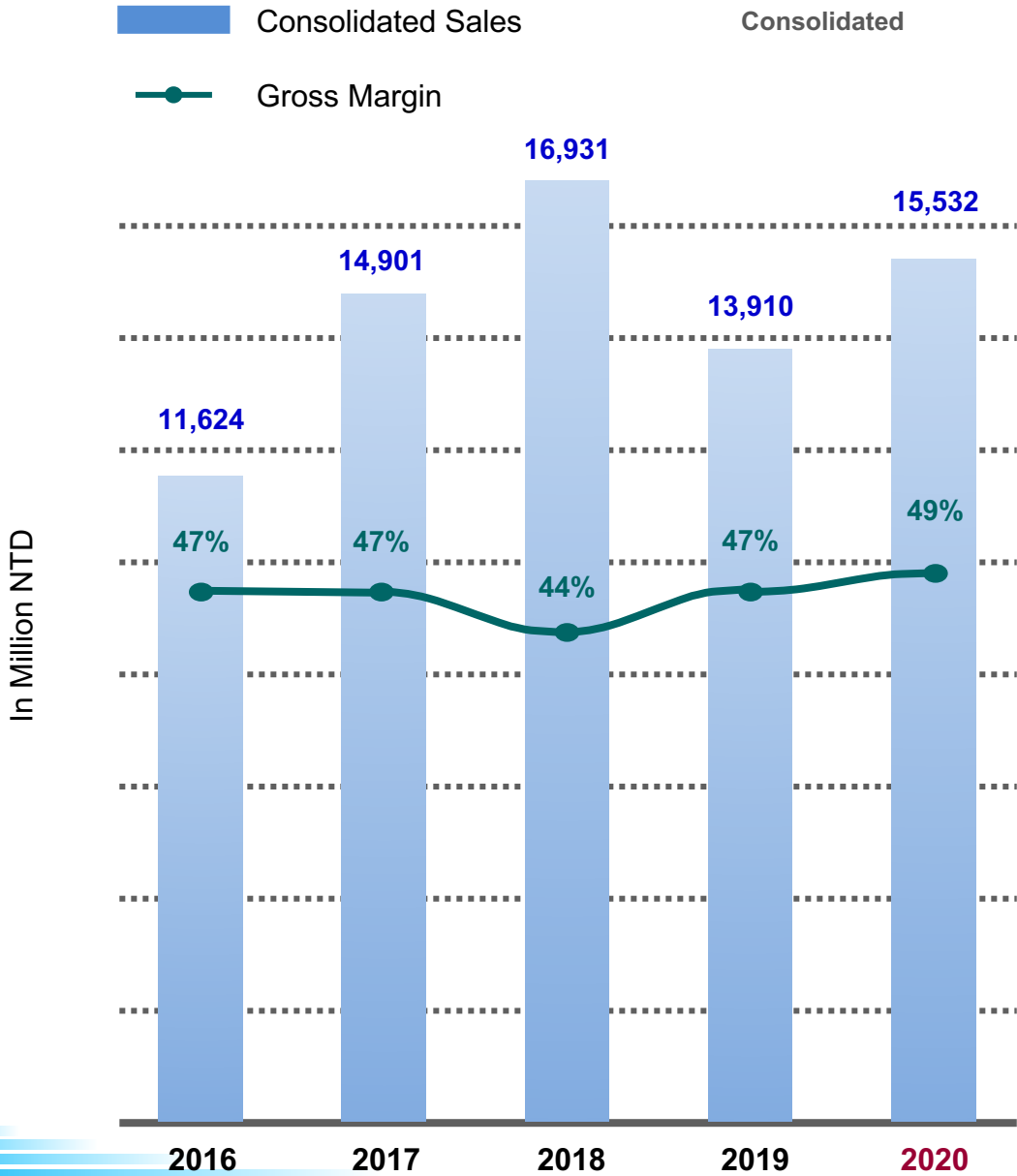
Test
Auto
Solution
providers

Corporate Profile

- Chroma Group founded in 1984, a world leading own brand turnkey test & automation solution provider, specialized in electronics test and measurement instruments and ATS (auto test system). Businesses cover test and measurement instruments and ATS for various industries, and a turnkey solution as an integration of Test and Measurement , Automation and MES (manufacturing execution system).
- Key success: Precision, Reliability, Innovation
- Chroma group encompass business unit of Chroma Ate Inc., Modular Assembly System (MAS) and Chroma New Material Corp (CNMC).
- 2020 Consolidated Sales : NT\$ 15.5 billion
- 2020 Net Income: NT\$ 2.3 billion
- Chroma Group total of 3,019 employees (as of December, 2020)

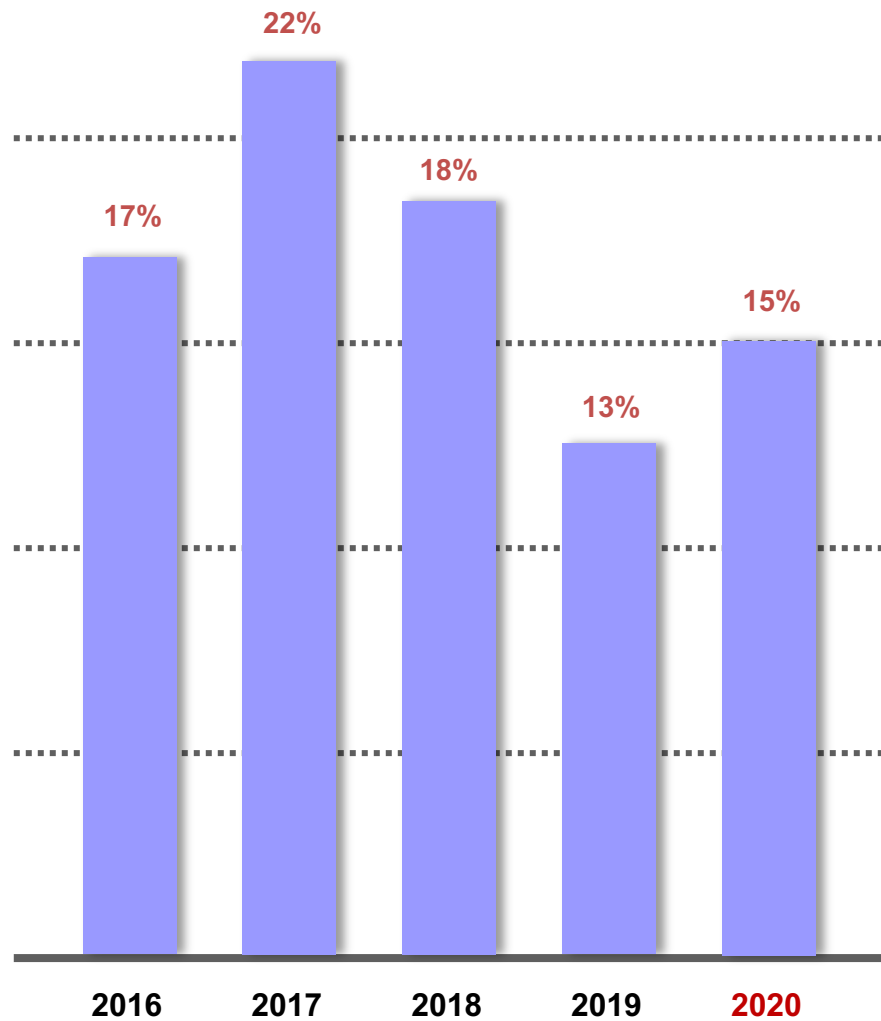


Financial Performance

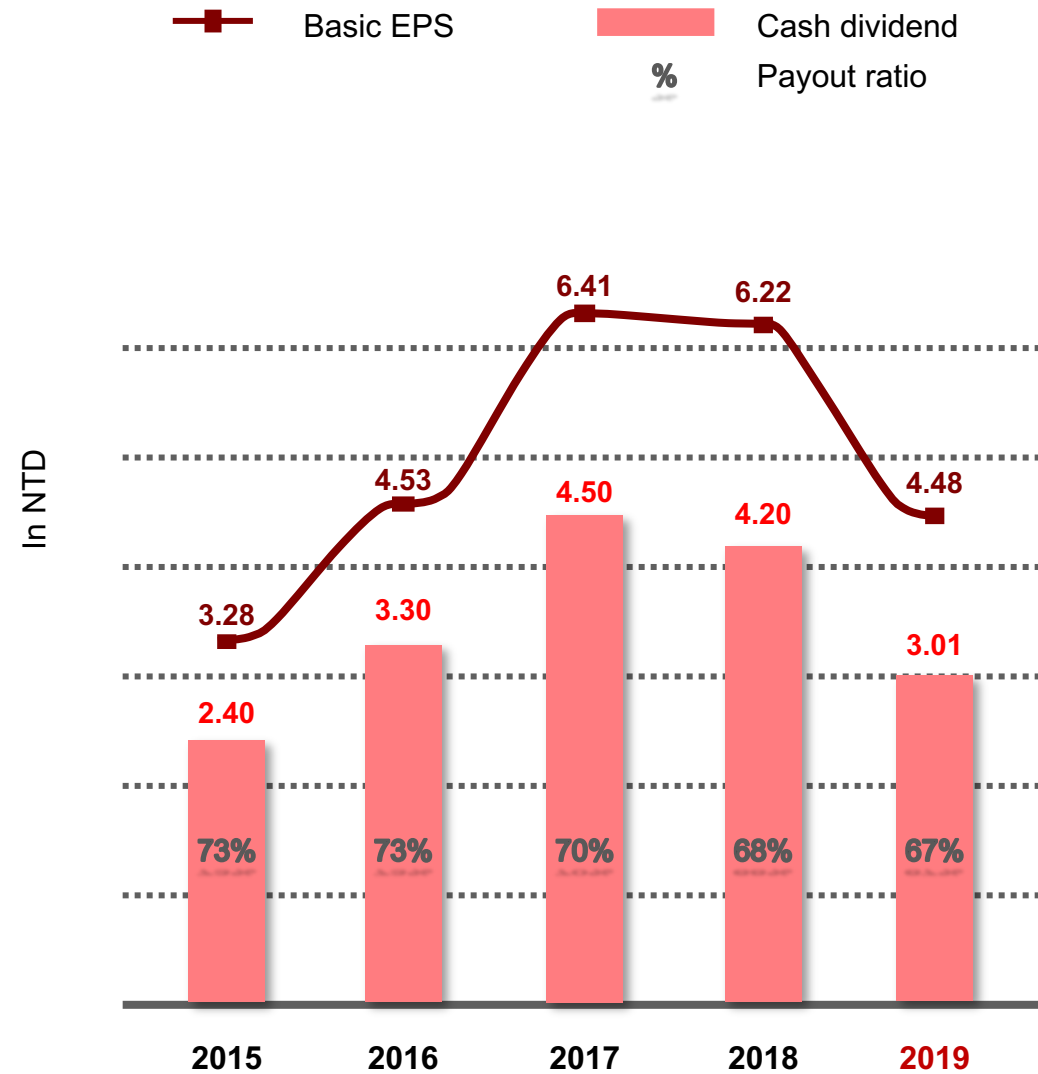


Financial Performance

ROE



Dividend



Global Operation Sites

50

Operation Sites

93

Distributors



EST. 1999



Netherlands: Ede

EST. 2017



Germany: Augsburg

EST. 2008



Japan: Shin-Yokohama/ Nagoya/ Osaka

EST. 2018



Korea: Pango

EST. 1993



United States: Irvine, CA
Santa Clara, CA
Chandler, AZ
Allentown, PA
Albany, NY

EST. 2001



United States: Foothill Ranch, CA
Marlborough, MA
Detroit, MI
Mexico : Ciudad Juarez

EST. 1998



China/ Shenzhen

EST. 1999



China/ Beijing

EST. 2000



China/ Shanghai

EST. 2001



China/ Dongguan



Taiwan: Taoyuan (Headquarters)

EST. 2003



Taiwan: Hsinchu

EST. 2009



Taiwan: Kaohsiung

EST. 2006



China/ Suzhou

EST. 2011



China/ Xiamen

EST. 2011



China/ Chongqing

EST. 2016



Quantel : Singapore

Others:

- India: New Delhi/ Mumbai/ Bangalore
- Thailand: Bangkok
- Vietnam: Hanoi/ Ho Chi Minh
- Malaysia: Kuala Lumpur/ Penang
- Philippines: Manila/ Cebu
- Indonesia: Jakarta

Others: Qingdao/ Zhengzhou/ Xian/Hefei/ Chengdu/ Wuhan/ Hangzhou/ Changsha/ Guangzhou/ Hong Kong

FINANCIAL REVIEW



Year 2020 Condensed Consolidated Income Statement



Condensed Consolidated P&L

(In Million NTD, except for EPS in NTD)

	<u>2020</u>	%	<u>2019</u>	%	YoY %
Net Sales	15,532	100%	13,910	100%	12%
Consolidated Sales of Testing Equipment Business	12,045	78%	10,546	76%	14%
Consolidated Sales of MAS	618	4%	1,009	7%	(39%)
Consolidated Sales of New Material	2,551	16%	2,097	15%	22%
Others	318	2%	258	2%	23%
Cost of Goods Sold	(7,988)	(51%)	(7,329)	(53%)	9%
Gross Profit	7,544	49%	6,581	47%	15%
Operating Expenses:					
General & Administration	(3,405)	(22%)	(3,238)	(23%)	5%
Research & Development	(1,342)	(9%)	(1,283)	(9%)	5%
Operating Income	2,797	18%	2,060	15%	36%
Non-Operating Income (Expenses), net	232	2%	279	2%	(17%)
Income (Loss) Before Tax	3,029	20%	2,339	17%	29%
Income Tax	(648)	(5%)	(449)	(3%)	44%
Net Income	2,381	15%	1,890	14%	26%
Other Comprehensive Income (Losses)	78	1%	(250)	(2%)	n/a
Comprehensive Income	\$ 2,459	16%	\$ 1,640	12%	50%
Net Income (Losses) Attributable To:					
Shareholders of the Parent	2,324	15%	1,854	14%	25%
Noncontrolling Interests	57	-	36	-	58%
	\$ 2,381	15%	\$ 1,890	14%	26%
EPS (Basic)	\$ 5.56		\$ 4.48		24%
EPS (Diluted)	\$ 5.51		\$ 4.42		25%

Balance Sheet Highlights & Financial Ratio

<u>Consolidated</u> (In Million NTD)	<u>2020. Dec</u>	<u>2019. Dec</u>	+ / - %
Balance Sheet Highlights			
Cash & Short Term Investments	4,442	3,455	29%
Inventory	3,028	2,665	14%
Short Term Debt	3,187	2,381	34%
Long Term Debt	2,405	2,422	- 1%
Shareholders Equity	16,389	14,785	11%
Total Assets	28,129	25,437	11%
Inventory Turnover (Day)	130	127	
AR Turnover (Day)	120	133	
AP Turnover (Day)	122	129	
Net Debt to Equity (%)	7%	9%	
ROE (%) ●	15%	13%	
ROA (%) ●	7%	8%	

Cash Position	<u>2020. A</u>	<u>2019. A</u>	YoY
EBITDA	3,527	2,839	24%
Cash Flow from Operation	2,712	1,365	99%
Free Cash Flow ●●	1,165	(902)	n/a

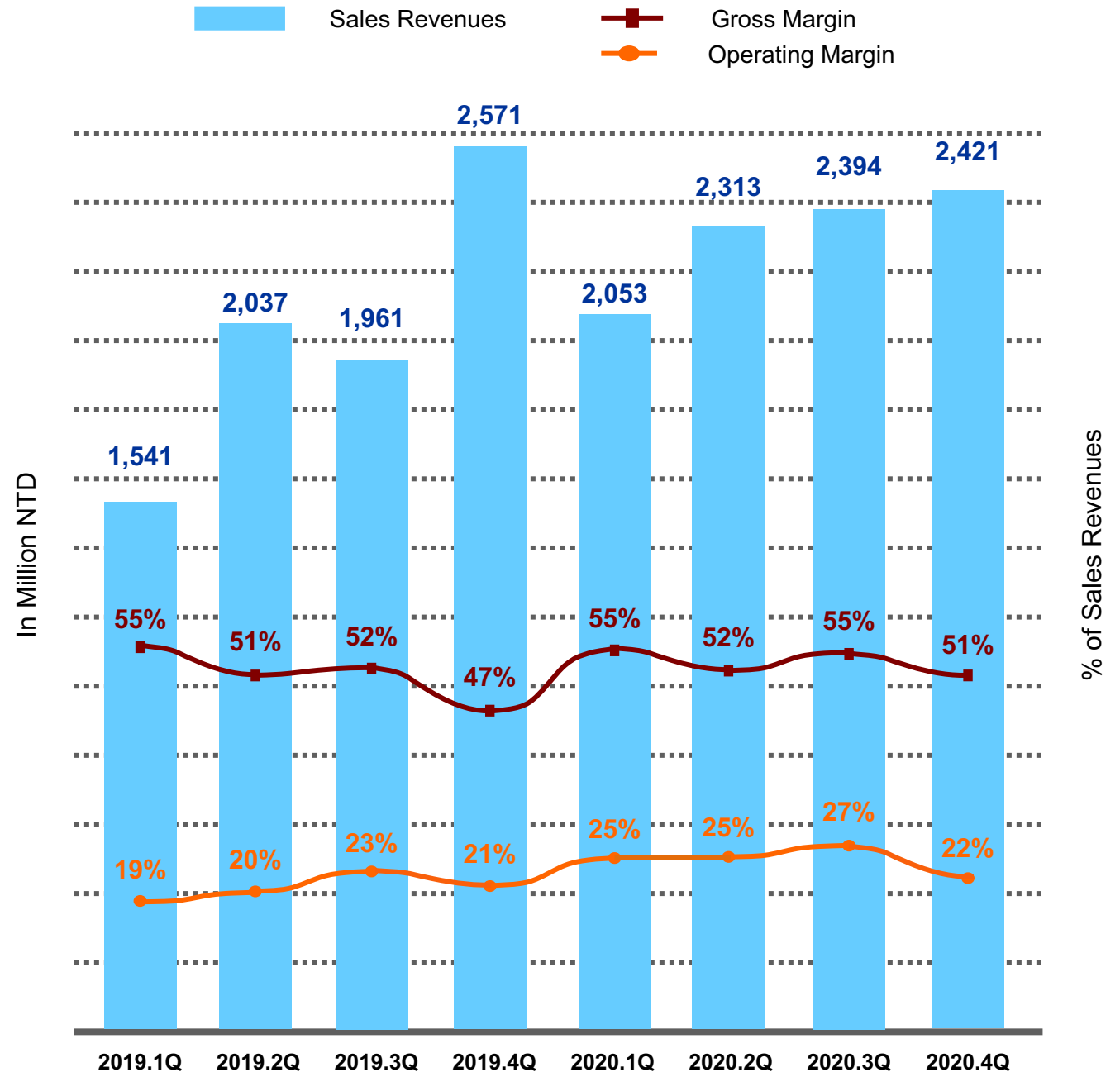
● All ROE + ROA has been annualized.

●● Free Cash Flow = Net Cash Provided by Operating Activities + (Net Cash used by Investing Activities)

Quarterly Highlights

2020.4Q Key Points

- Sales Revenue: \$ 2,421 million, up 1% QoQ, down 6% YoY
- Gross Margin: 51%
- Operating Margin: 22%
- Net Income: NT\$ 686 million, up 18% QoQ, up 14% YoY
- 2020.4Q Highlights:
 - The sales revenues in fourth quarter is mainly contributed from Turnkey Solutions



Year 2020.4Q Condensed Income Statement

<u>Condensed P&L – Parent Only</u> (In Million NTD, except for EPS in NTD)	<u>2020.4Q</u>	%	<u>2020.3Q</u>	%	<u>QoQ</u>	<u>2019.4Q</u>	%	<u>YoY</u>
					%			%
Net Sales	2,421	100%	2,394	100%	1%	2,571	100%	(6%)
Cost of Goods Sold	(1,184)	(49%)	(1,088)	(45%)	9%	(1,370)	(53%)	(14%)
Gross Profit	1,237	51%	1,306	55%	(5%)	1,201	47%	3%
Operating Expenses:								
General & Administration	(365)	(15%)	(353)	(15%)	3%	(339)	(13%)	8%
Research & Development	(329)	(14%)	(307)	(13%)	7%	(311)	(13%)	6%
Operating Income	543	22%	646	27%	(16%)	551	21%	(1%)
Non-Operating Income (Expenses), net ●	275	11%	50	2%	450%	195	8%	41%
Income (Loss) Before Tax	818	33%	696	29%	18%	746	29%	10%
Income Tax	(132)	(5%)	(113)	(5%)	17%	(142)	(6%)	(7%)
Net Income	\$ 686	28%	\$ 583	24%	18%	\$ 604	23%	14%
Other Comprehensive Income	105	4%	47	2%	123%	(211)	(8%)	n/a
Comprehensive Income	\$ 791	32%	\$ 630	26%	26%	\$ 393	15%	101%
EPS (Basic)	\$ 1.64		\$ 1.39		18%	\$ 1.45		13%
EPS (Diluted)	\$ 1.62		\$ 1.38		17%	\$ 1.43		13%

● 100% owned subsidiaries' income - New Material: - , MAS: 27m (YoY ↓ 45%),

Year 2020 Condensed Income Statement

Condensed P&L – Parent Only (In Million NTD, except for EPS in NTD)	2020	%	2019	%	YoY %
Net Sales	9,180	100%	8,111	100%	13%
Cost of Goods Sold	(4,313)	(47%)	(4,018)	(50%)	7%
Gross Profit	4,867	53%	4,093	50%	19%
Operating Expenses:					
Selling and General & Administration	(1,390)	(15%)	(1,231)	(15%)	13%
Research & Development	(1,217)	(13%)	(1,172)	(14%)	4%
Operating Income	2,260	25%	1,690	21%	34%
Non-Operating Income (Expenses), net ●	535	5%	460	6%	16%
Income (Loss) Before Tax	2,795	30%	2,150	27%	30%
Income Tax	(471)	(5%)	(296)	(4%)	59%
Net Income	\$ 2,324	25%	\$ 1,854	23%	25%
Other Comprehensive Income	89	1%	(246)	(3%)	n/a
Comprehensive Income	\$ 2,413	26%	\$ 1,608	20%	50%
EPS (Basic)	\$ 5.56		\$ 4.48		24%
EPS (Diluted)	\$ 5.51		\$ 4.42		25%

● Non-operating Income included 100% owned subsidiaries' income - New Material: 20m (YoY ↓ 31%), MAS: (136m).

Balance Sheet Highlights & Financial Ratio

Parent Only (In Million NTD)

Balance Sheet Highlights

	<u>2020. Dec</u>	<u>2019. Dec</u>	+ / - %
Cash & Short Term Investment	902	459	97%
Inventory	2,331	2,026	15%
Short Term Debt	2,420	1,615	50%
Long Term Debt	2,230	2,285	- 2%
Shareholders Equity	16,063	14,489	11%
Total Assets	24,406	21,803	12%
Inventory Turnover (Day)	184	178	
AR Turnover (Day)	106	123	
AP Turnover (Day)	96	102	
Net Debt to Equity (%)	23%	24%	
ROE (%) ●	15%	13%	
ROA (%) ●	10%	9%	

Cash Position

	<u>2020. A</u>	<u>2019.A</u>	YoY
EBITDA	3,053	2,400	27%
Cash Flow from Operation	2,049	1,537	33%
Free Cash Flow ●●	606	(218)	n/a

● All ROE + ROA has been annualized.

●● Free Cash Flow = Net Cash Provided by Operating Activities + (Net Cash used by Investing Activities)

**OPERATION
HIGHLIGHT**



2020 Product Mix and Consolidated Sales Breakdown

(Unit: Million NTD)

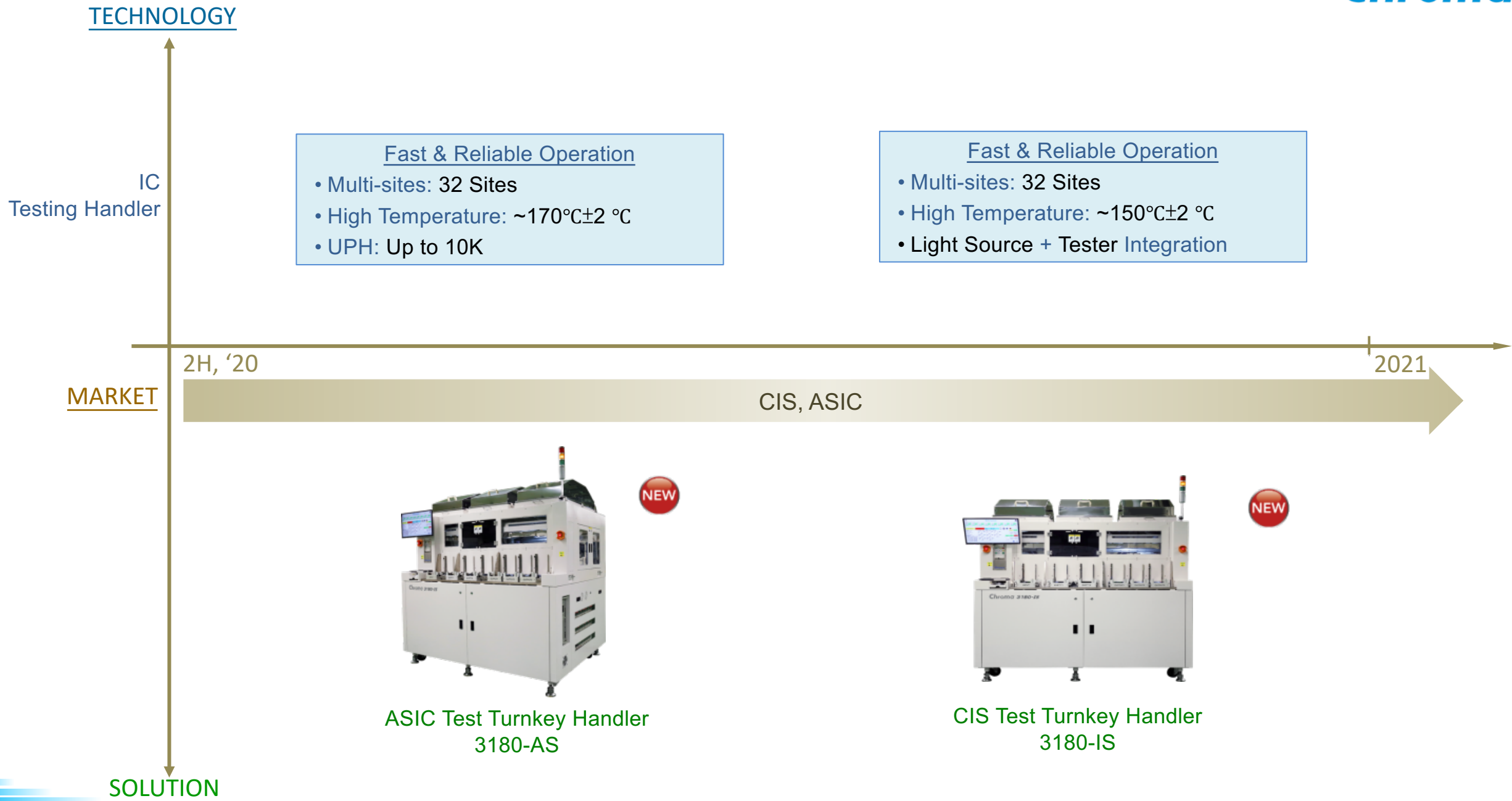
	<u>2020</u>	<u>%</u>	<u>YoY</u>	<u>2019</u>	<u>%</u>
Test Instruments & Automatic Testing System (ATS)	4,849	53%	5%	4,605	57%
Semiconductor / Photonics Test Solutions	3,025	33%	31%	2,311	28%
Turnkey Solutions	456	5%	(28%)	632	8%
Service & Others	850	9%	51%	563	7%
Total of Parent Company Sales	9,180	100%	13%	8,111	100%
+ Sales from Overseas Operations & Related Subsidiaries	2,865		18%	2,435	
Chroma Consolidated Testing Equipment Business	12,045	78%	14%	10,546	76%
MAS	618	4%	(39%)	1,009	7%
New Material	2,551	16%	22%	2,097	15%
Other Subsidiaries	318	2%	23%	258	2%
Consolidated Sales	15,532	100%	12%	13,910	100%



Year 2021 Guidance

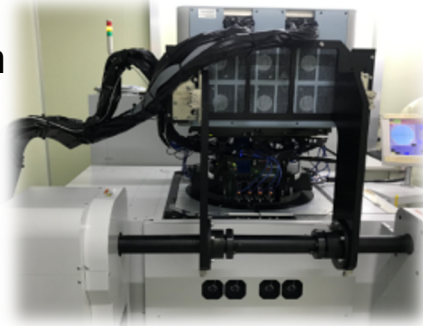
- In Year 2020, Chroma total consolidated sales revenues reached 15.5 billion NTD, presented a growth of 12% YoY. The Parent Company sales revenues hit historical record high reached 9.2 billion, presented a growth of 13% YoY, mainly contributed from Semiconductor / Photonics testing solutions which increased by 31% compared to year 2019.
- 2021 Business Outlook:
 - ✓ Continue to see strong demand for Semiconductors / Photonics testing solutions, which is driven by global semiconductor chip shortage and development of 5G-related and high performance chip (HPC) applications. Key drivers are:
 - High Reliability Testing Solutions : Burn-in Test, SLT Test with thermal control
 - Wireless RF and MCU testing solutions
 - CIS / VCSEL / ToF testing solutions
 - Semiconductor inspection and metrology solutions
 - ✓ The Test Instruments & ATS for power testing solutions continues benefit from green energy, included EV related components, battery cell / module / pack and smart-grid and 5G / Server related power testing.

Semiconductor Test Solution



CMOS Image Sensor 32 site CP Test

- ✓ **High pixel, high resolution** sensors
- ✓ **Wafer level** packaging
- ✓ **32-site** direct mount test
- ✓ Based on **3380 VLSI** Test System
- ✓ Integrated CRAFT Software



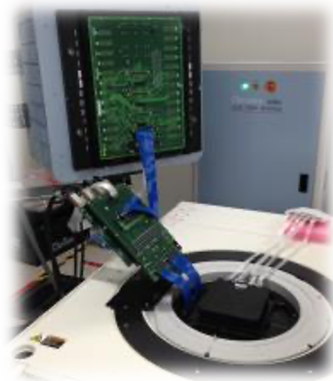
CMOS Image Sensor FT Test

- ✓ **High pixel, high resolution** sensors
- ✓ **Packaged** sensors
- ✓ **Flexible #** of parallel test sites
- ✓ Based on **3300 PXIe** platform
- ✓ Integrated CRAFT Software



CMOS Image Sensor 8 site CP Test

- ✓ Surveillance, **<10M pixel** sensors
- ✓ **Wafer level** sampling test
- ✓ **4-8 site** cable mount test
- ✓ Based on **3380 VLSI** Test System
- ✓ Integrated CRAFT Software



CMOS Image Sensor FT Test with SLT Handler

- ✓ Surveillance, **<10M pixel** sensors
- ✓ **Packaged** sensors
- ✓ **6-12 site** parallel test
- ✓ Based on **3300 PXIe** platform
- ✓ Integrated CRAFT Software



Photonics Test Solution

TECHNOLOGY

Photonics Testing

Photonics Wafer Tester

- LIV & NF 2-in-1 test with one probe mark
- Measureable Optical Power Range: 1mW~5W
- Throughput: 2300UPH

High Voltage SMU

- High Voltage Source: Up to 80V DC
- Measurement Accuracy : 0.02uA
- DUT Protection: Spike Free

Photonics Module Tester

- Max. 4 different optical heads
- Measureable Optical Power Range: 1uW~20W
- Wavelength Resolution: 0.05nm

2H, '20

2021

MARKET

3D Sensing, LiDAR, Optical Fiber Communication



NEW

Photronics Device Probing LIV & NF Test System
58635-LN



NEW

Photronics Module Semi-Automatic Test System
58625

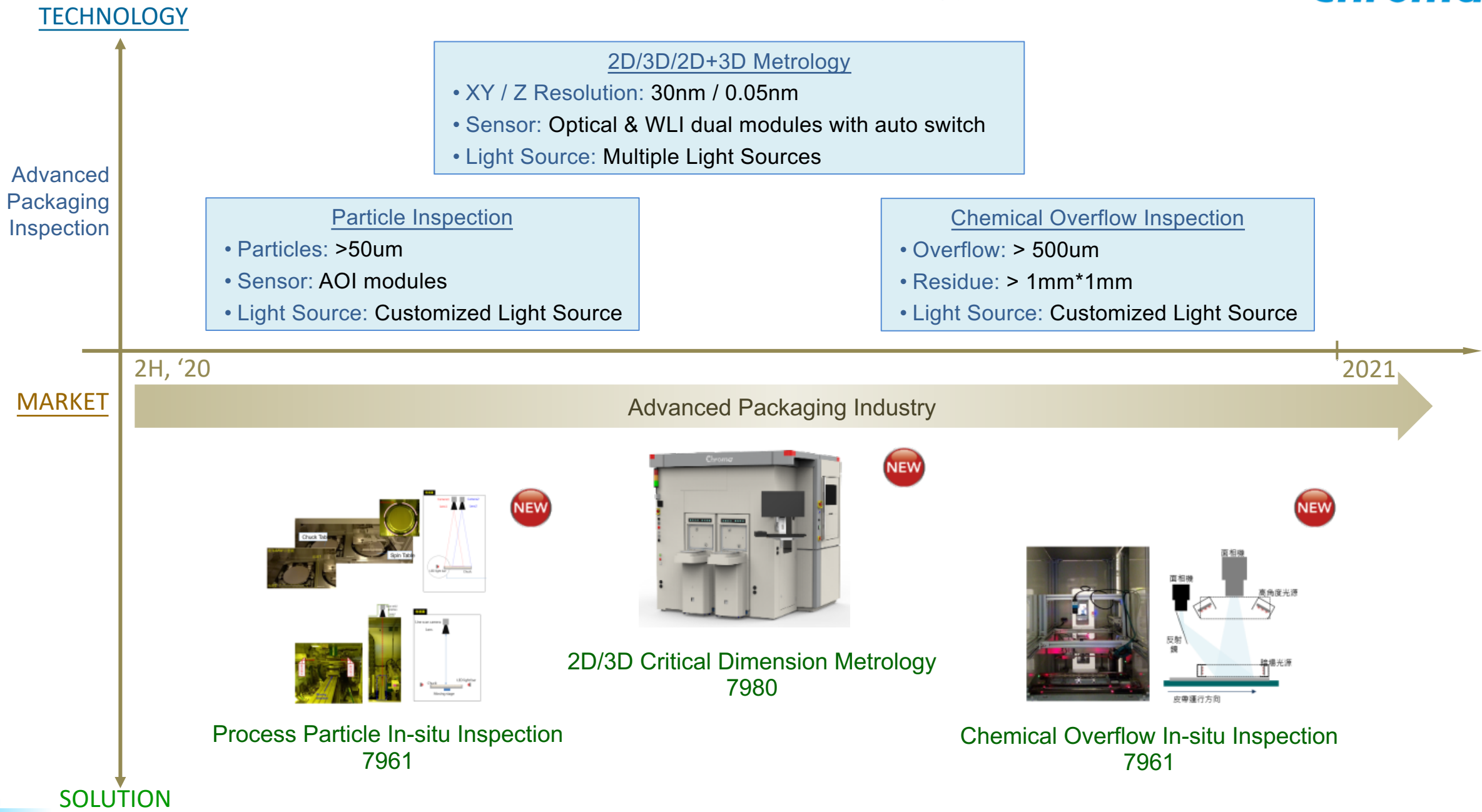


NEW

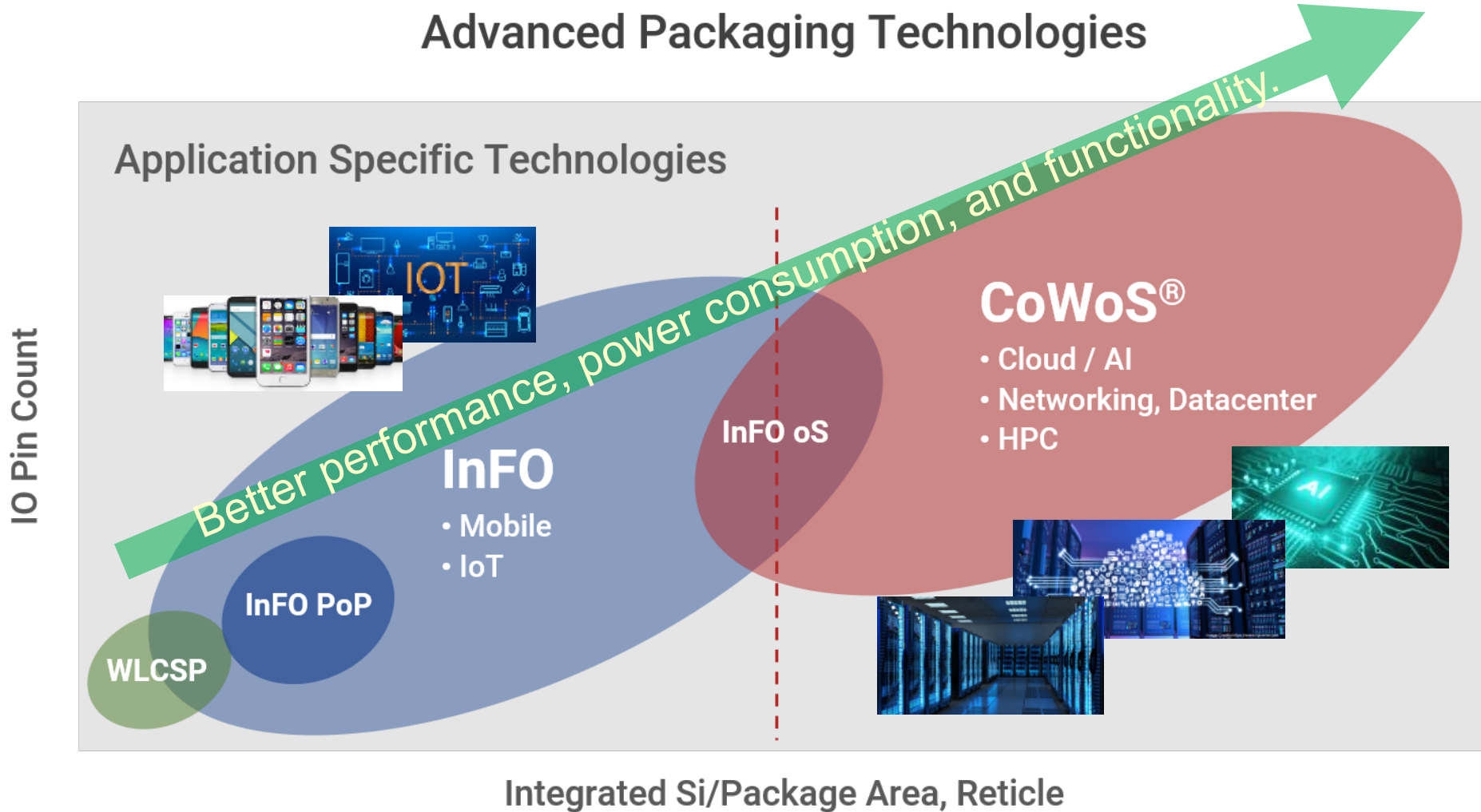
PD/APD Burn-in & Reliability Test System
58606

SOLUTION

Semiconductor Inspection & Metrology Solution

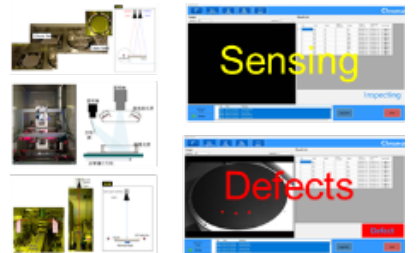


Advanced Packaging Technologies



Measurement

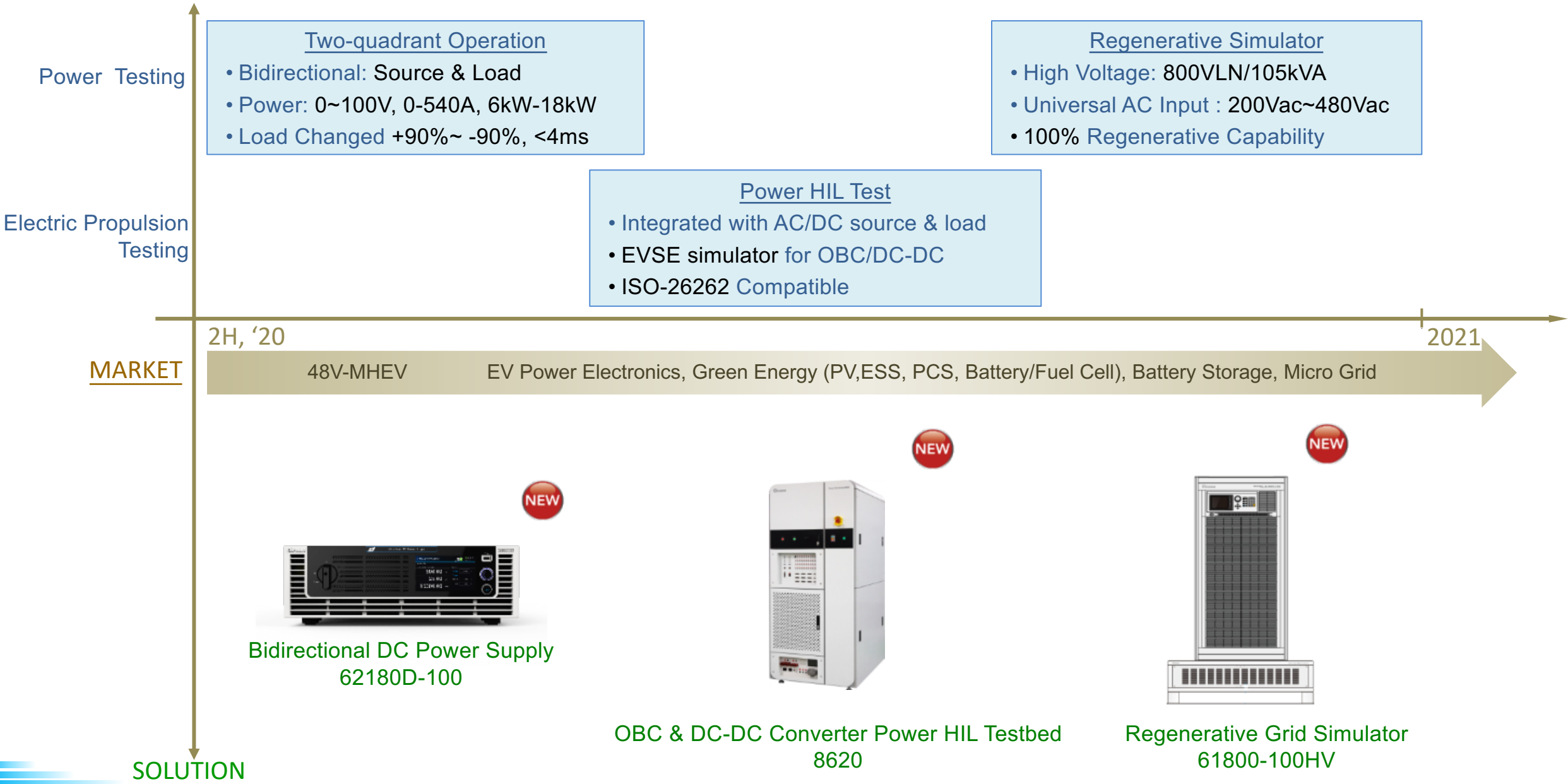
- ✓ Critical Dimension
- ✓ TSV
- ✓ Overlay
- ✓ Film Thickness



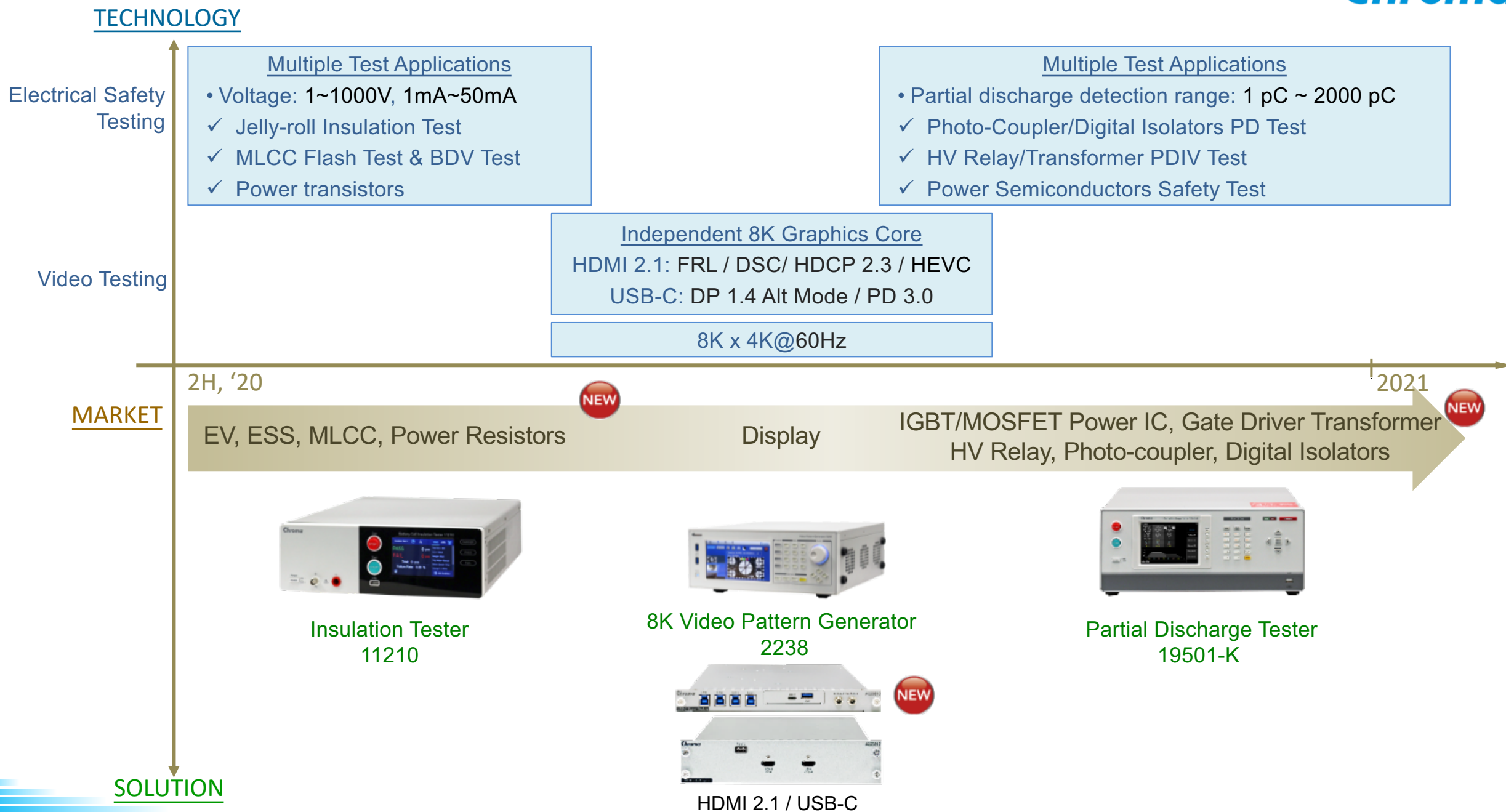
Process In-situ Inspection

- ✓ SAW Particle
- ✓ Underfill Glue Residue
- ✓ Flux Particle
- ✓ Trim Particle
- ✓ Mount Particle
- ✓ Plating Chemical Residue
- ✓ Grinding Tape Residue

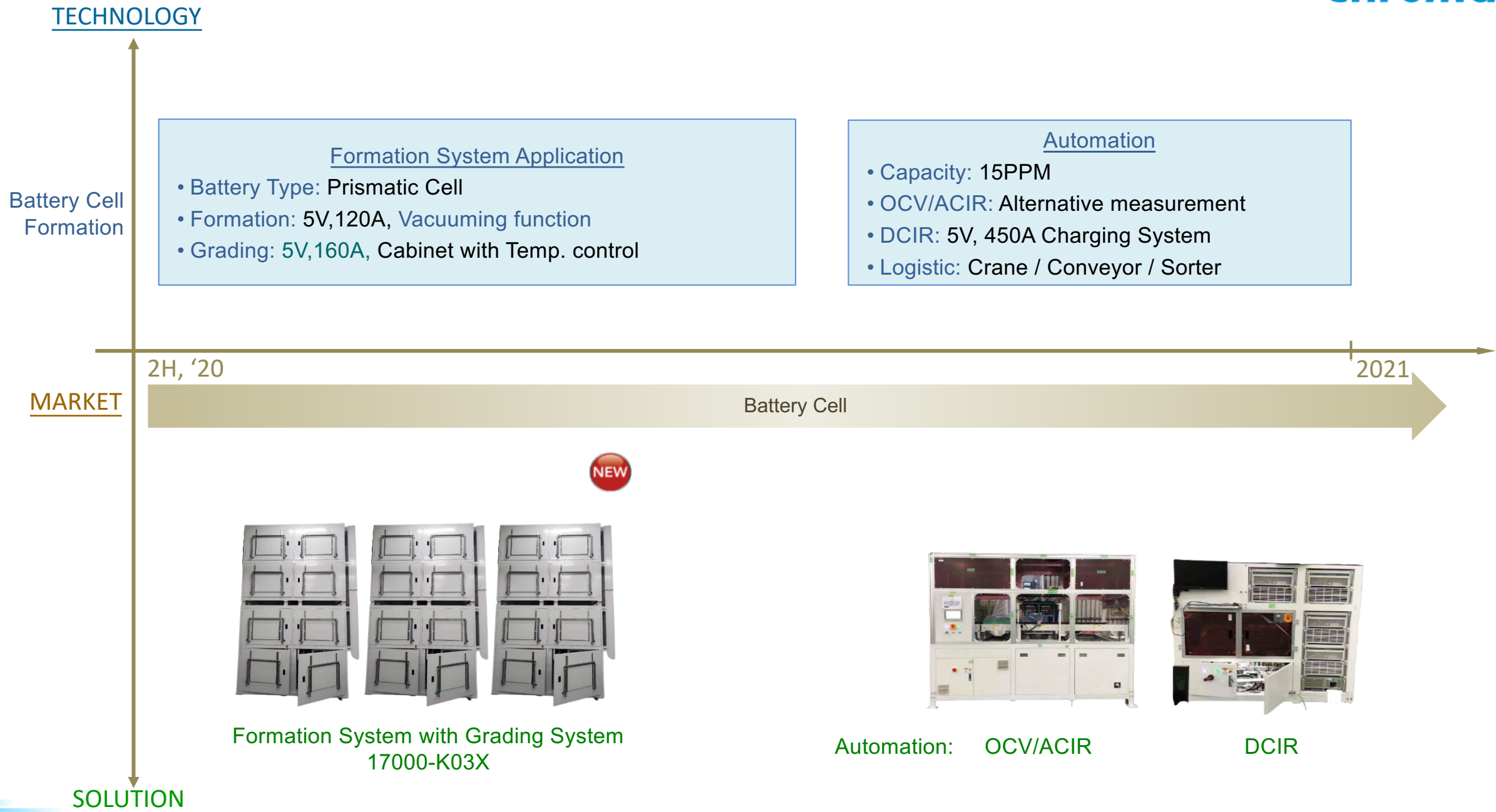
Source: tsmc Website
 3DFabric™ for HPC - Taiwan Semiconductor Manufacturing Company Limited (tsmc.com)



Test Instruments & ATS



Turnkey Solution



SuperSizer™ Series

The Unprecedented Yield Enhancer in the Nanometer Range



SuperSizer™ V

Semi S2 certified
TS explosion-proof certified
For IPA/Organics

US Pat. No 10545082B2
US Pat. No 9625365B2

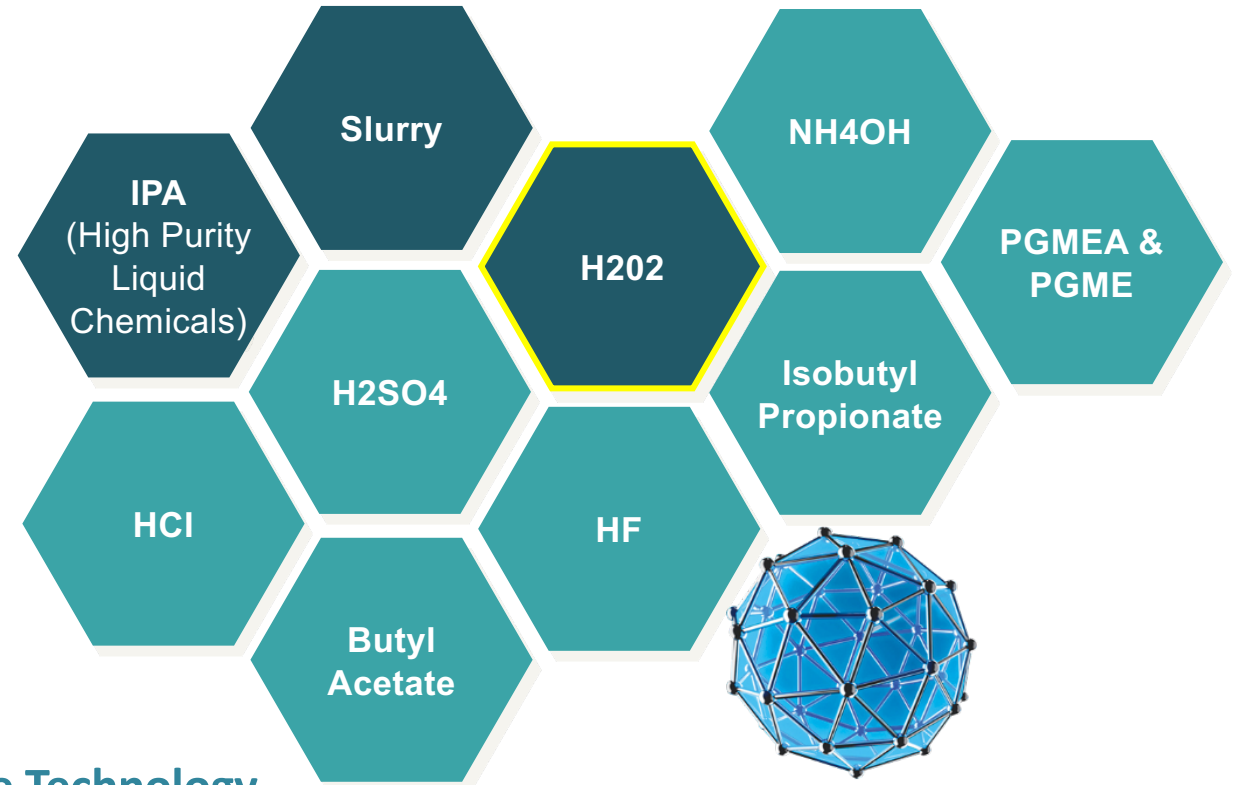


SuperSizer™ VI

Semi S2 certified
For H₂O₂ /UPW

TW Pat. No I583439B
TW Pat. No I549745B

Monitoring Materials



Core Technology

Aerosol Measurement Technology

Target

Particles (hard particles)
Impurities (soft particles)

Advantage

No Bubble Interference

Resolution

~1nm@20nm
(at 20nm, the scale gap is around 1nm)

Report

Particle Size Distribution
Total Count

Keep going beyond



Thank
You !