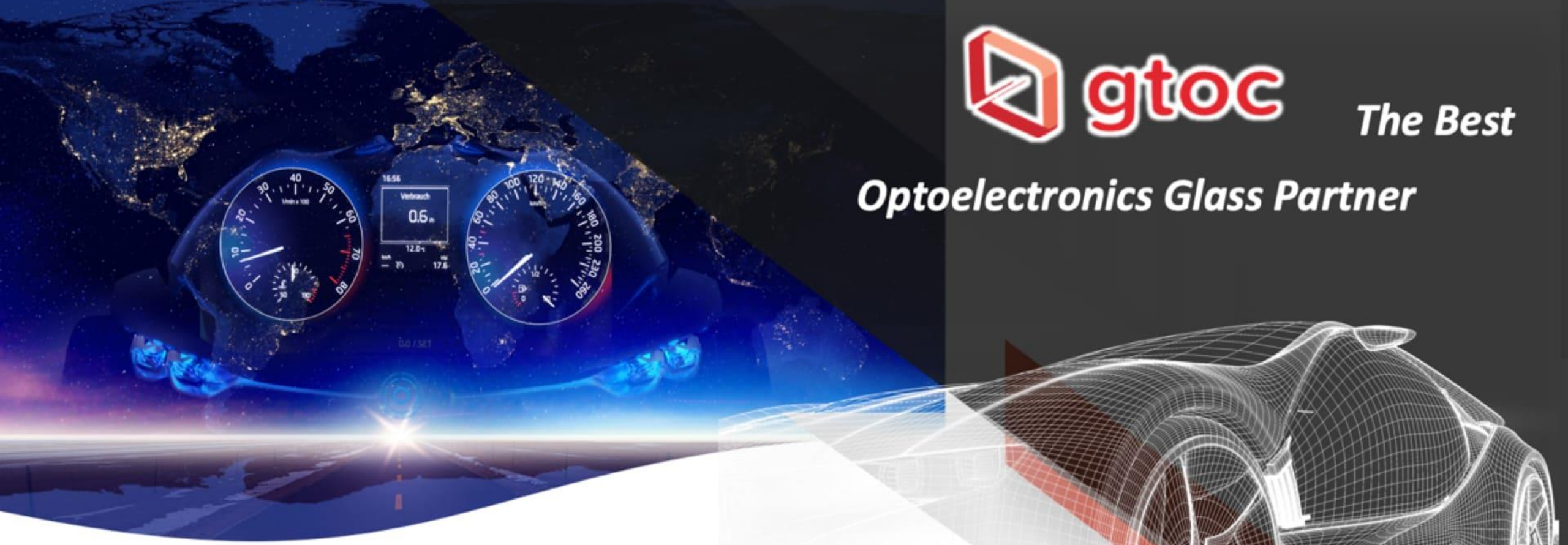


gtoc

The Best

Optoelectronics Glass Partner

G-TECH OPTOELECTRONICS CORPORATION

2023.8.31

G-Tech Optoelectronics Corp.

- **Capital**：NTD$ 2.24 Billion
  (USD$ 0.7 Billion)
- **CEO**：Tony Chung
- **HQ** ： Miaoli, Taiwan
- **Employees** : 509 Employees
- **Revenues** : 2023/1-6 NTD$0.88 Billion

Global Fabs

Gtoc(ChengDu)

Sales Office

HQ / RD Center

ML II

ML III

* Automotive-2D/3D CG
* Touch Module
* ITO coating

* Architectural glass

NK

*AR Coating
*CS Glass substrate

GL(SZ)

Track Pad

Company Milestone

1996 Founded
Scanner Cover Glass

2007 Being member of Foxconn

2008 Start Apple Business
Glass sensor substrate for iPhone / iPad (2009)

2011 Supply Apple iPad Cover Glass

2012 Apple iMac AR Glass

2014 3D CG for Automotive SOP

2018 Architecture Glass Business Start

2019 Start Developing Large 3D CG for Automotive

2021 Large CG for Automotive Start SOP

2022

GTOC
Acitve markets and segments

Smart Opto-Electro

AR opticl coatings
AG spray process
Glass strengthening
Fitness, Industrial &
consumer applications

Smart Auto

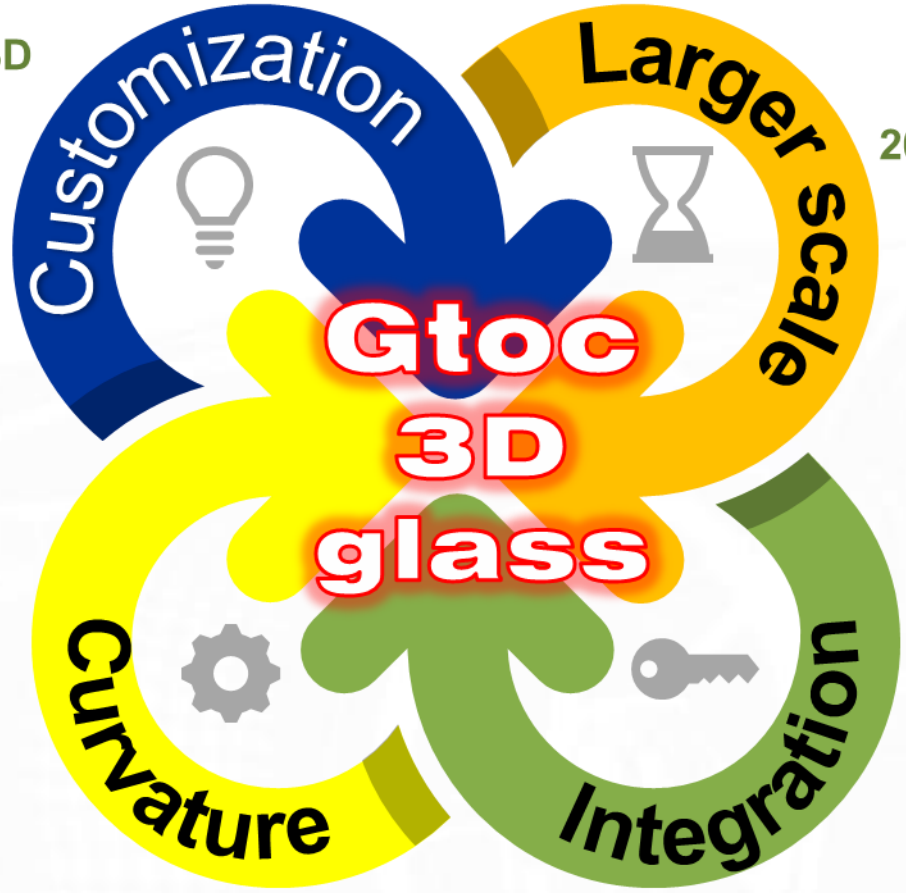
Interior 3D/2D
Center Console
Cluster / CID

Smart Building

Low-E Glass
EC glass
LED+LED/IGU
BIPV

Trend of auto interior design & demand

Adopting glass material advantages and its unique feeling, using 3D forming technology to achieve high quality informative and interactive cabin environment and make realization of full e-cabin design possible for better user experience.



2021 dual-displays
- Cluster
- CID

2022 multi-displays
- Cluster
- CID
- Passenger seat

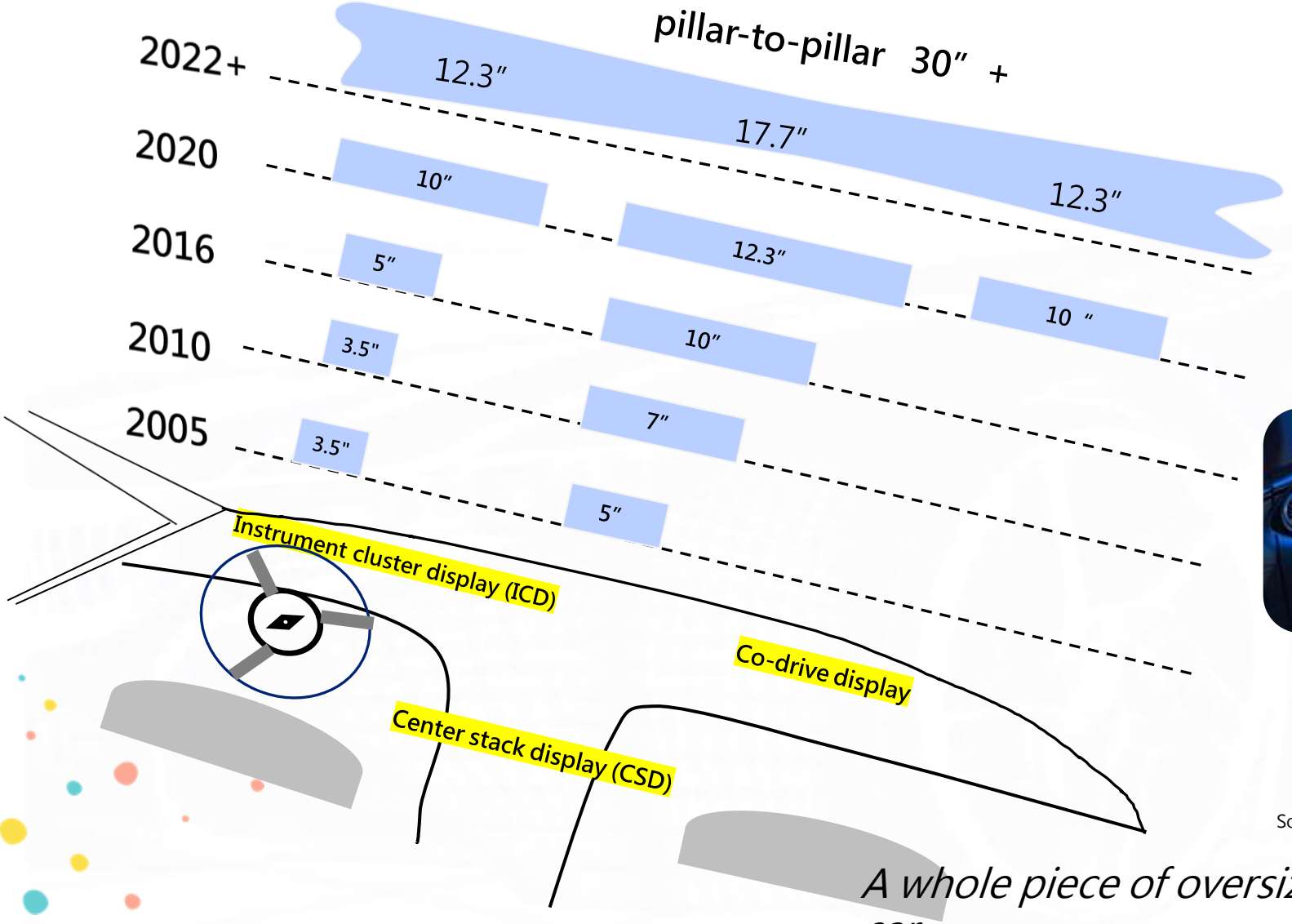
3D forming glass with the preciseness as for electronics and related optical design reducing reflection and improving visibility supports modern cabin design.

More integration of :
- Cluster
- CID
- Passenger seat
- Sides mirrors
- Central console

Etc.

Gtoc 3D glass for Auto applications

Smart Cockpit Market Trend



Bigger, Integration, free form Shape

Touch

Facial / Fingerprint Recognition

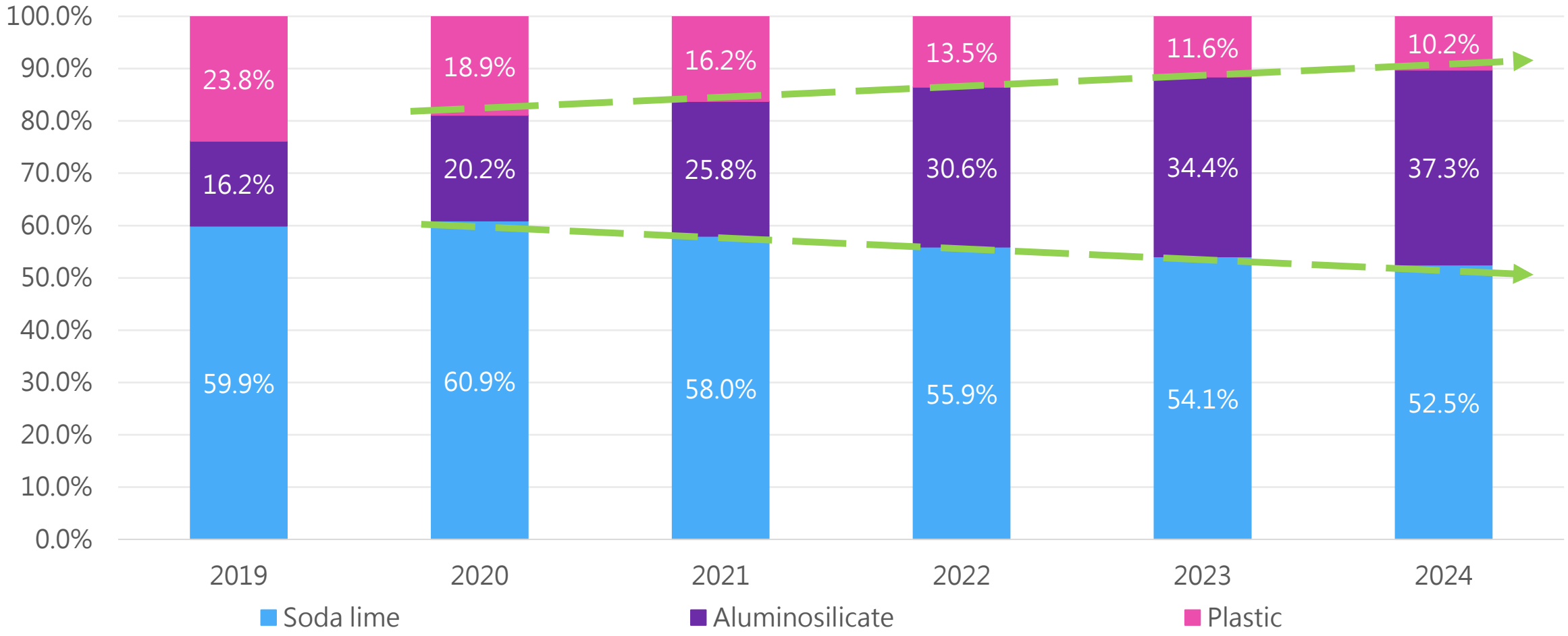
Source: mercedes-benz Photo

A whole piece of oversized free-shaped 3D cover glass for luxury car.

Creative designs for brand differentiation.

Market Share of Glass is getting higher and higher

Market share of automotive cover lens materials



Source: Omdia, Touch Panel Cover Lens & CPI Report – 2021 Analysis

Gtoc 3D glass forming features

Process flexibility in design / shaping

- Steps / Recesses / Protuberances / Openings
- Flat surfaces / Curved surfaces
- Free forms and geometries can be integrated

Wide range of glass substrate

Thickness from 0.33mm ~40mm
could be processed

Suitable for various glass material

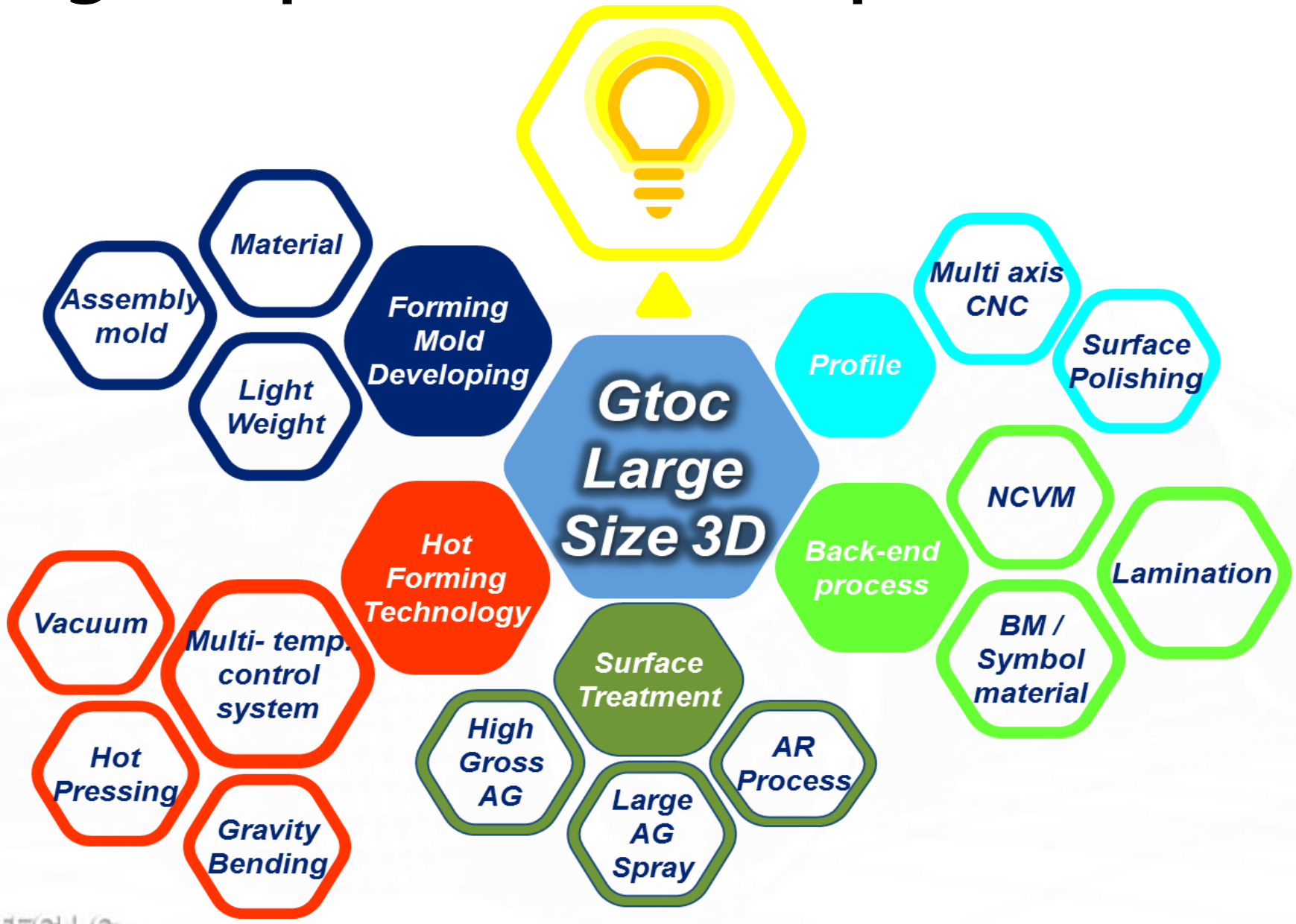
With coefficient of thermal expansion (CTE)
between 3.2 and 9.0 μm/m*K; e.g.:

- Soda Lime Glass
- Aluminium - silicate Glass

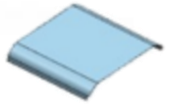
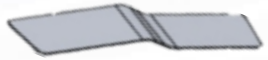
High preciseness

- X,Y,Z direction : ± 0.15mm
- Thickness : ± 3%

Gtoc 3D glass process development



3D Forming Technology

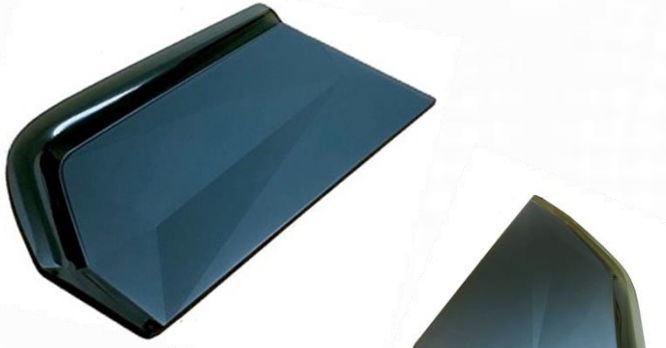
Cover Glass Process	Type	Capability
Forming		
Single curvature 	Gravity Hot Bending	Max size (L*W*H): 1500*400*300mm
Edge curved shape 	Vacuum Hot Forming	Profile tolerance : ± 1mm
S-shape 	Hot Press Forming	Min R : 30mm
Multi-shape 		

Center console

Recent Development

180 x 110 x 1.1 mm

1) Mature and extraordinary thermal forming process, make physical button and any micro patten rise up from flat touch screen.
2) Available for glossy (mirror) and texture (matte) surface, expanding diversity of interior design
3) Integrated design with dynamic interface that gives instant feedback to driver and improves in-vehicle experience.



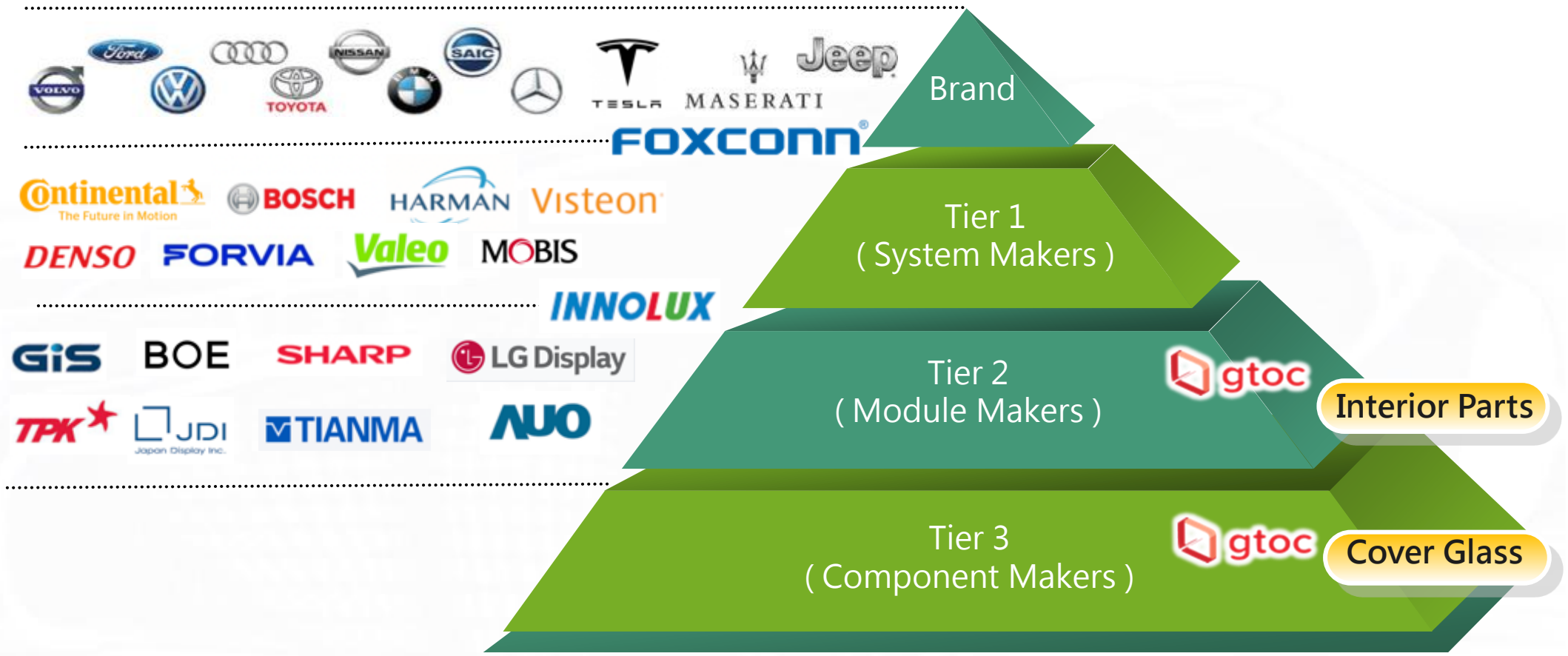
300.5 x 143 x 4 mm

1) 3D hot pressing : the mold design is used to make a haptic combined with crystal and foggy on the glass surface, and even the ridges create different light and shadow effects

2) Environmental friendly, the integrated process is in cutting down waste compared to the traditional process.

Smart Cockpit Supply Chain

Gtoc had awarded by OE and 1st tier authentication and plan to offer the large 3D glass mass production.

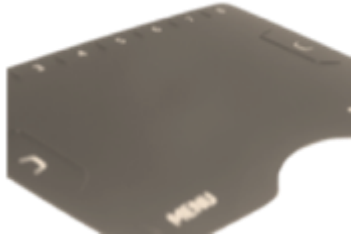


Global Partners

Tier 1
Tier 2

OEM

SOP 3D Projects



2012 | 2013 | 2021 | 2022~ | 2023

Smart Key

Q5/Q7

iX/i4

Maserati Grecale

To be announced

Gtoc in-house process technologies

01

Glass cover lens

2D / 2.5D / 3D Cover glass

02

AG spray

High temperature Curing AG spray solution for durable application

03

AR sputtering

Inline / batch type sputtering machine that suitable for 2D/2.5D/3D cover glass

04

Painting / Decoration

Screening Printing / Pad Printing / Spray Painting / Decoration Film

05

Chem. strengthening

Suitable for thin glass

06

AF spray

WCA >110

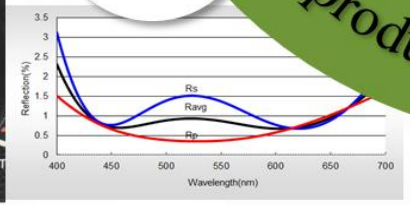
Our Domain of Industry Application

Size : 10.1″ ~15.6″

- Transportation Machine
- Smart Retail POS
- Fitness Equipment
- Healthcare Equipment

Size : 7.0″ ~ 21.5″

Opto-electro glass & application developing cycle



Market need

Standard AR substrate
Various applications

AR coating optical design
Large substrate AR/AG
HC layer development

Gtoc
Opto-electro
glass

Technologies

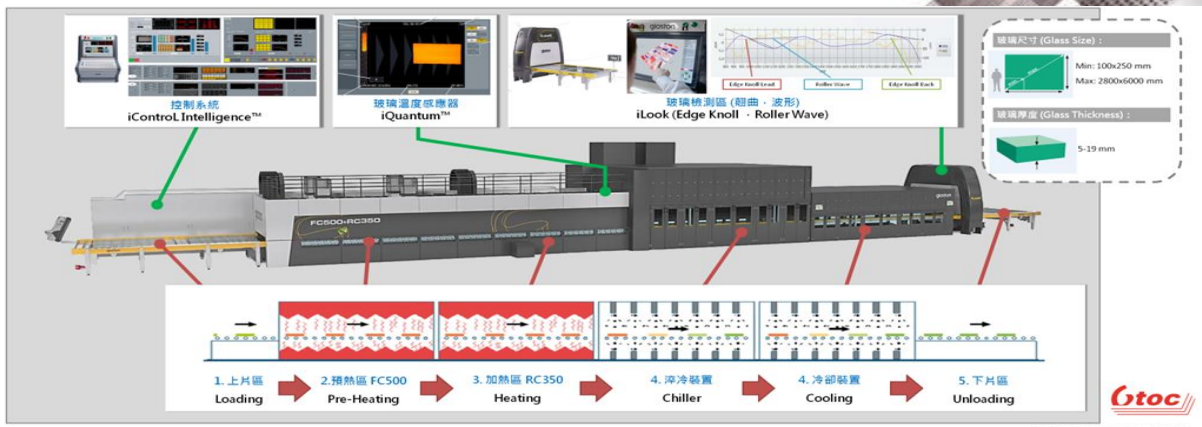
Integration of automatic
production & inspection

Production

Advantage

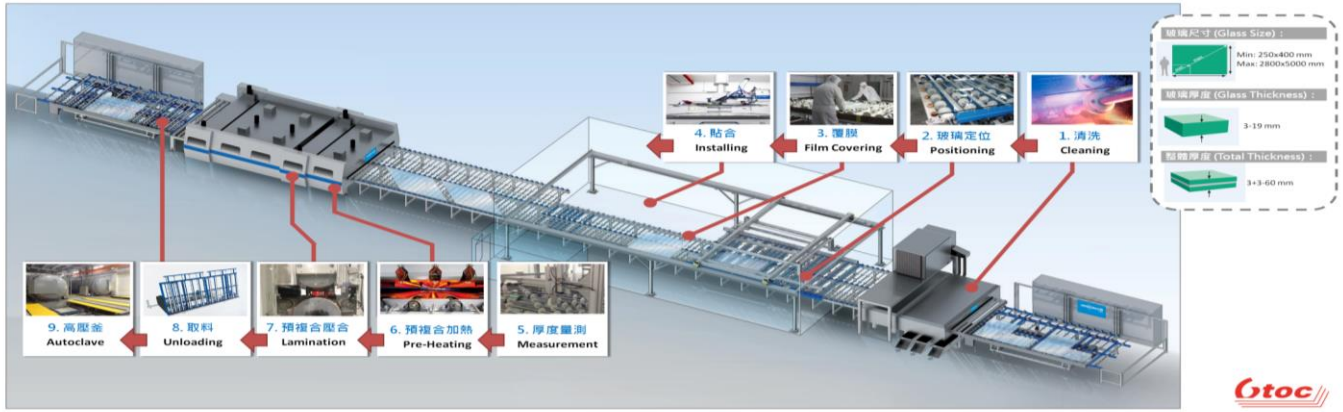
Tempering

Automatically detect the quality level by setting up the tempering parameters.



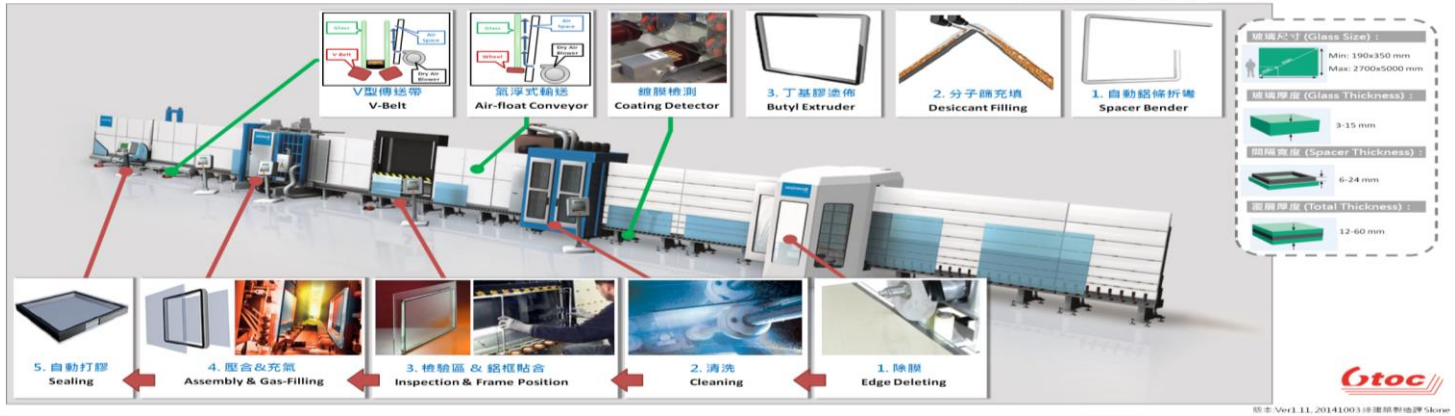
Lamination

Glass automatically position before pre-lamination
Automatically Detect glass thickness and control balance press pressure by servo motor

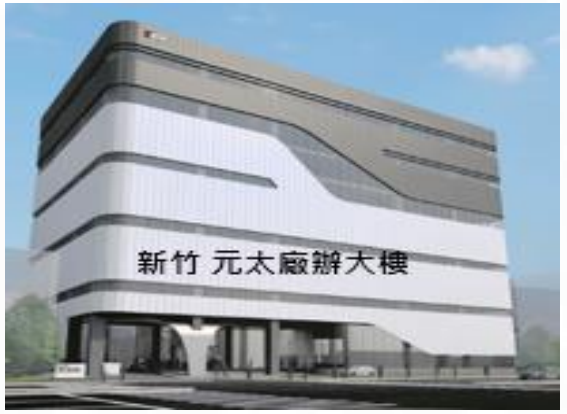


IGU

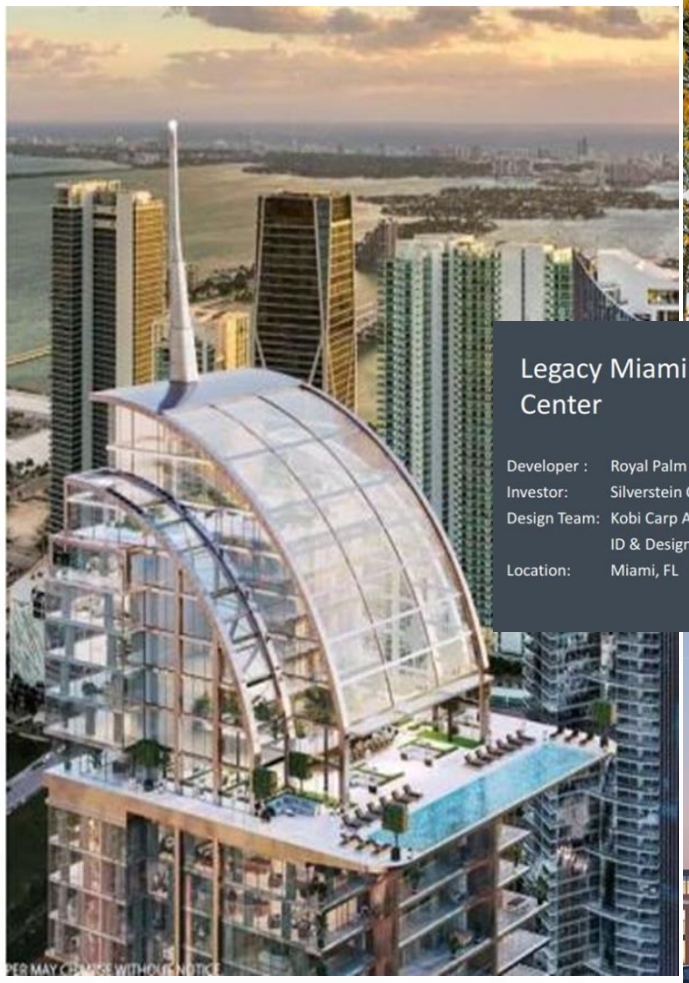
Glass transport by Floating transportation, it will escape from roller marker on roller surface, automatically detect glass thickness



Performance and Goal



Electrochromic Project



- **Electrochromic** :Through smart window by taking active control to achieve :
  - improving environment comfort and privacy level within buildings
  - energy saving for building environment control
  - enhancing the view from the window toward outdoor

GTOC

2023 Operational summary

Balance sheet： 2022~2023/6/30

Unit: NT$ thousand

	2022/3/31	2022/6/30	2022/9/30	2022/12/31	2023/3/31	2023/6/30
Total current assets	1,405,543	1,543,555	1,552,274	1,467,816	1,566,531	1,536,055
Total non-current assets	2,952,406	2,969,916	2,967,314	2,895,230	2,646,163	2,614,217
Total assets	4,357,949	4,513,471	4,519,588	4,363,046	4,212,694	4,150,272
Total current liabilities	1,273,863	1,166,174	1,214,786	1,091,175	1,506,620	1,503,744
Total non-current liabilities	1,691,696	1,706,363	1,716,575	1,793,412	1,249,197	1,203,579
Total liabilities	2,965,559	2,872,537	2,931,361	2,884,587	2,755,817	2,707,323
Total Share Capital	2,063,936	2,233,936	2,233,936	2,241,856	2,241,856	2,243,296
Total capital surplus	20,137	195,079	196,167	196,778	197,144	20,641
Total retained earnings	-1,170,784	-1,267,364	-1,324,838	-1,440,223	-1,462,253	-1,299,616
Total other equity interest	479,101	479,283	482,962	480,223	480,130	478,628
Total equity attributable to owners of parent	1,392,390	1,640,934	1,588,227	1,478,459	1,456,877	1,442,949
Total equity	1,392,390	1,640,934	1,588,227	1,478,459	1,456,877	1,442,949
The Net Asset Value of Each Share	6.75	7.35	7.11	6.59	6.50	6.43

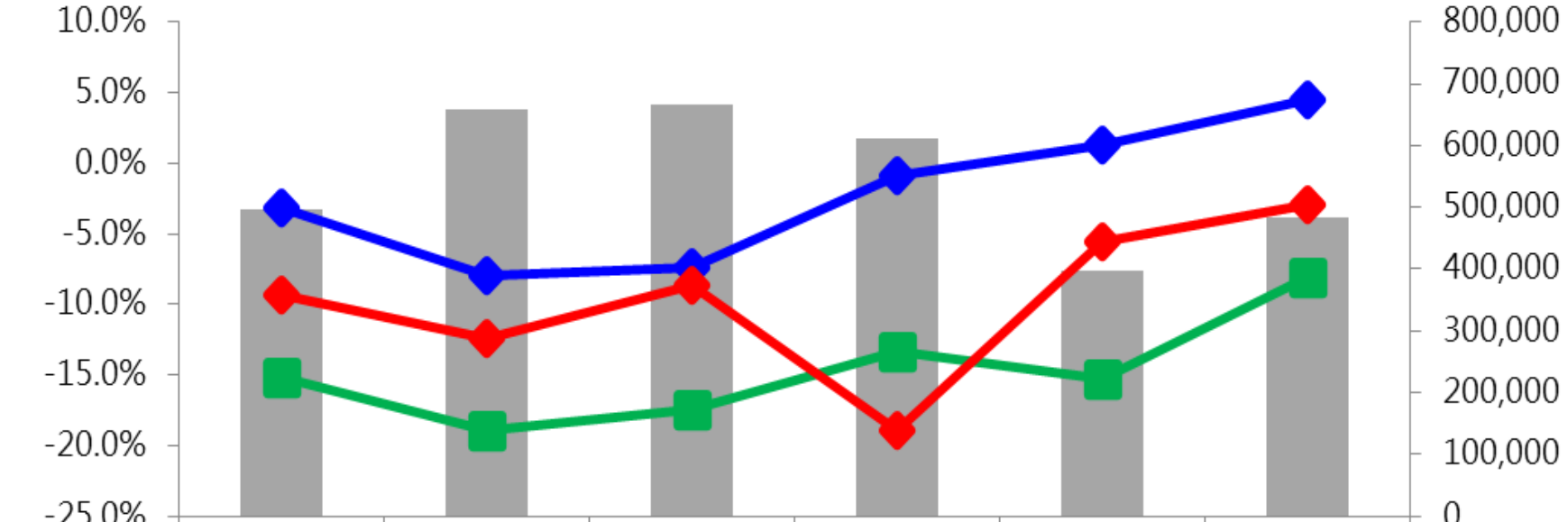
Income statement：2022~2023/6/30

Unit: NT$ thousand

	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2
Total operating revenue	495,174	1,152,781	1,819,948	2,430,202	396,074	878,709
Total operating costs	510,767	1,220,446	1,936,704	2,552,312	391,121	852,302
Gross profit (loss) from operations	-15,593	-67,665	-116,756	-122,110	4,953	26,407
Total operating expenses	58,962	131,398	198,923	274,991	65,261	125,644
Net operating income (loss)	-74,555	-199,063	-315,679	-397,101	-60,308	-99,257
Total non-operating income and expenses	28,401	56,329	115,471	81,508	38,278	62,949
Profit (loss) from continuing operations before tax	-46,154	-142,734	-200,208	-315,593	-22,030	-36,308
Total tax expense (income)	0	0	0	0	0	0
Profit (loss)	-46,154	-142,734	-200,208	-315,593	-22,030	-36,308
Other comprehensive income, net	4,596	4,778	8,457	5,543	82	-1,420
Total comprehensive income	-41,558	-137,956	-191,751	-310,050	-21,948	-37,728
Profit (loss), attributable to owners of parent	-46,154	-142,734	-200,208	-315,593	-22,030	-36,308
Comprehensive income, attributable to owners of parent	-41,558	-137,956	-191,751	-310,050	-21,948	-37,728
Total basic earnings per share	-0.22	-0.68	-0.93	-1.45	-0.10	-0.06

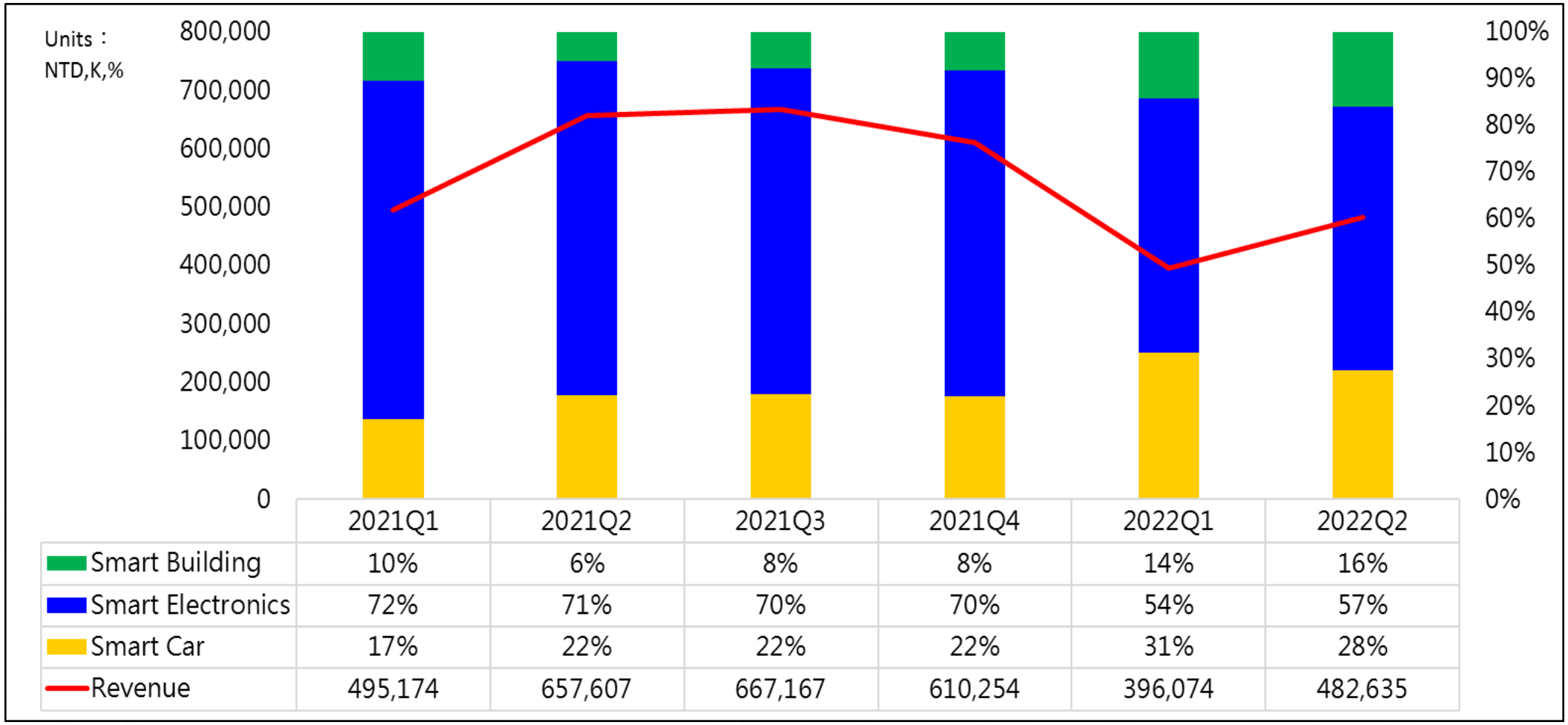
Financial ratio：2022~2023/6/30

UNIT：NTD,K,%



	2022Q1	2022Q2	2022Q3	2022Q4	2023Q1	2023Q2
Revenue	495,174	657,607	667,167	610,254	396,074	482,635
Gross margin	-3.1%	-7.9%	-7.4%	-0.9%	1.3%	4.4%
Operating profit ratio	-15.1%	-18.9%	-17.5%	-13.3%	-15.2%	-8.1%
Net profit rate	-9.3%	-12.4%	-8.6%	-18.9%	-5.6%	-3.0%

Product group revenue：2022~2023/6/30



	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
Smart Building	10%	6%	8%	8%	14%	16%
Smart Electronics	72%	71%	70%	70%	54%	57%
Smart Car	17%	22%	22%	22%	31%	28%
Revenue	495,174	657,607	667,167	610,254	396,074	482,635

THANK YOU

HAVE ANY COMMENTS?

www.gtoc.com.tw