

胜利精密 Victory Precision

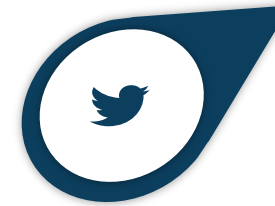


CREATE NEW VALUE FOR CUSTOMERS

主动-Initiative 沟通-Communication 透明-Transparent 创新-Innovation



- Sales Revenue in Y2021: CNY 5.2 Billion
- Employees: Total 9K+
- Net Asset in Y2021: CNY 4.6 Billion



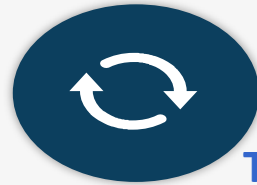
Growth

2020-future

Total Solution Provider

Focus on core business

Stronger & Greater

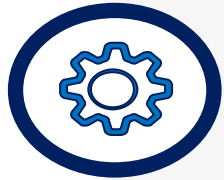


Transformation

2012 Diversified business Dev

2013 Anhui industrial park

2015 Extension & Restructuring



Start-up

2003 Founded

2007 Poland Operation

2010 Public listed 002426

2011 SAP Implement



Victory Poland



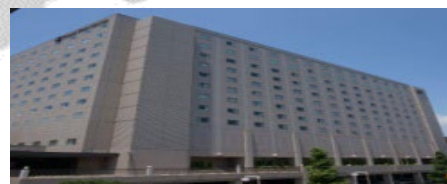
Victory Anhui



Victory Hong Kong



Victory Japan



Victory Precision
(HQ@Suzhou)



Optical glass





Automotive



- Co-design
- Tool making
- CNC machining
- Stamping
- Die casting
- Optical glass 2D & 2.5D & 3D
- Optical Film
- Bonding
- Finishing

TV&PC



- Co-design
- Tool making
- CNC machining
- Injection
- Stamping
- Die casting
- Optical glass 2D & 2.5D & 3D
- Bonding
- Finishing

Wearables



- CNC machining
- Tool making
- Injection
- Die casting
- Finishing

Healthcare



- intelligent wheelchair assembling
- CNC machining
- Tool making
- Injection
- Stamping
- Die casting
- Finishing



Consumer Electronics

Lenovo SONY SAMSUNG



Google

NEC

FUJITSU

FUNAI

FOXCONN

LCFC

wistron



英华达



仁碁電腦



Quanta Computer



泰全寶電通

Cai-Shan-Wang Electronics & Communications

PEGATRON
和碩聯合科技

HUAQIN

TPV

Automotive



SHARP

BOE



Panasonic



MAGNETI
MARELLI

TPK
touching tomorrow, today

HIWAY

HADBEST

ADAYO
华阳集团



WAICHI
偉志

德赛西威
DESAY SV AUTOMOTIVE



Yanfeng

CORNING

TRULY®
信利

AUO

INNOLUX VIA optronics
Solutions for a brighter life

JDI
Japan Display Inc.



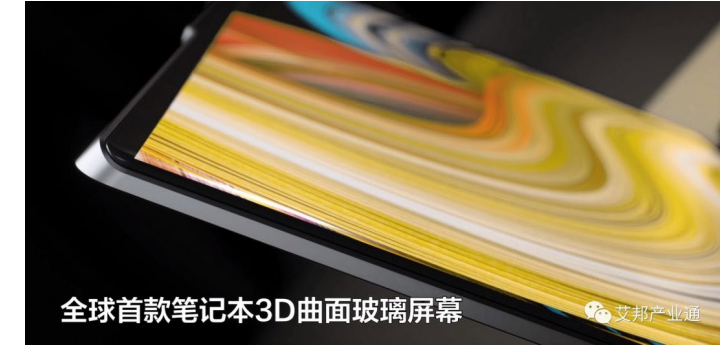
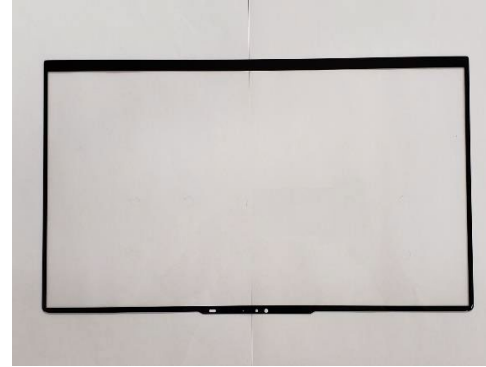


Mechanical Parts

Optical Glass

YOGA S940

World first 3D cover glass for PC!

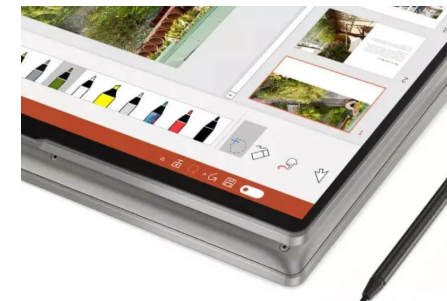


YOGA Air 14S



Lenovo

YOGA S950



Cover Glass for LCD TV(55"/65"/75")

LGP for the world's thinnest 4.9mm LCD TV (55"/65")

Rear Glass for OLED TV (55"/65")



World first AGC Dragon Trail !

SONY



World's thinnest TV !

Air bonding



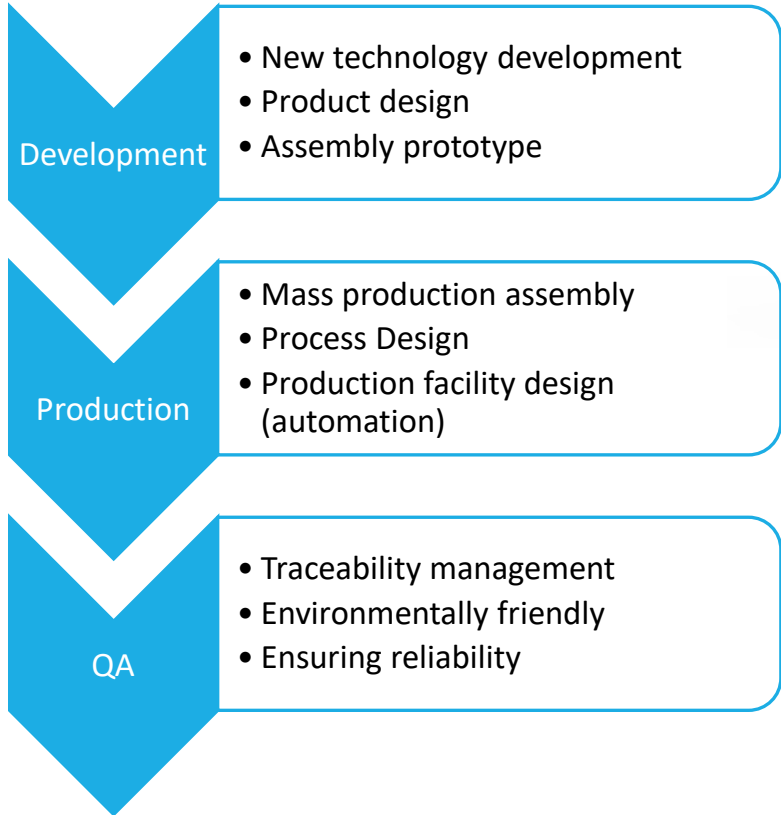
TP&OGS Full bonding



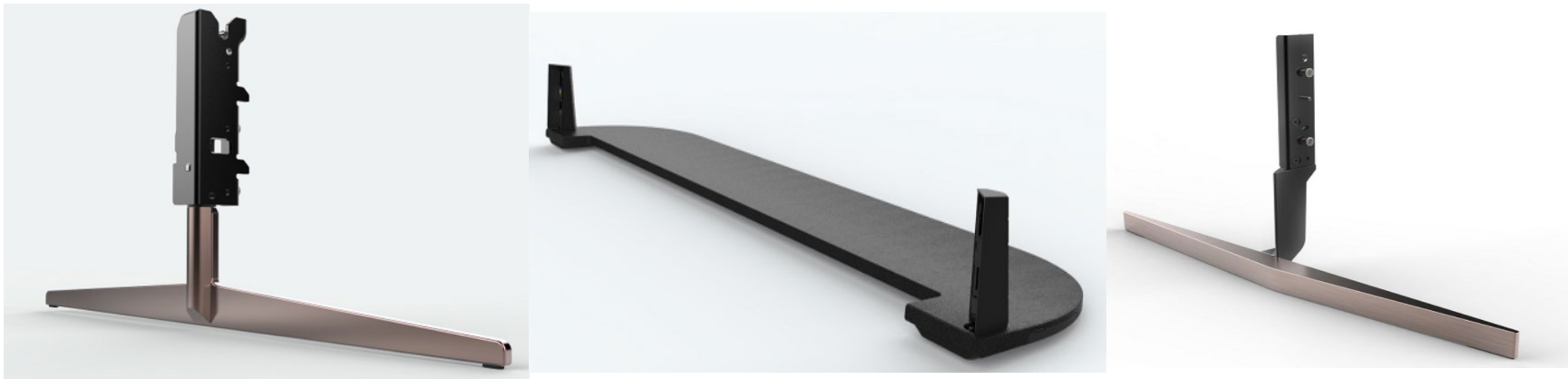
Open Cell Bonding



Consistently responsible
from development
to production



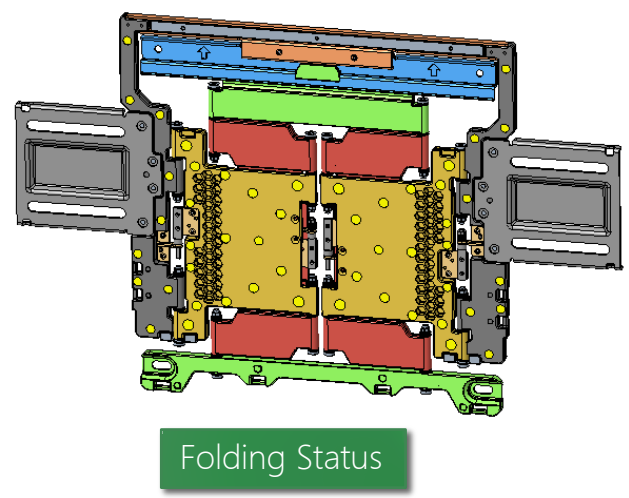
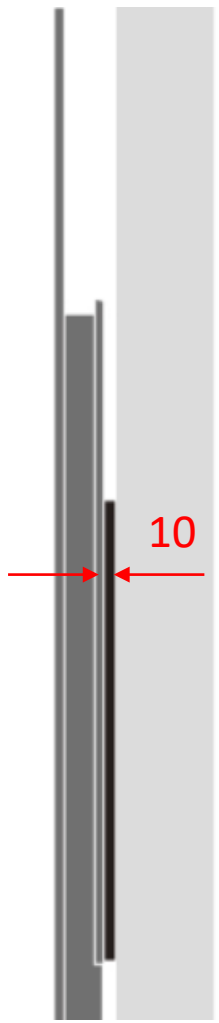
Various Stand for different TV Set



■ Ultrathin TV Wall mount Bracket



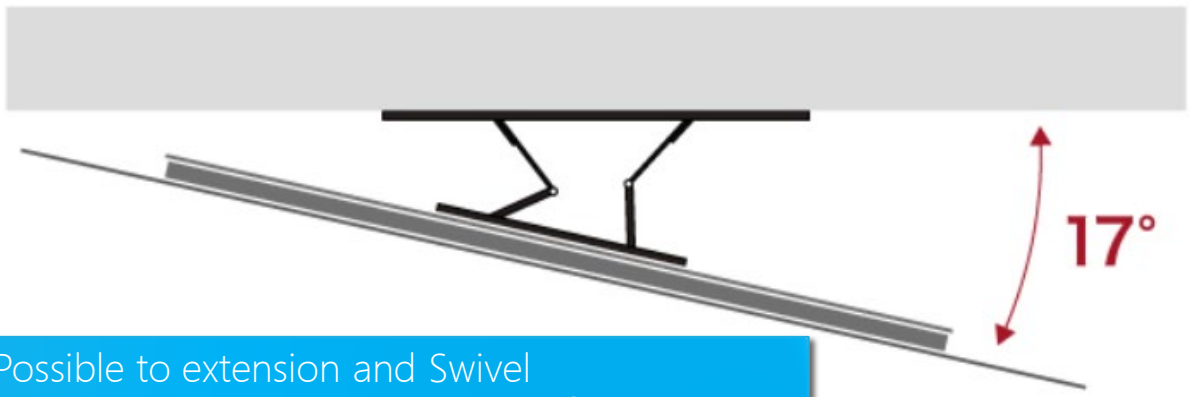
Fit for Max 84 Inch 70kg



Minimum 10mm Thickness



SONY



Possible to extension and Swivel
Easy to adjust the screen position for end user

■ Mechanical parts and Assy for PC



- Aluminum CNC
- Magnesium Thixomolding
- Metal Stamping
- 2 Color molding
- Insert molding
- Nono Molding technology
- Anodizing
- High gloss Painting
- Diamond Cut

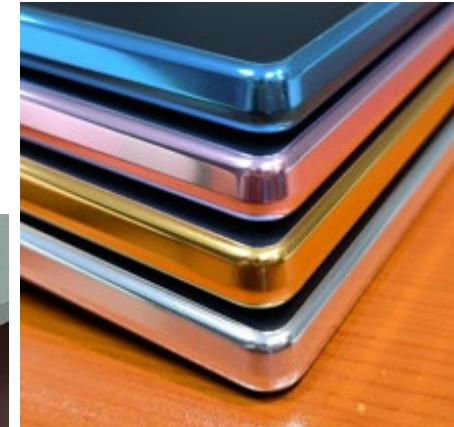
Lenovo



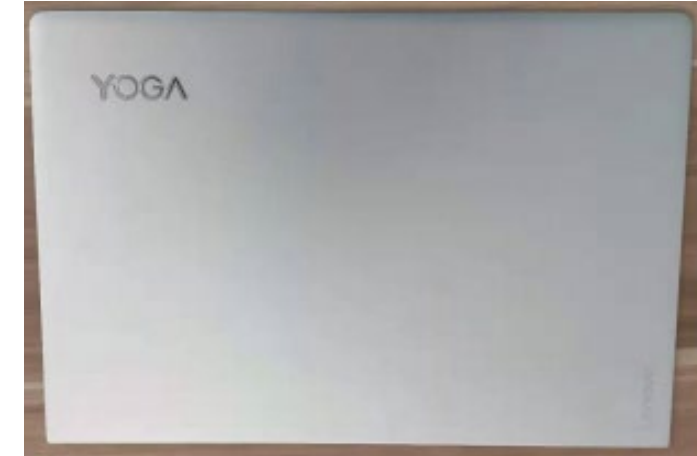
SAMSUNG

NEC

FUJITSU



Automated assembly line : 44x Lines



Aluminum parts for mobile products



oppo



SONY
WALKMAN



fitbit

Google



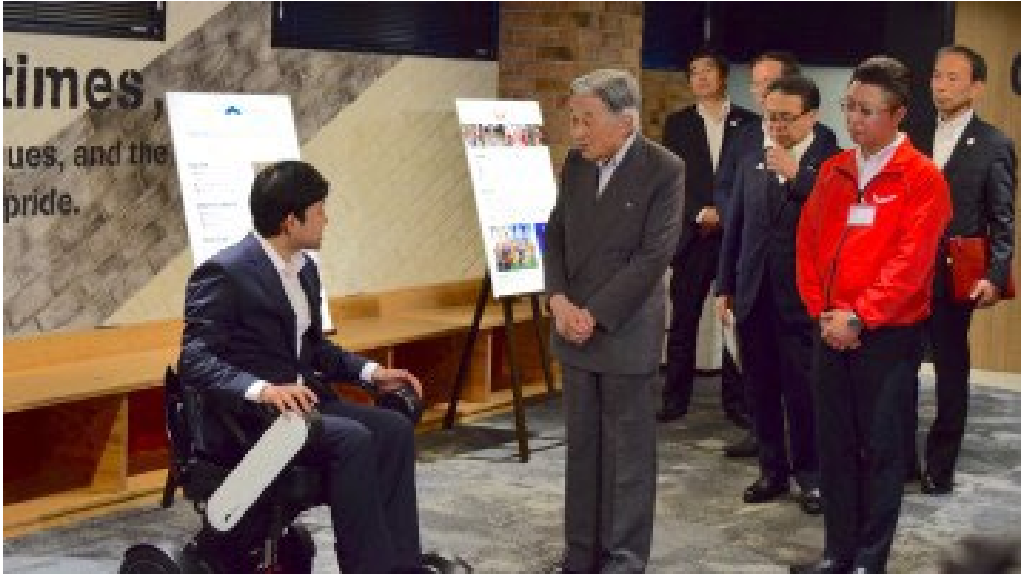
MIM



Electric bike



electric wheelchair





Mechanical Parts



Optical Glass



Outer rearview mirror



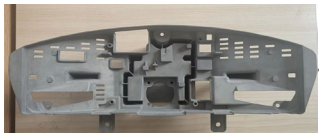
CID housing



Inner rearview mirror



AR HUD Glass



Cluster Holder



3D Glass



CID holder



Dual screen CID holder

Projects List

• Thixomolding

- Tesla: Model 3
- BMW: 3 / 5 / X3 / X5 / Z series
- Porsche: Macan
- Ford: S650
- NIO: ET5 / ET7
- LI: X01 / X02 / L7 / L8 / L9

• Injection

- LI: L7 / L8 / L9

• Stamping

- NIO: ET5 / ET7

• Optical parts

- Mercedes-Benz: E-class
- Porsche: Macan
- Volkswagen: Passat / Lavidia / Sagitar
- Buick: GL8 / Verano
- Mazda: Axela
- Xpeng: P7
- LYNK&CO: 01 /02
- Roewe: RX5

• Main Process

Thixomolding (JSW)



32 sets

CNC (Brother/FANUC)



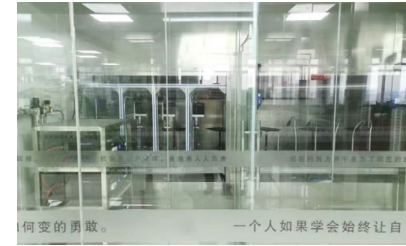
1000+ sets

Polishing (ABB Robot)



260+ sets

Painting (Spindle/5 Axis)



13 lines

MAO



1 line

• Thixomolding

- **280T:** 4 sets
- **450T:** 2 sets
- **650T:** 18 sets
- **850T:** 4 sets + 2 sets in plan
- **1300T:** 4 sets + 1 sets in plan
- **3000T :** 1sets + 1 sets in plan

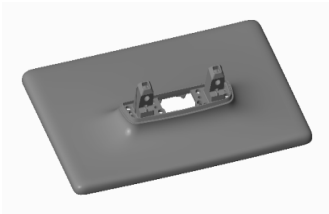
• Supporting Process

- **Tooling Center:** WEDM 10 sets; EDM 17 sets; CNC 15 sets
- **Injection:** 200+ sets (380 ~ 1000T)
- **Stamping:** 300+ sets (110T)
- **Sandblasting:** 40+ lines
- **Chemical Treatment:** 1 line
- **Powder Coating:** 1 line

Tesla (Model 3)



- Products: Housing



Size : 356*282*182

Part Weight: 746g

Machine: 850T

Surface: Painting

NIO (ET5 / ET7)



- Products: Housing



Size : 260*240*52

Part Weight: 520g

Machine: 850T

Surface: Painting

Size : 183*71*57

Part Weight: 295g

Machine: 650T

Surface: Painting

LI (X01 / X02)



- Products: Housing



Size : 875*640*410

Part Weight: 1071g

Machine: 1300T

Surface: Painting

BMW (X3 / X5 / Z series)



- Products: Bracket



Size : 400*112 *80

Size : 435*151*82

Part weight: 213g

Part weight: 287g

Machine: 650T

Machine: 650T

Surface: Chemical Conversion

BMW (3 / 5 series)



- Products: Bracket



Size : 287*113*18.5

Size : 286*106*19

Part Weight: 160g

Part Weight: 150g

Machine: 450T/650T

Machine: 650T

Surface: Chemical Conversion

Ford (S650 25.6")



- Products: Housing



Size : 855*610*310

Part Weight: 821g

Machine: 1300T

Surface: High Gloss Painting

Maserati (Grecale)



- Products: Bracket



Size : 323*225*104

Part weight: 650g

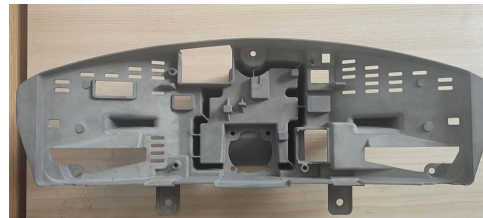
Machine: 850T

Surface: Chemical Conversion

Porsche (Macan)



- Products: Bracket



Size : 354*147*91

Part Weight: 358g

Machine: 650T

Surface: Chemical Conversion

Jaguar (XFL)



- Products: Housing



Size : 228*167*35

Part Weight: 440g

Machine: 850T

Surface: Painting

LI (L9 / L8 / L7)



- Products: Injection Housing



Size : 232*163*42

Part weight: 73g

Machine: 800T

Surface: Plating

NIO (ET5 / ET7)



- Products: Stamping Bracket



Size : 180*113*1.2

Part Weight: 250g

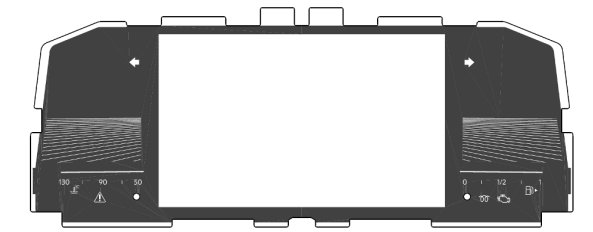
Machine: 110T

Surface: Coated with anti-rust oil

Volkswagen (Passat/Lavida/Sagitar)



- Process: AG+AR+AF



Glass Material : PMMA+PC+PMMA

Size : 328.5*132.43*2mm

Surface : Printing Gradient Color

MP: 130-150K/M

• Main Process

Cutting/CNC



100+ sets

Hot forming



6 sets

Chemical Strengthen



30+ sets

Screen Printing



6 lines

ARAF



6 lines

• Hot Forming : Max 1500*260

Equipment	Large size for NPI*1	Middle size for MP*2	Large size for MP*2	Oversized for NPI*1
Max Size	L800*W300*H70mm	L400*W260*H25mm	L800*W300*H70mm	L1500*W360*H200mm
Tolerance	±0.3mm	±0.2mm	±0.3mm	±0.3mm
Stage	3	17/18	30	5
Tack time	1h	100-200s	80-100s	<15min
Capacity/D	20-30 pcs	320-500 pcs	800-900 pcs	96 pcs
Yield	70-80%	80-90%	80-90%	80-90%

• ARAF coating line : Max 2000*1500

Line	Max Size	Capacity(13.3inch)	MP Time
1#	2000*1300	150K/M	2013 Jan
2#	1500*800	112K/M	2017 Nov
3#	1500*800	112K/M	2015 Dec
4#	1500*800	144K/M	2018 Jul
5#	1500*1000	112K/M	2019 Feb
6#	1500*1000	112K/M	2019 Apr

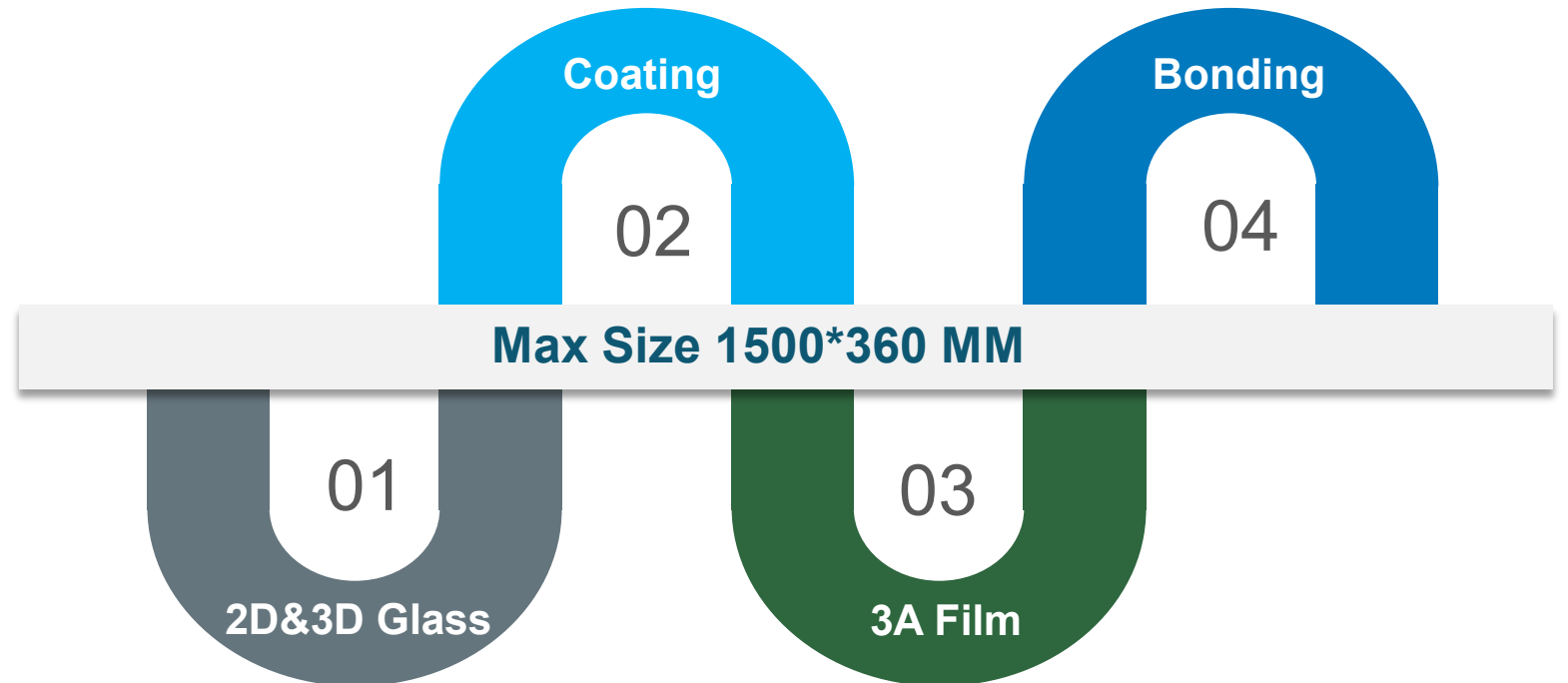
Milestone

- **2015**
2D Glass
- **2016**
3D Glass
Automotive display cover
Coated Products
- **2018**
"One Black"
- **2019**
PMMA/PC/PMMA
Composite plate
- **2021**
Automotive cover lens with
ASF (Anti-Scattering Film)

• Main Products

- AG/AR/AF 3 in1
- Gradient printing

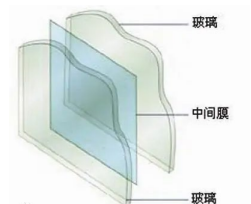
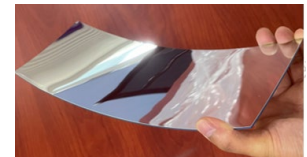
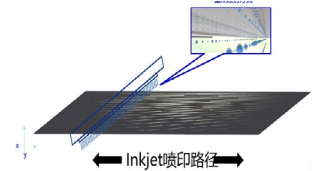
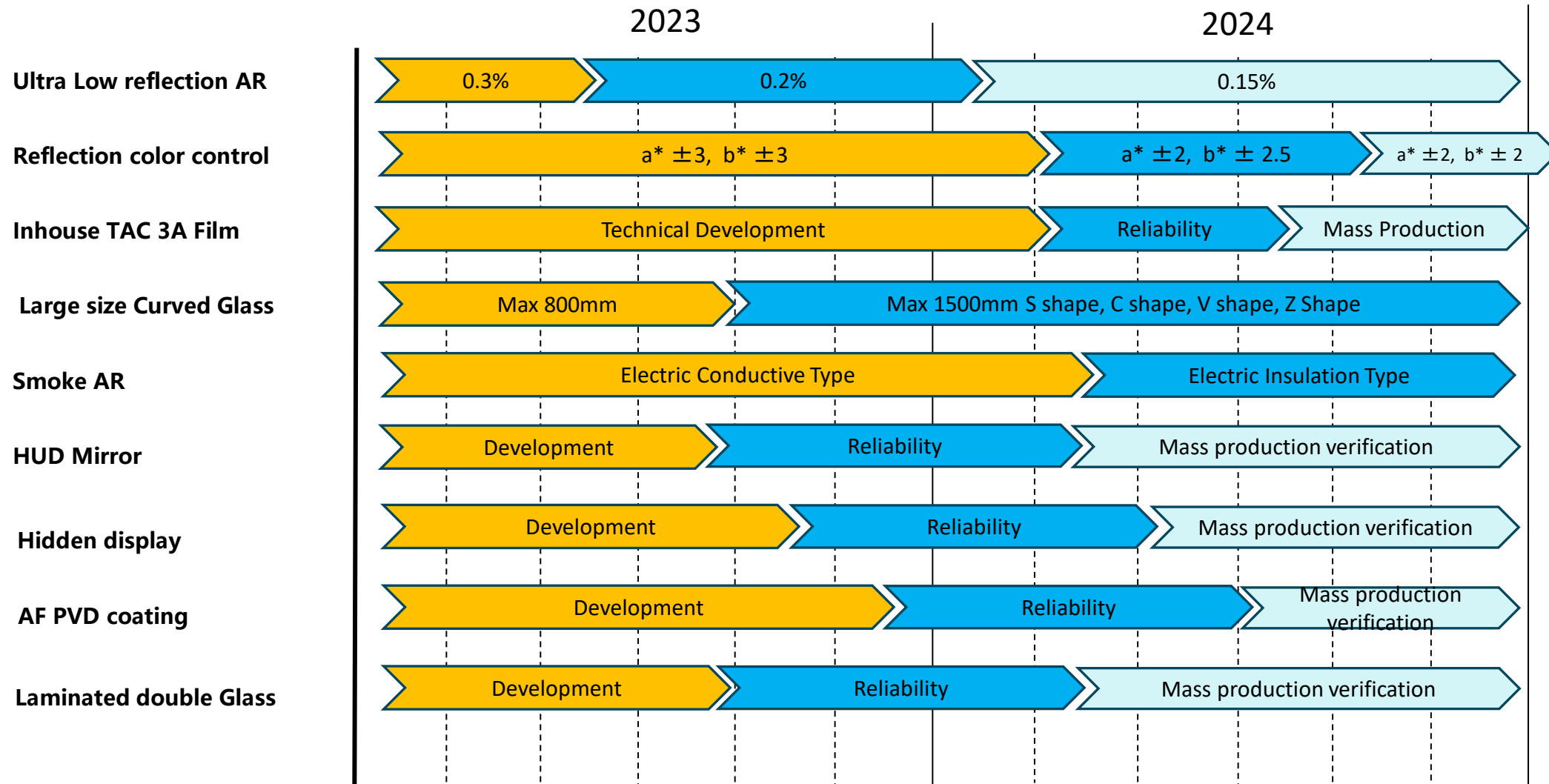
- Normal lamination+ Die-cutting
- 1:1 size lamination+Laser cutting



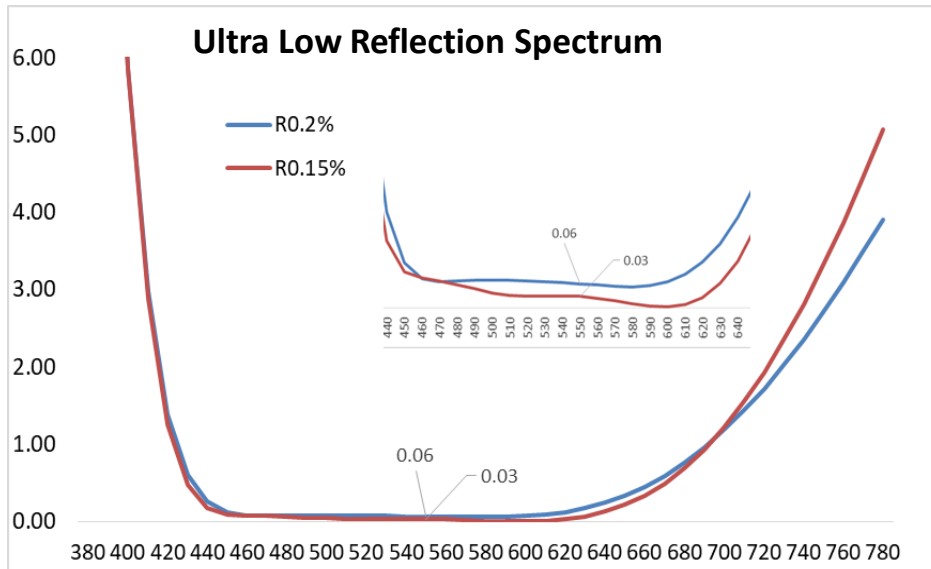
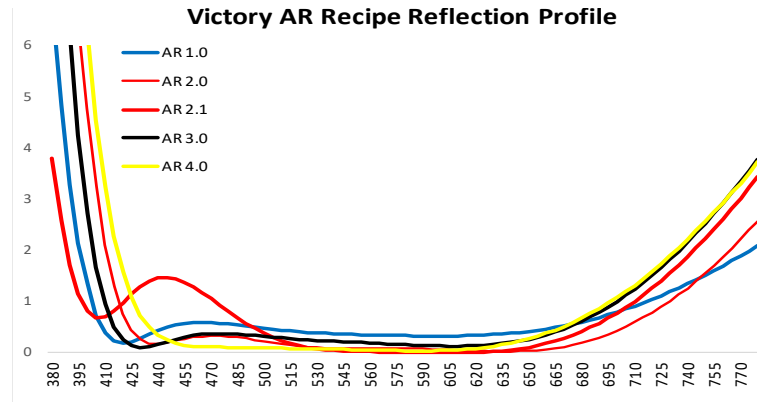
- Irregular shape 3D glass
- Wood grain screen printing
- Laminated glass
- HUD curved glass

- Benchmark Dexerials & DNP
- Pass Volkswagen TL226/MS 945-01/GM standard
- Lower reflectivity
- Better hardness

• 2023-24 Developing New Technologies



- Developing next technology Ultimate low reflection 0.15% AR coating



Victory AR recipes:

AR1.0($R\% \leq 0.60$): Standard Process

AR2.0($R\% \leq 0.3\%$): Low Reflection solution

AR3.0($R\% \leq 0.6\%$): **wide viewing Angle** AR coating

AR4.0($R\% \leq 0.2\%$): Super-low Reflection AR coating



AR5.0($R\% \leq 0.15\%$): Ultra Low Reflection AR coating

- Adopting new materials for high refractive index layer.
- Estimated average reflection rate 0.11%.

Ultra Large Size Cover Glass



With the improvement of people's living standards, people's perception of cars has become the pursuit of science and technology from the beginning, and the curve aesthetics of car interiors has become the most demanding.

Technical focus of Ultra large curved cover glass development

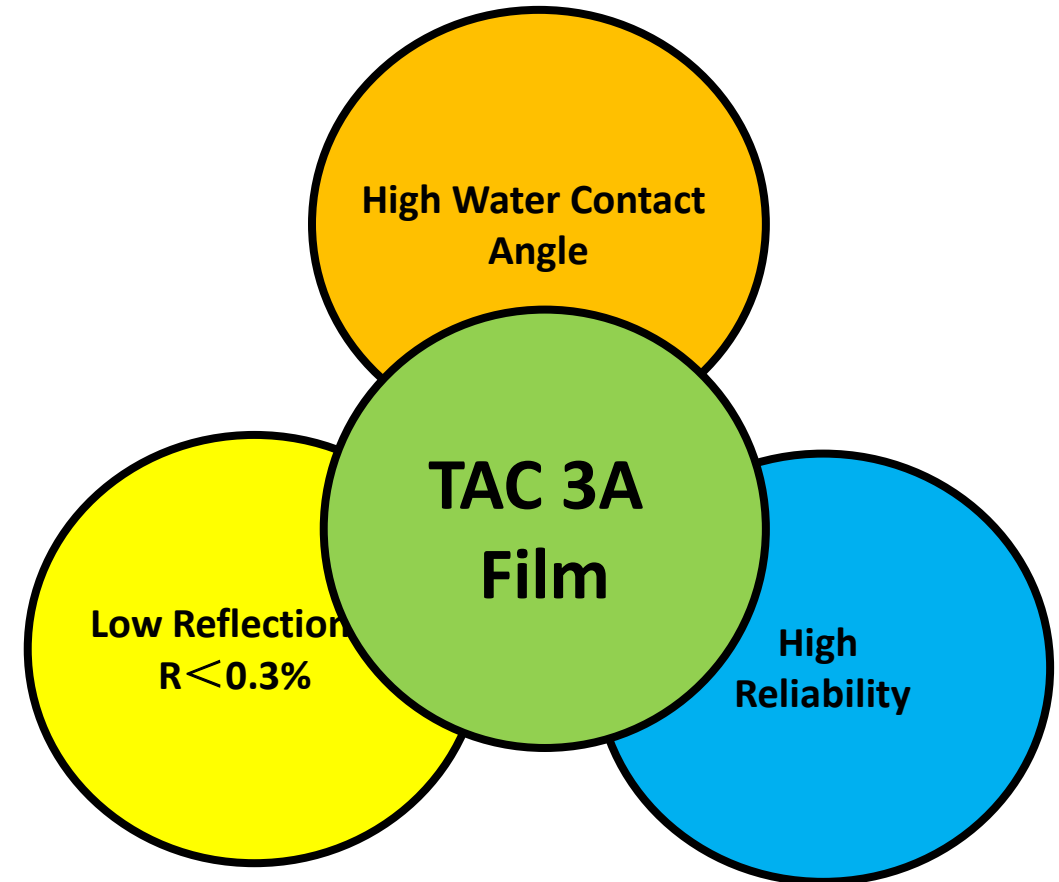
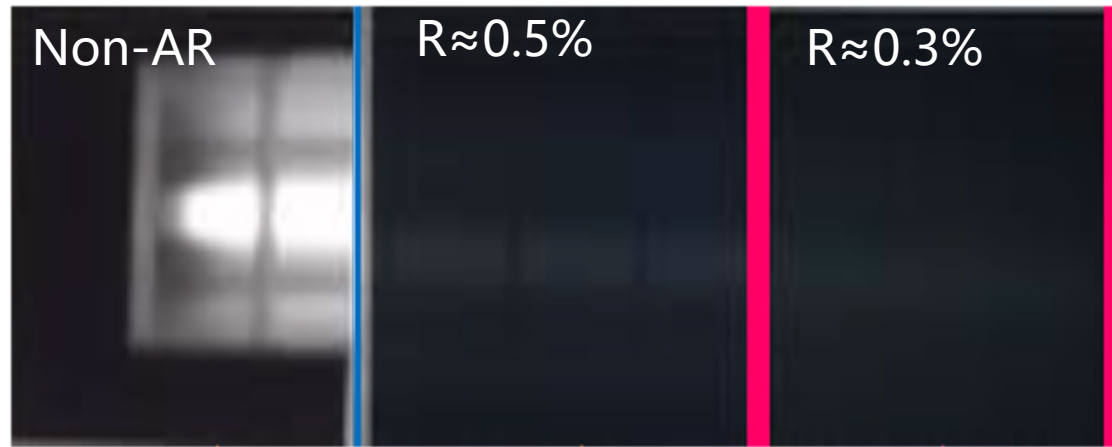
■ Heat bending process

- ✓ Development of product structure molds
- ✓ Dimensional accuracy guarantee verification
- ✓ Development of product structure molds

■ Printing Process

- ✓ Precision of printing size
- ✓ New printing method for curved surface





The internal layer structure of TAC substrate 3A film is less than that of SRF substrate 3A, and the reflectance is lower, so we developed a film based on TAC substrate with $R < 0.3\%$ reflectance, high water contact angle, and high anti-aging performance.

Victory precision
REAL. WITH A DIFFERENCE

Sep 2024 MP

Dexrials Low Haze

Perfect compatibility characteristics targeted

HUD mirror

■ Features of glass free-form mirror

① High Reliability

Less deterioration due to environmental factors (heat, humidity, light) than resin products, longer life

② Surface Hardness

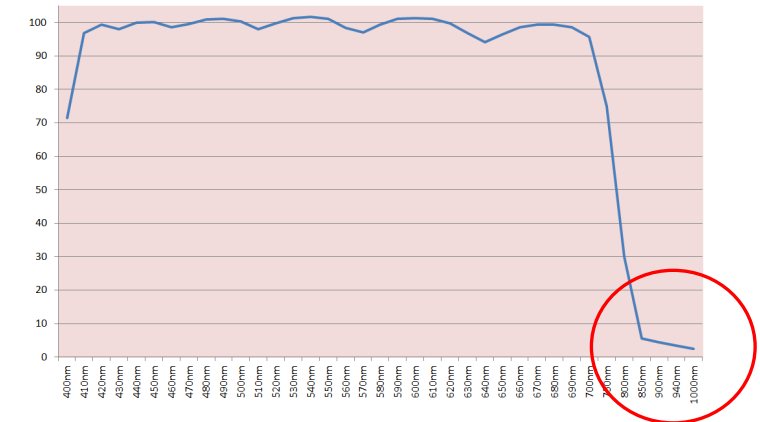
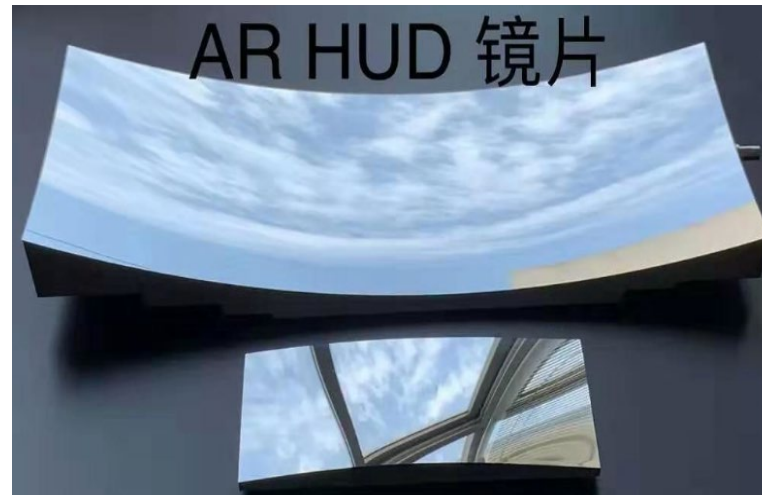
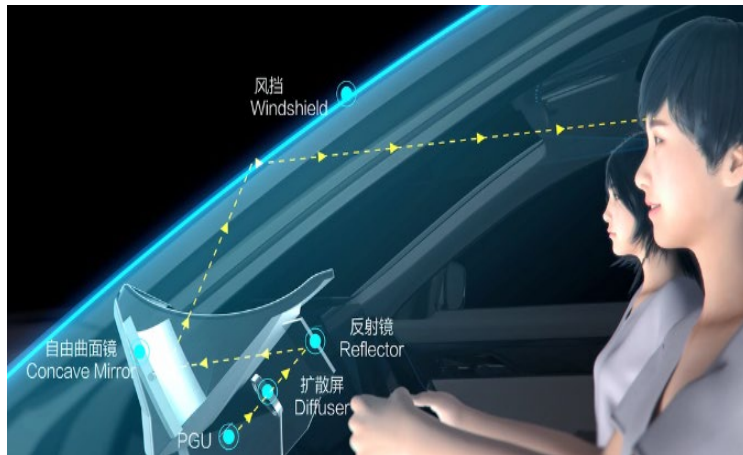
The surface is harder and less likely to be scratched compared to resin mirror.

③ Low coefficient of expansion

The expansion coefficient due to heat and humidity is small, so the mirror deformation is small.

④ Coating adhesion

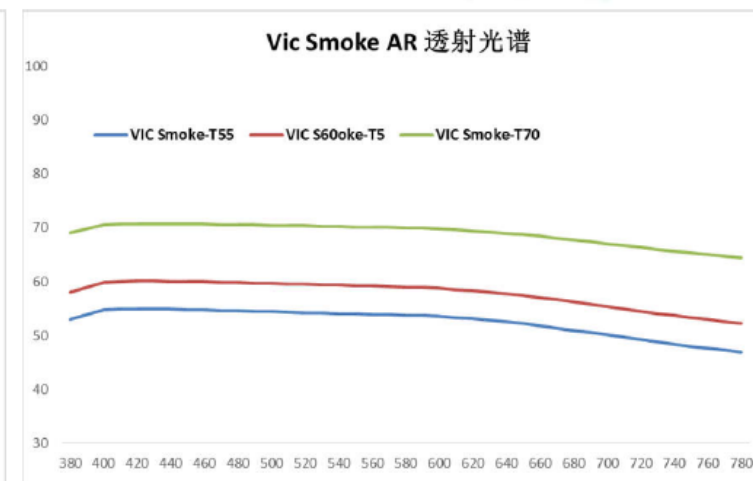
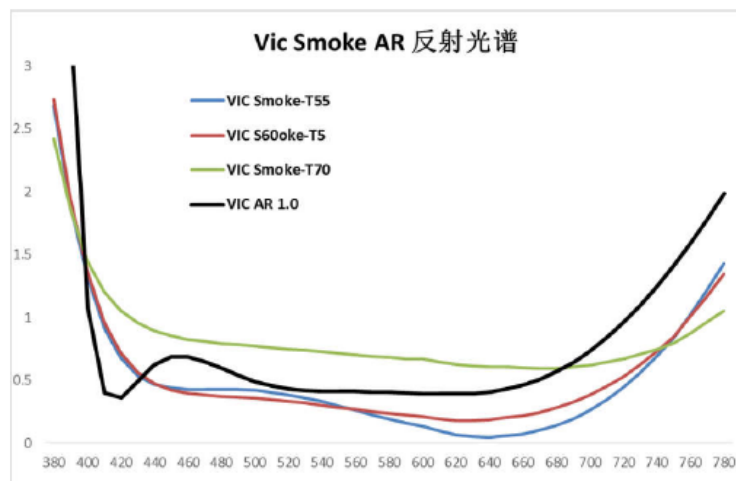
The adhesion of the reflective film to glass is higher than that to resin, making it difficult to peel off.



Requirements: visible light reflectance of 96% or more, infrared light transmittance of 95% or more



Optical Properties



Victory smoke AR achieves

- Low surface reflection
- Transmittance 50-70% (tunable)
- Flat transmission spectrum

项目		VIC Smoke-T55	VIC Smoke-T60	VIC Smoke-T70	测试条件/设备
全光线透射率 (%) Total Transmittance		55±3%	60±3%	70±3%	UV3600分光光度计
D65 反射颜色a*/b* Reflectance Color		a*: -4~2 b*: -7~1	a*: -3~3 b*: -7~1	a*: -3~3 b*: -7~1	分光测色计CM-700D
视感反射率D65° (%) Reflectance Y D65°		≤0.5%	≤0.5%	≤1.0%	分光测色计CM-700D
铅笔硬度 Pencil Hardness	负重 750g Load 750g	≥6H	≥6H	≥6H	参照ISO 15184
涂层附着力 Adhesion Of Coating		≤Class 1	≤Class 1	≤Class 1	参照ISO 2409
水接触角 (°) Water Contact Angle		≥110°	≥110°	≥110°	水滴角接触仪



Display off



Display on



Parameter		LCM	LCM+CG	Remark
Transmittance		/	30~80%	/
Chroma	x	0.270	0.276	CS 100A
	y	0.384	0.387	CS 100A
Sparkling		/	OK	/



Structure Chart

Glass
Picture 1~3 Layer
Function 1~2Layer

More to make the car interior more integrated and harmonious decoration solution.
High transmittance, low color shift are required.



A Class, E Class

Mercedes-Benz



Mass
Golf, T-Roc, etc



Machan, Tycan

PORSCHE



208, 2008

PEUGEOT



Defender



Aion



Explorer, Mustang, Mach-E



Mazda3, CX-



P-7



Verano Pro

MAZDA



GEELY



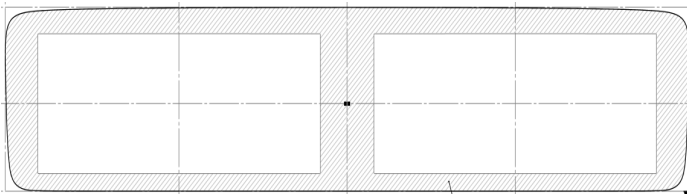
Many Others...



Mercedes-Benz (E-class)



- Process: AR+AF



Glass Material : Corning GG3
Size : 711.9mm*146.2mm*1.3mm
AR Parameter : $R\% < 0.65\%$
MP: 30 K/M

Porsche (Macan)



- Process: AG+AR+AF

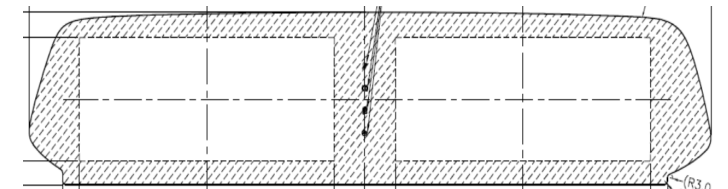


Glass Material: DT-HW T1.0glass
Size : L367mm*W130mm*R750mm
AR Parameter : $R\% < 0.5\%$
MP: 6 K/M

Buick (GL8)



- Process: AG+AR+AF

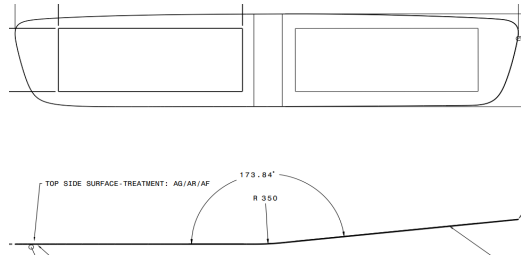


Glass Material : Corning GG3
Size : 783.90mm*154.02mm*1.3mm
AR Parameter : $R\% < 0.65\%$
MP: 15 K/M

Buick (Verano)



- Process: AG+AR+AF

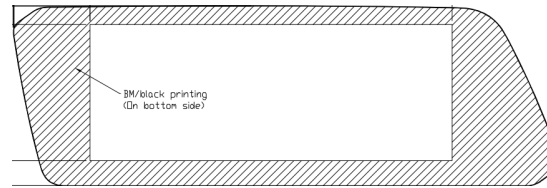


Glass Material: DT-HW 1.3mm
 Size : L661.64mm*W129.42mm*R350mm
 Surface: Victory VIC-AR2222-S80
 MP: 15 K/M

Mazda (Axela)



- Process: AG+AR+AF



Glass Material : Sodalime 1.8
 Size : 315.92mm*104.04mm*1.3mm
 Surface : Dexerials AR100-T062V-BD
 MP: 15 K/M

Roewe (RX5)



- Process: AG+AR+AF

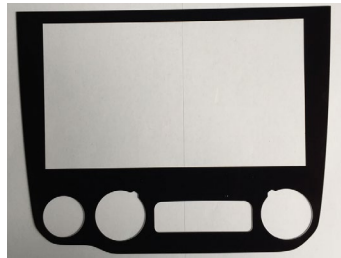


Glass Material: Sodalime 1.3
 Size : 700mm*155mm*1.3mm
 Surface: Victory VIC-AR2222-S80
 MP: 20 K/M

LYNK&CO (01/02)



- Process: AG+AR+AF

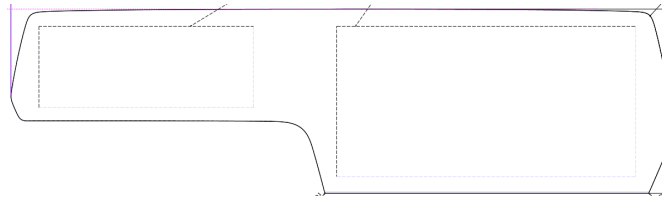


Glass Material : Corning GG3
Size : 271.75mm*208.58mm*1.1mm
AR Parameter : $R\% < 0.65\%$

Xpeng (P7)



- Process: AR+AF



Glass Material : AGC Dragontrail
Size : 755.43mm*209.71mm*2.0mm
AR Parameter : $R\% < 0.65\%$
MP: 6 K/M

Victory Precision | Technology Advantage

MG-Thixomolding



CNC -group



Die-cut



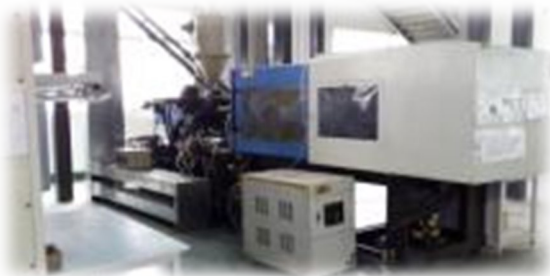
Auto-polish



All Process Capability



Spray Painting



Insert molding



Chemical Conversion

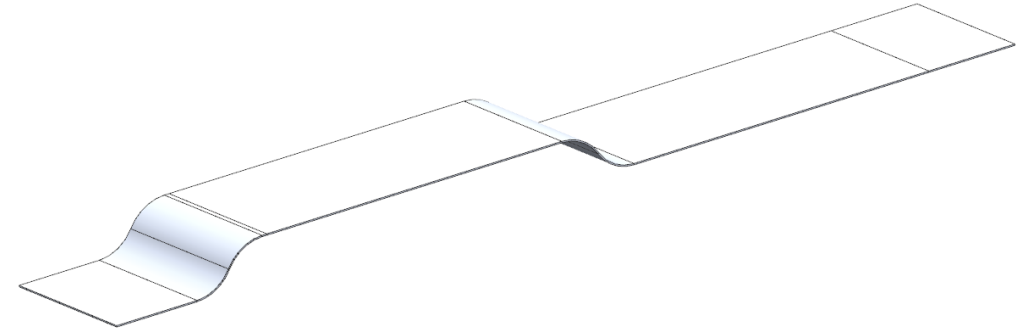


Burnish Line

Oversized Multiple-R 3D Hot forming

➤ Hot forming developing

- Forming molds developing and production ability;
- Verification of dimensional accuracy ;
- Small R Free without polishing process;



➤ 3D printing developing

- 3D screen printing equipment ;
- Exposure development process (out sorting);

➤ 3D AR coating developing

➤ 3D film lamination developing



Summarize

➤ Cover Glass

1. Oversized cover glass full process ability, max to 1500mm;
2. In-line mode AR PVD coating line, large capacity (1KK/M), good Color consistency;
3. Self-made 3A film (PVD), competitive cost and performance;
4. 10 years PVD coating developing and MP experience;

➤ Magnesium parts

1. 1800T and 3000T MG-Thixomolding equipment, up to 1500mm part size;
2. Full process ability (Molding tool ~ JIG ~ Molding ~ Chemical Conversion ~ Painting)

胜利精密 Victory Precision

Innovation - Transparency - Communication - Initiative

创新 - 透明 - 沟通 - 主动

www.vicsz.com