

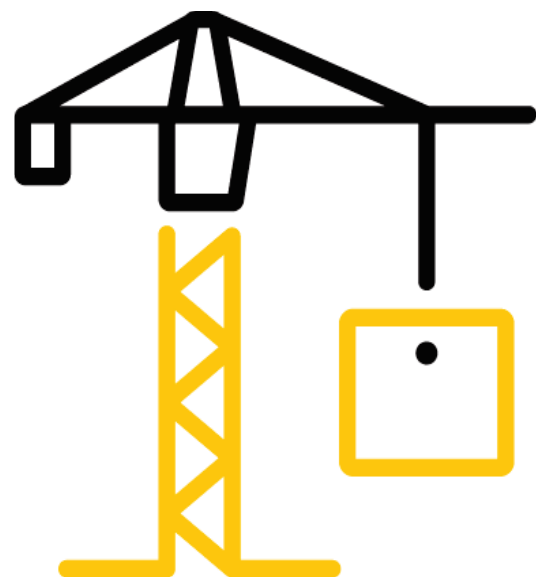
# GUANGZHOU APRO BUILDING MATERIAL CO., LTD

## TEST REPORT

**REPORT NUMBER**  
201228037GZU-001

**ISSUE DATE**  
2021/1/8

**PAGES**  
17



# Test Report

Issue Date: 2021/1/8

Intertek Report No. 201228037GZU-001

Applicant:	GUANGZHOU APRO BUILDING MATERIAL CO., LTD
Applicant Address:	No.9 OF 66 HUA GANG AVENUE, XIU QUAN STREET, HUA DU DISTRICT, GUANGZHOU, CHINA.
Attn:	JASON LAU

Manufacturer:	GUANGZHOU APRO BUILDING MATERIAL CO., LTD
Manufacturer Address:	No.9 OF 66 HUA GANG AVENUE, XIU QUAN STREET, HUA DU DISTRICT, GUANGZHOU, CHINA.
Attn:	JASON LAU

**SUBJECT:** Performance testing  
<150mm Awning Window>

Dear Sir,

This test report for represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:

TEST METHODS AND STANDARDS
AS 2047-2014 Windows and external glazed doors in buildings (Amdt 2-2017)

SAMPLE ID	MODEL	SPECIFICATION
S201228037-001	AS150 Series	1040 mm (Width) × 2167 mm (Height) × 162.3 mm (Thickness)

SAMPLE RECEIVED: 2020/12/25  
TESTED FROM: 2020/12/29 TO 2020/12/29

TEST LOCATION: C2-1 Building Heping Fair, Yongning Street, Zengcheng District, Guangzhou, China



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### Test Items, Method and Results:

#### 1 Test Samples

A full scale of sample was provided by the manufacturer that was not weathered nor conditioned. The description of the samples given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

**Table 1 Product Information**

1	Product Name	150mm Awning Window
2	Model	AS150 Series
3	Dimension of Window Frame	1040 mm (Width) × 2167 mm (Height) × 162.3 mm (Thickness)
4	Dimension of Window Sash	Operable Sash: 896mm (Width) × 1124 mm ( Height) × 51mm (Thickness)
5	Aluminum Profile	Model: AS150 Manufacturer: Guangdong Wacang
6	Frame Corner Construction Details	Mechanically assembled: Glued & screwed
7	Reinforcement	None
8	Glazing	Dimension: Operable Sash: 793 (Width) × 1020 mm ( Height) Fixed glass: 920 (Width) × 847 mm ( Height) Structure: 6mm+12A+6mm tempered double glazing Supplier: Guangdong Sunglas
9	Hardware	Specify type: Chain winder; Handle lock Model: DS1; SC-05 Supplier: Doric; Ke Lang Ming(Foshan)
10	Weather Bar	None
11	Thermal Break	None
12	Drainage	Sizes: 25 (Width) × 6 mm ( Height) Quantity: 2
13	Gasket (between sash and frame)	Model: BYRD0228EPDMB Material: EPDM Supplier: 3H Inc
14	Sealant of Glass	Model: SS511b Black Silicone Sealant Supplier: Bai Yun
15	Installation	The rough opening allowed for a 10mm shim space. The exterior perimeter of the test specimen was sealed with silicon sealant.

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## Test Items, Method and Results:

### 2 Test Result

**Table 2 Test Results**

Test Description	Test Result			Rating	Verdict	
Serviceability Design Wind Pressure AS/NZS 4420.1-2016 section 3	±	1600	Pa	N6 & C4 (General)	Pass	
Deflection / Span Ratio Framing member 1	Stile	1/2615				
Deflection / Span Ratio Framing member 2	Bottom rail	1/1640				
Deflection / Span Ratio Framing member 3	Transom	1/2150				
Operating Force AS/NZS 4420.1-2016 section 4	Initial Movement Requirement: < 160N		Open	42N	/	Pass
			Close	33N		
	Maintain Movement Requirement: < 80N		Open	40N		
			Close	32N		
Air Infiltration at ±75 Pa AS/NZS 4420.1-2016 section 5	Overall area: 2.25 m <sup>2</sup>	at +75Pa:	0.53	L/s·m <sup>2</sup>	Low	Pass
		at -75Pa:	0.55	L/s·m <sup>2</sup>		
Water Penetration AS/NZS 4420.1-2016 section 6	No water penetration at:		300	Pa	N5 & C3 (Non-exposed)	Pass
	Description: Water leakage was occurred at the joint of profiles on top right corner of fixed frame when spraying maintained at 450 Pa for 13 minutes.				N4 & C2 (Exposed)	
Ultimate Strength Test AS/NZS 4420.1-2016 section 7	±	4000	Pa with no collapse		N6 & C3 (General)	Pass
	Description: No significant breakage, permanent deformation or operational malfunction after ultimate strength was released.					

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### Appendix A: Test Data and Sample Drawings:

#### A.1 Deflection Test – Test method AS/NZS 4420.1-2016

Test Pressure (Serviceability design wind pressure), P=1600 Pa, rating N6 (General).

Note : No structural members in a completely assembled and glazed window shall deflect by an amount greater than the following, when tested at the serviceability design wind pressure:

- (a) Span/250 for windows and sliding doors
- (b) Span/100 for doors other than sliding

**Table 3 Test Data of Deflection Test**

Member (mm)		Test Pressure (Pa)	Displacement(mm)			Actual Deflection	Deflection/Span Ratio
Item	Span Length		1	2	3		
Stile	1046	+P/4=400	0.0	0.1	0.0	0.1	/
		+2P/4=800	0.0	0.2	0.0	0.2	/
		+3P/4=1200	0.3	0.6	0.3	0.3	/
		+4P/4=1600	0.5	0.9	0.6	0.4	1:2615
		0	0.2	0.3	0.4	0.1	/
Stile	1046	-P/4=-400	0.0	0.1	0.0	0.1	/
		-2P/4=-800	0.1	0.2	0.0	0.2	/
		-3P/4=-1200	0.3	0.6	0.4	0.3	/
		-4P/4=-1600	0.5	1.0	0.8	0.4	1:2615
		0	0.2	0.3	0.4	0.1	/

**Table 4 Test Data of Deflection Test**

Member (mm)		Test Pressure (Pa)	Displacement(mm)			Actual Deflection	Deflection/Span Ratio
Item	Span Length		3	4	5		
Bottom rail	820	+P/4=400	0.0	0.2	0.1	0.2	/
		+2P/4=800	0.0	0.5	0.4	0.3	/
		+3P/4=1200	0.3	1.0	0.8	0.5	/
		+4P/4=1600	0.6	1.4	1.3	0.5	1:1640
		0	0.4	0.2	0.2	0.1	/
Bottom rail	820	-P/4=-400	0.0	0.1	0.2	0.1	/
		-2P/4=-800	0.0	0.4	0.4	0.2	/
		-3P/4=-1200	0.4	0.8	0.7	0.3	/
		-4P/4=-1600	0.8	1.3	1.1	0.4	1:2050
		0	0.4	0.2	0.2	0.1	/

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**Table 5 Test Data of Deflection Test**

Member (mm)		Test Pressure (Pa)	Displacement(mm)			Actual Deflection	Deflection/Span Ratio
Item	Span Length		6	7	8		
Transom	860	+P/4=400	0.1	0.1	0.0	0.1	/
		+2P/4=800	0.2	0.3	0.0	0.2	/
		+3P/4=1200	0.3	0.5	0.2	0.3	/
		+4P/4=1600	0.5	0.8	0.4	0.4	1:2150
		0	0.0	0.1	0.3	0.2	/
Transom	860	-P/4=-400	0.0	0.1	0.0	0.1	/
		-2P/4=-800	0.1	0.2	0.0	0.2	/
		-3P/4=-1200	0.3	0.4	0.2	0.2	/
		-4P/4=-1600	0.5	0.7	0.4	0.3	1:2867
		0	0.1	0.0	0.3	0.1	/

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### A.2 Sample Drawings

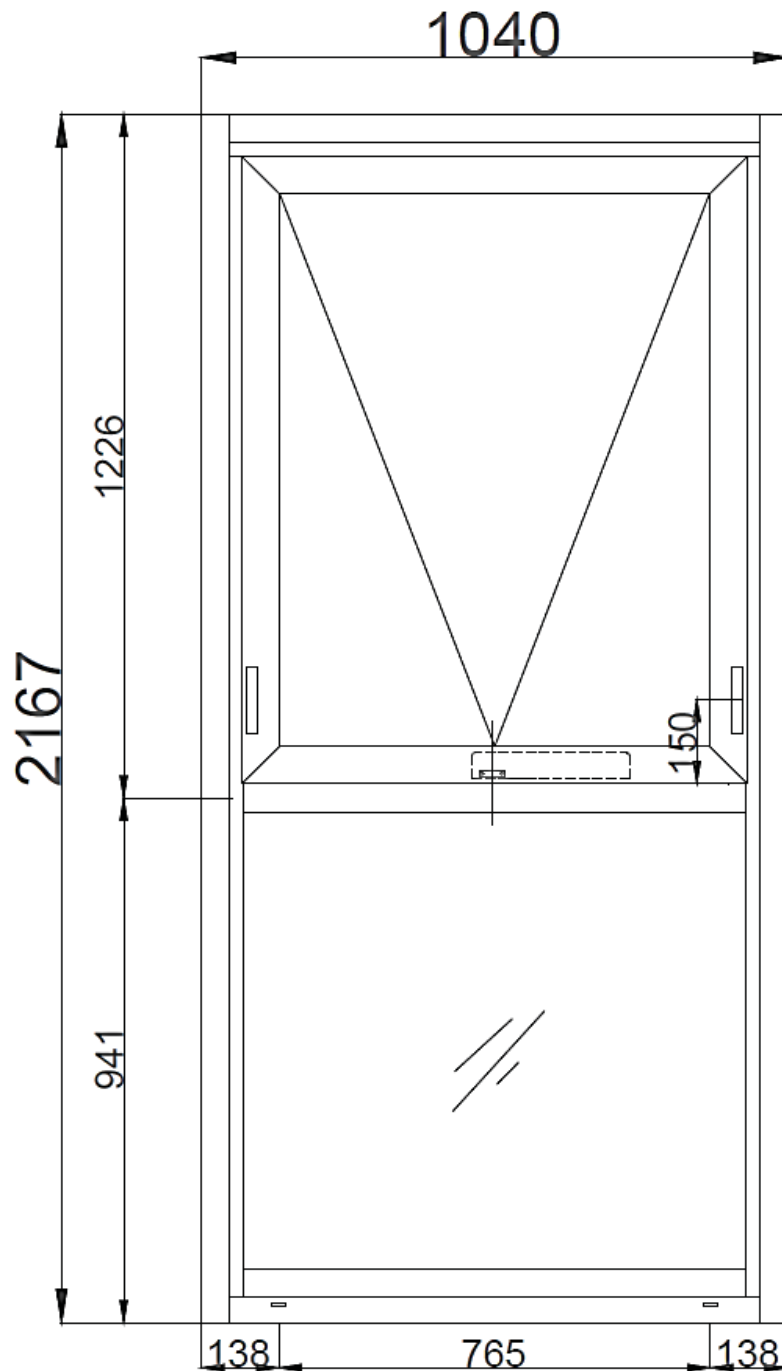
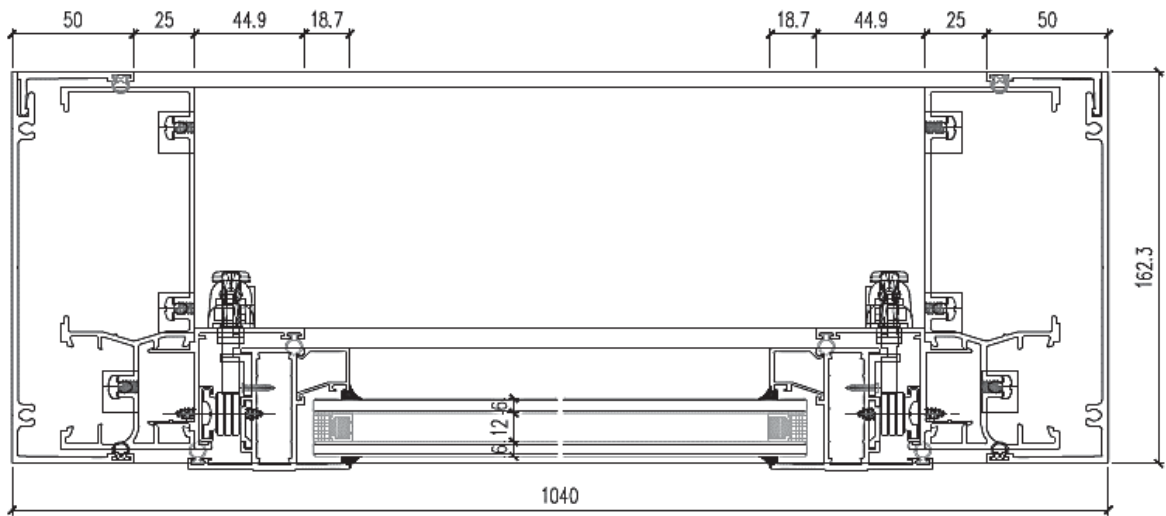


Fig.1 Drawing of Representative Sample

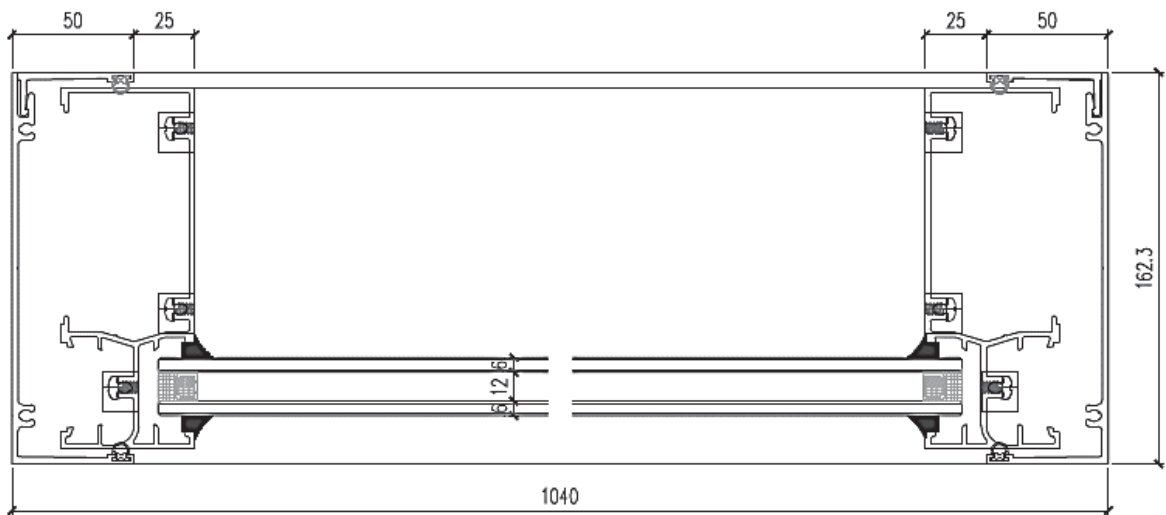
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Fig.2 Drawing of Representative Sample



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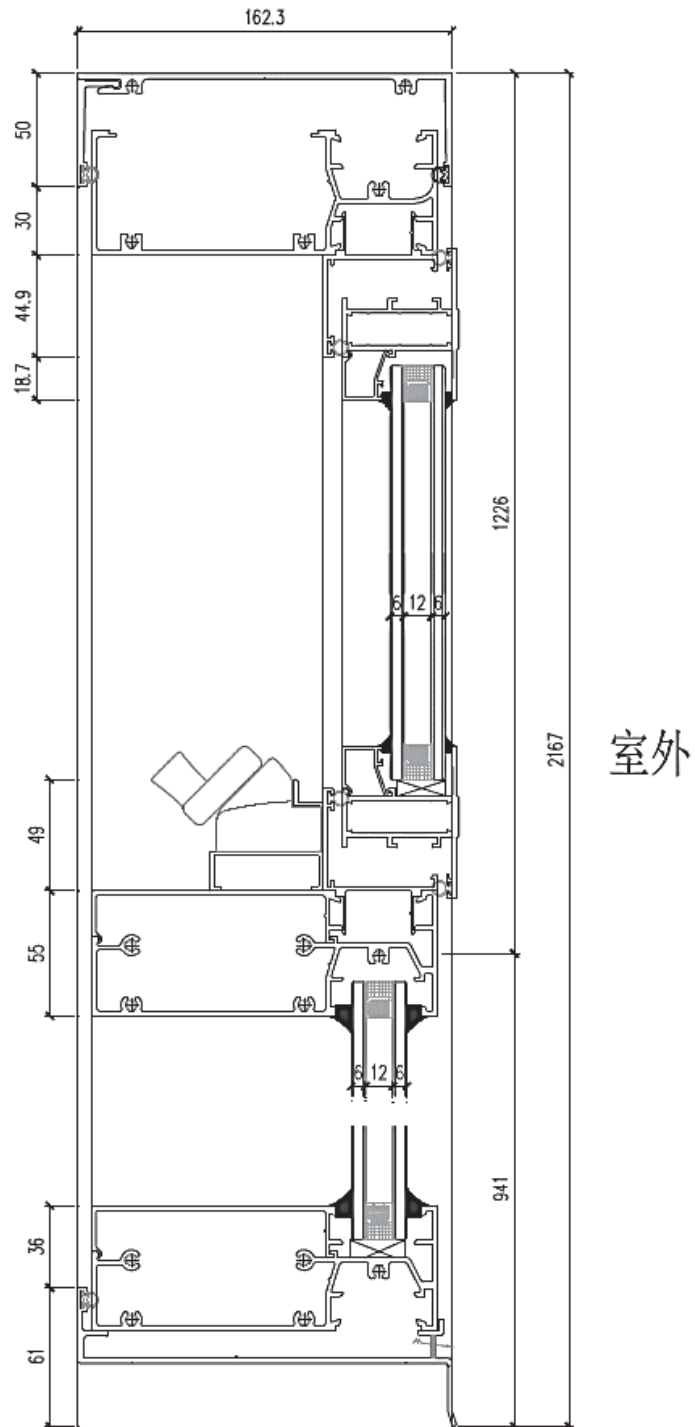


Fig.3 Drawing of Representative Sample

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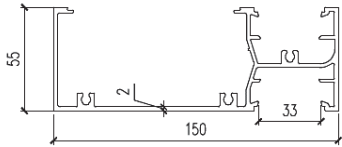
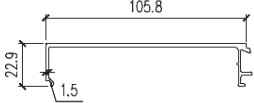
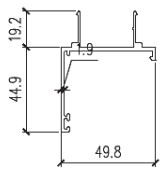
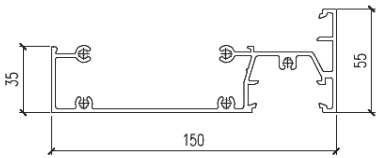
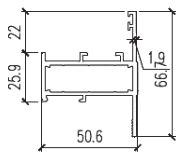
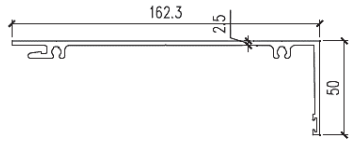
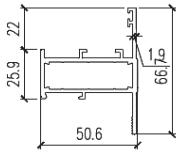
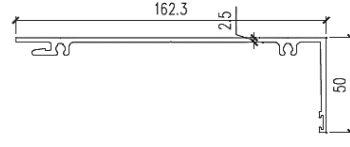
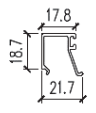
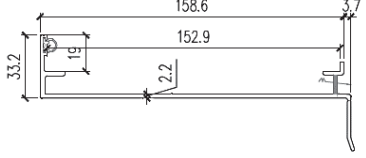
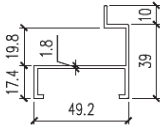
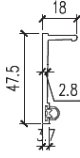
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AUD008 悬窗窗扇 备注:		AUD040 顶副框 备注:	
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AUD025 手摇座 备注:		AUD006 副框拍线 备注:	

Fig.4 Drawing of Representative Sample

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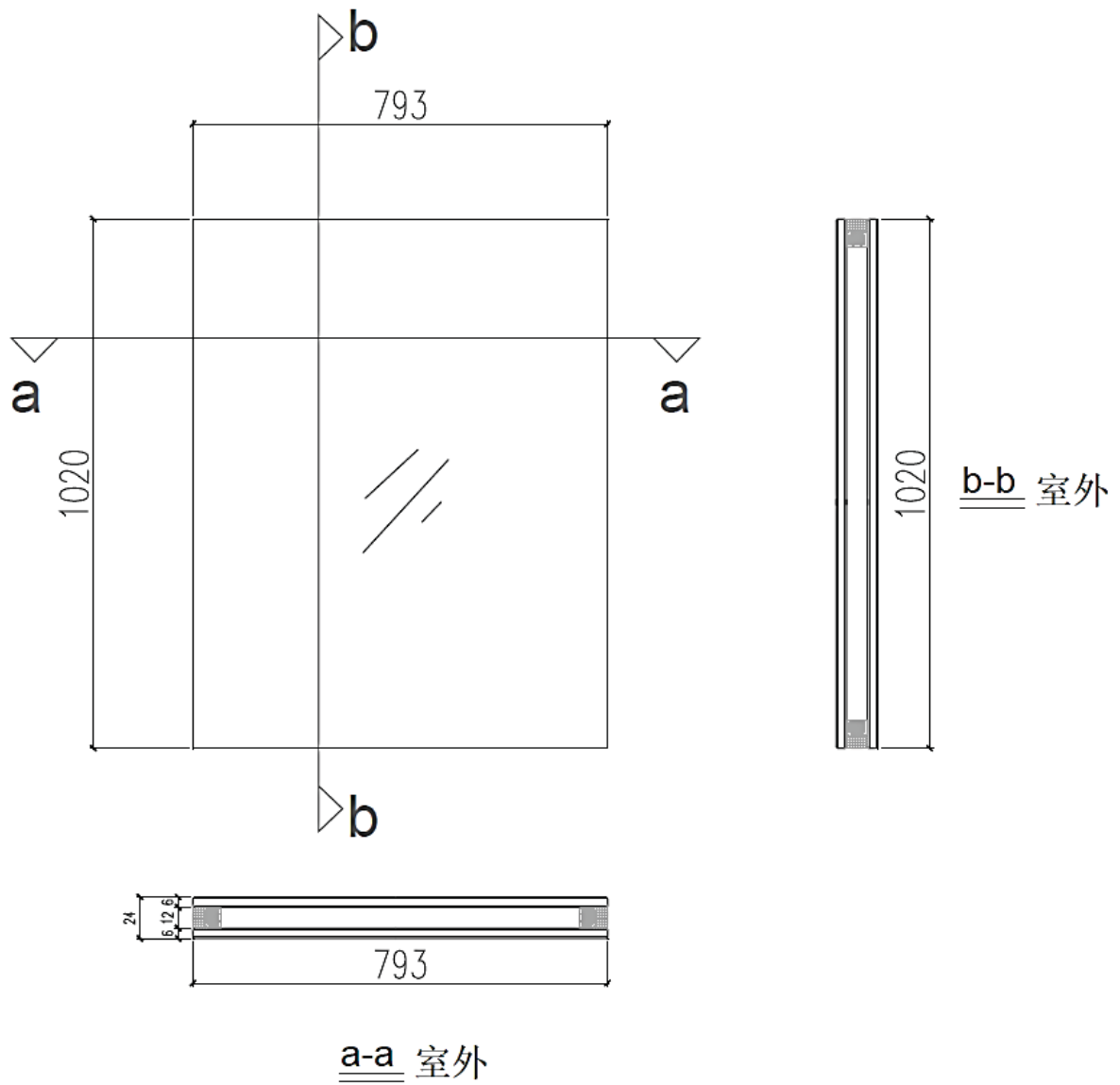


Fig.5 Drawing of Representative Sample

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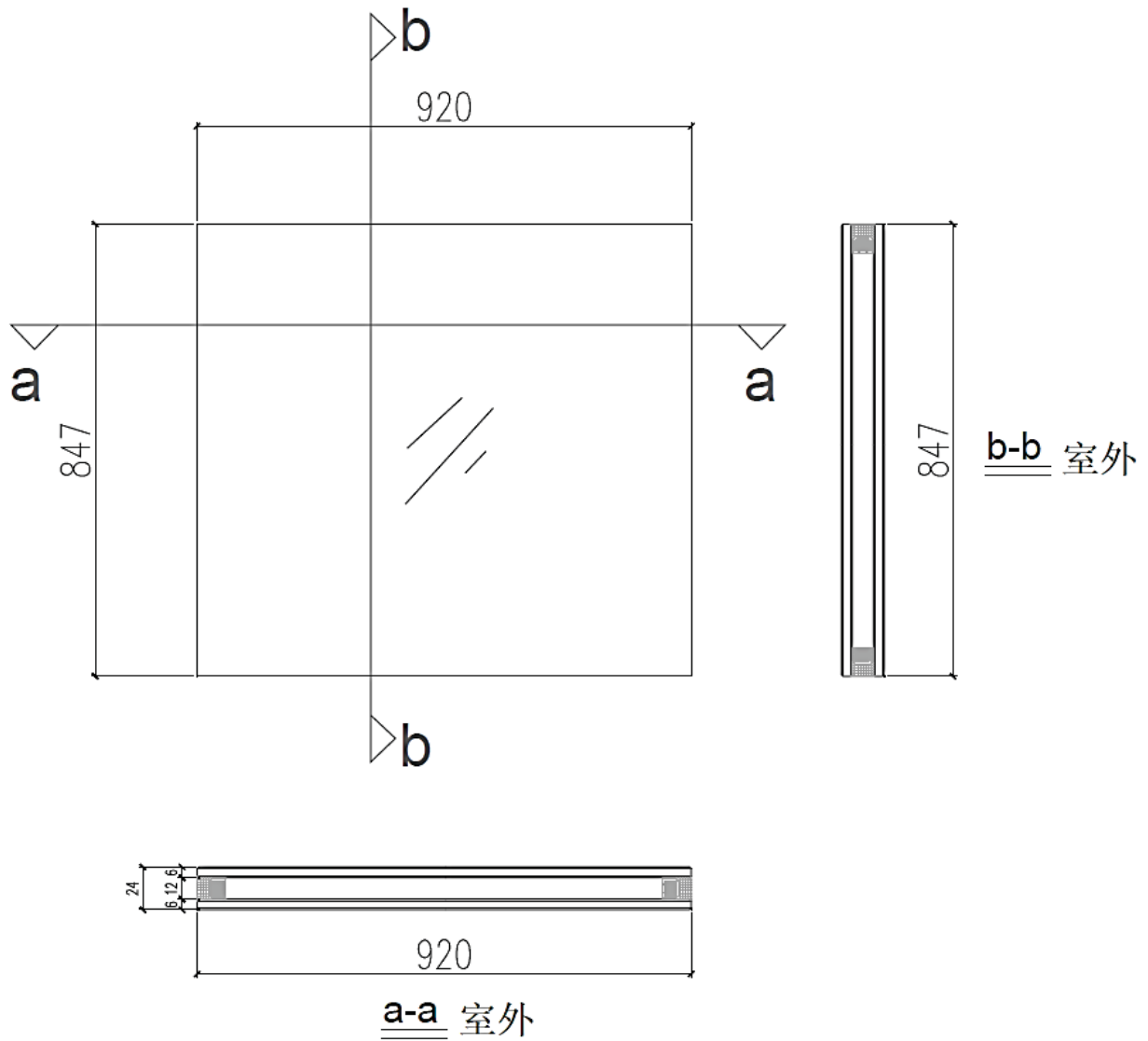


Fig.6 Drawing of Representative Sample

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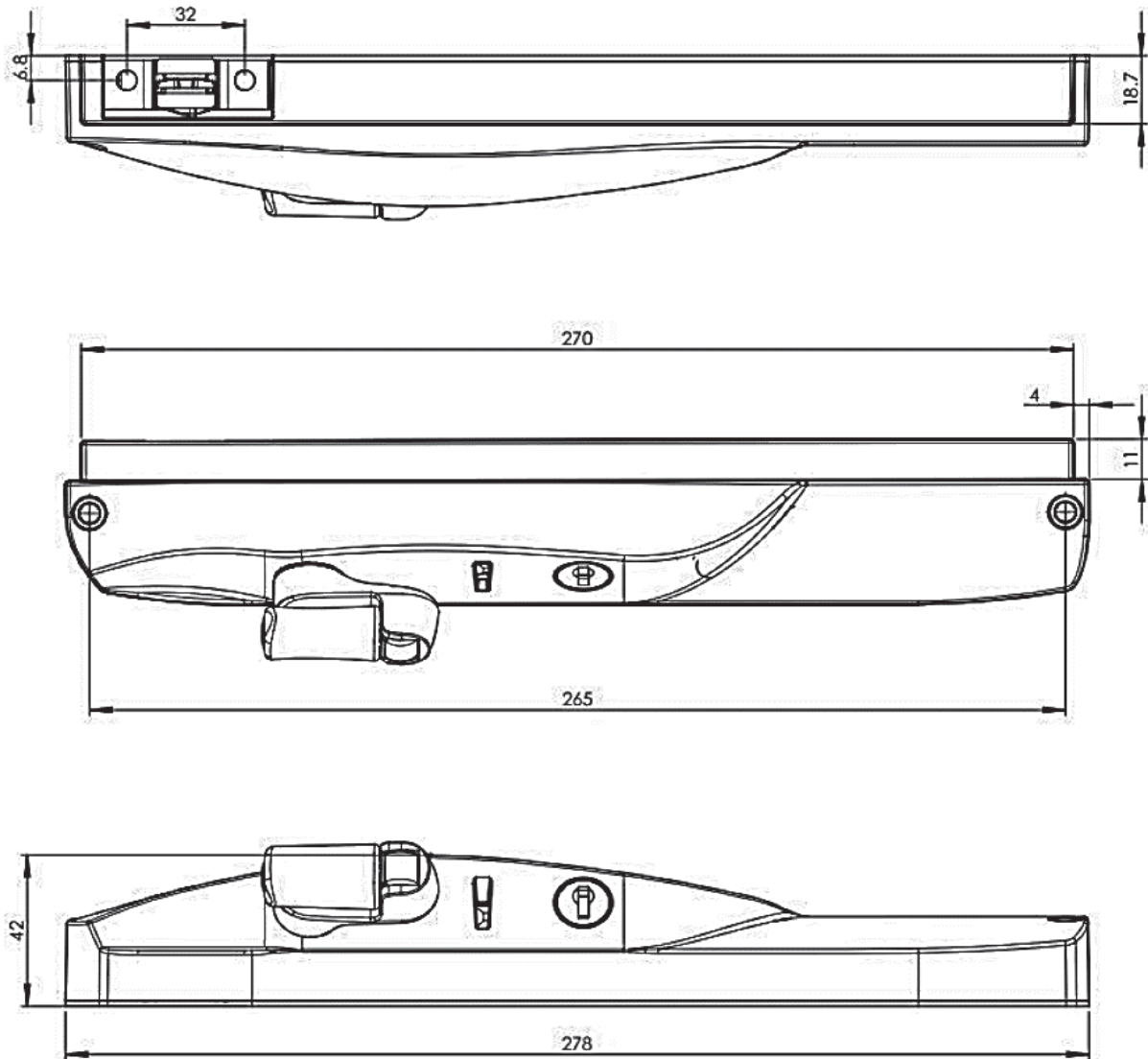


Fig.7 Drawing of Representative Sample

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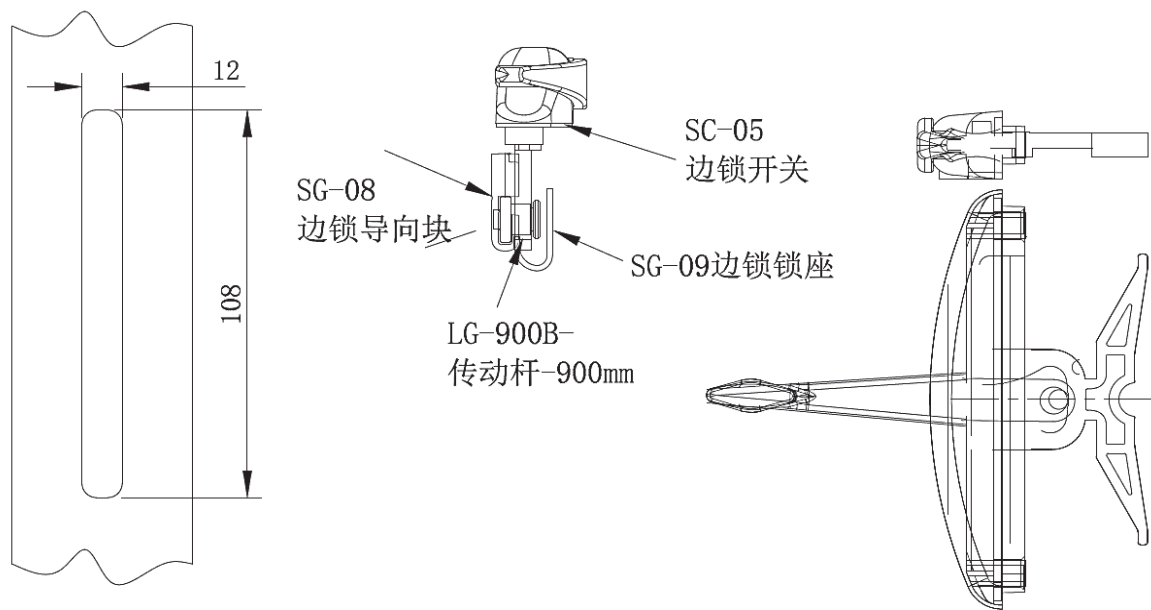


Fig.8 Drawing of Representative Sample

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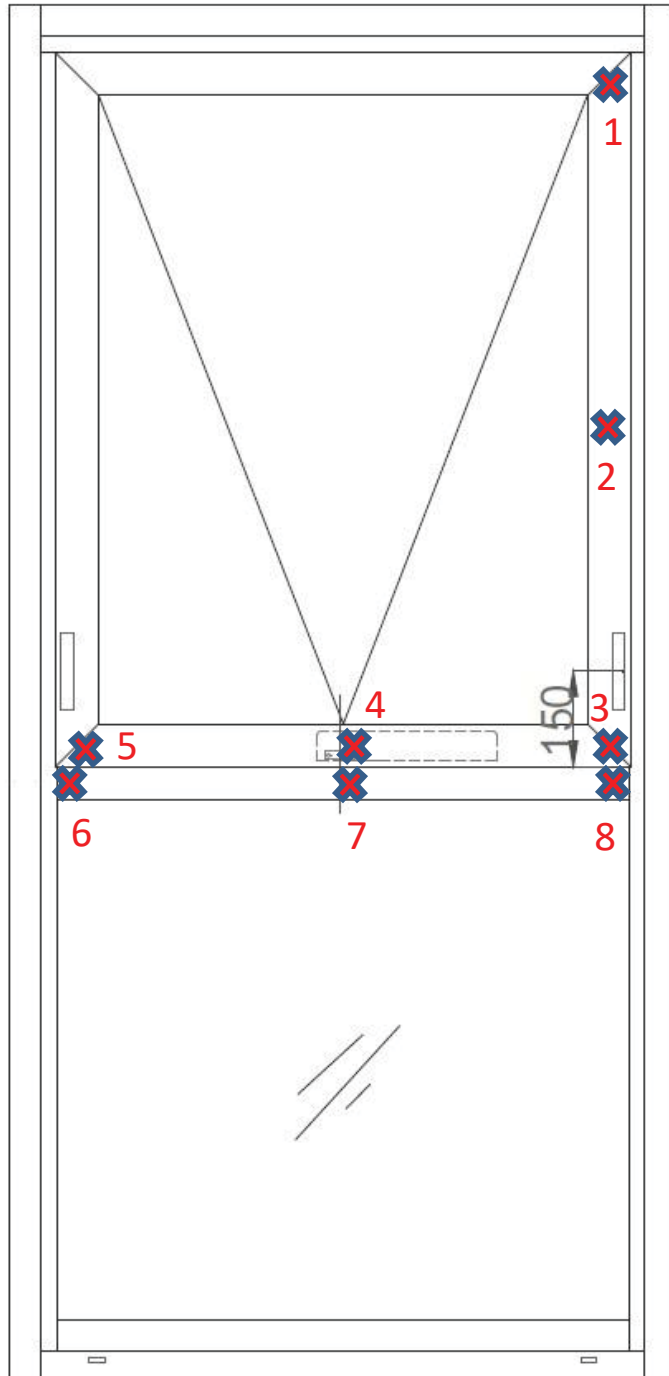


Fig.9 Locations of Displacement Measuring Devices

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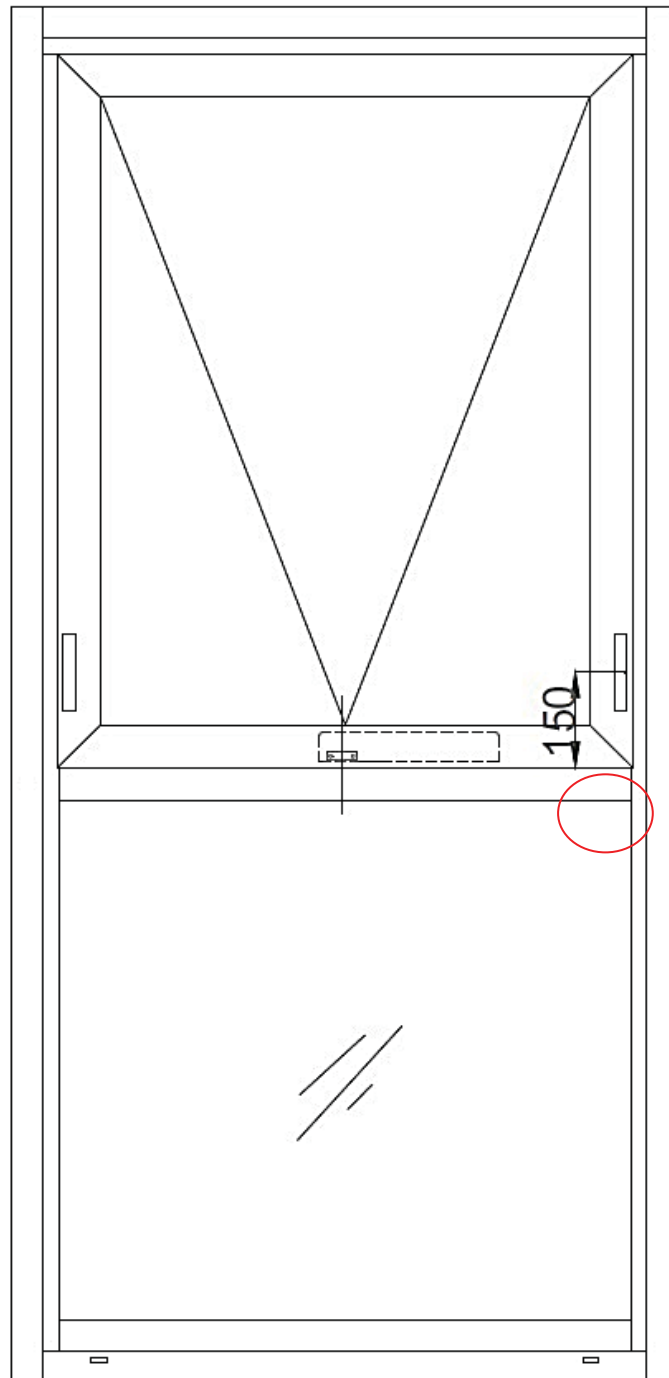


Fig.10 Locations of water penetration

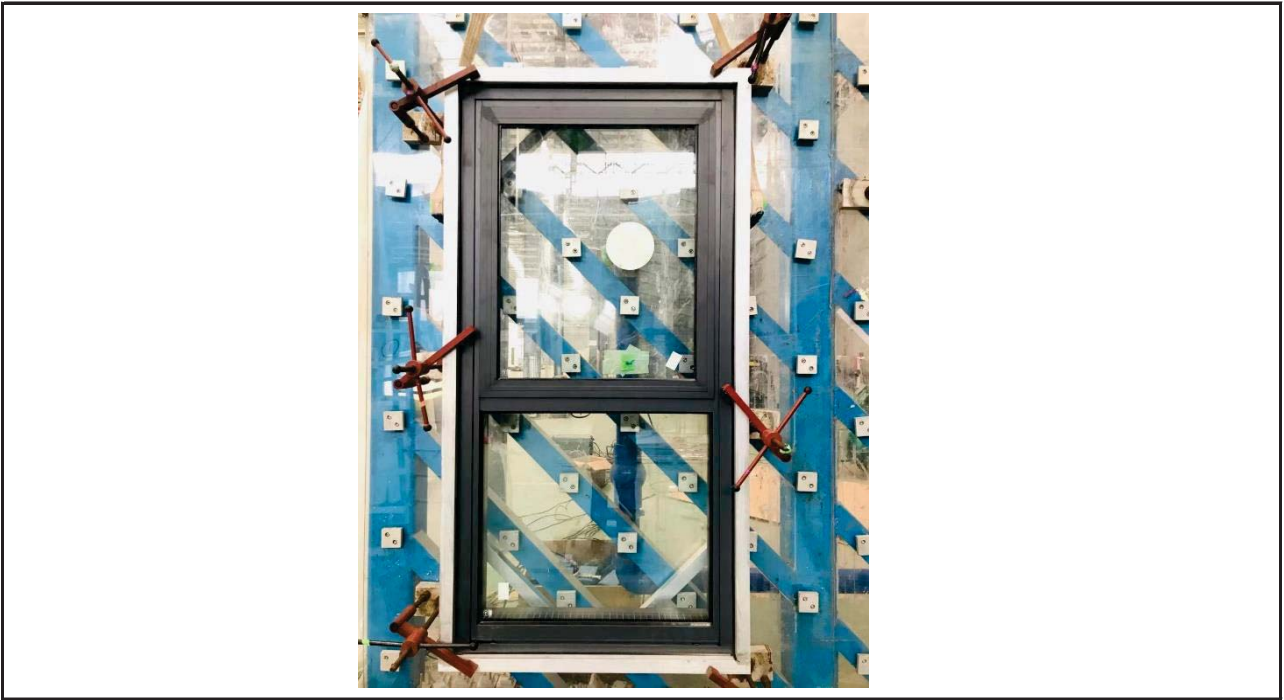


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**APPENDIX : SAMPLE RECEIVED PHOTO**



**REPORT AUTHORIZED**

When signed with physical or electronic signature, the contents of this report have been prepared and approved per Intertek's quality process in accordance with ISO 17025.

**Approved by:**

**Prepared by:**

*Ziqing Chen*

*oliver zhu*

Name: Ziqing Chen  
Title: Reviewer

Name: Oliver Zhu  
Title: Project Engineer

**Revision:**

Report No.	Date	Revision Reason	Revision Summary	Author	Reviewer
201228037GZU-001	2021/1/8	/	First issue	Oliver Zhu	Ziqing Chen

**End of Test Report**