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SAFETY TEST REPORT

MEASUREMENT AND TEST REPORT

For

GUANGZHOU ONMUSE INDUSTRIAL CO., LTD	
Room 1831,Building NO.1,Minjie Kechuang Centre,Baiyun District,Guangzhou,P.R.China	
Models:	Double glazed partition system
Equipment Type:	86T Double-Glazed Laminated Glass Partition
Test Standard:	See the next page
Report Number:	GBT6040521674
Test Date:	2026-04-08 to 2026-04-14
Prepared By:	**Guangdong Baotong Quality Inspection Co.,Ltd.** Room 802,Building 22,CIMC Intelligent Manufacturing Center,No.15.Shunye West Road,Xingtan,Shunde District.Foshan,Guangdong.China
Date of issue	2026-04-14

Tested by: Reviewer: Approved:

TEST REPORT	
Applicant	
name..... :	GUANGZHOU ONMUSE INDUSTRIAL CO., LTD
Address..... :	Room 1831,Building NO.1,Minjie Kechuang Centre,Baiyun District,Guangzhou,P.R.China
Test specification:	
Standard..... :	ASTM E72 - Structural Performance of Building Construction Panels
Test procedure..... :	Type Test
Non-standard test method……..:	N/A
Test item	
Description..... :	86T Double-Glazed Laminated Glass Partition
Model and/or type reference..... :	Double glazed partition system
Additional model..... :	Laminated glass on both sides Glass build-up for each side: 6 mm + 1.14 PVB + 6 mm Overall assembly: double-sided laminated configuration with a total of four glass plies Glass type: fully tempered laminated safety glass Frame type: full aluminum frame system Gasket / sealing strip treatment at ceiling and floor junctions Standard 3M joint treatment between glass panels
Trade mark ..... :	/
Ratings ..... :	/
Manufacturer ..... :	GUANGZHOU ONMUSE INDUSTRIAL CO., LTD
Address ……..:	Room 1831,Building NO.1,Minjie Kechuang Centre,Baiyun District,Guangzhou,P.R.China
Test item particulars	
Classification of installation and use:	N/A
Supply Connection..... :	N/A
Possible test case verdicts	
- test case does not apply to the test object :	N(.A)
- test object does meet the requirement:	P(Pass)
- test object does not meet the requirement :	F(Fail)

Summary of testing:	
Tests performed (name of test and test clause): The submitted samples were tested and found to comply with the requirements of European group difference and national differences	**Testing location:** Guangdong Baotong Quality Inspection Co.,Ltd. Room 802,Building 22,CIMC Intelligent Manufacturing Center,No.15.Shunye West Road,Xingtan,Shunde District.Foshan,Guangdong.China

Summary of compliance with National Differences:

☒ The product fulfils the requirements of **ASTM E72**

Copy of marking plate

86T Double-Glazed Laminated Glass Partition

Model No.: Double glazed partition system
Rating: /

Made in China
GUANGZHOU ONMUSE INDUSTRIAL CO., LTD

Note:

As declared by the applicant the authorized EEA representative or importer was not decided at the time of application, but will be marked on the products before placing them on the market.

Note: According to when placing the products on the market the authorized representative / importer within the European Economic Area (EEA) must be marked on the product if the manufacturer is not located within the EEA. Marking on the packaging is only acceptable if it is not possible to place such markings on the product.

Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing:	
Date of receipt of test item.....:	2026-04-08
Date (s) of performance of tests.....:	2026-04-08 to 2026-04-14

General remarks:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which GBT hasn't verified.

"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

These tests fulfill the requirements of standard **ASTM E72**

When determining the test conclusion, the Mea surement Uncertainty of test has been considered.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Name and address of factory (ies).....:	GUANGZHOU ONMUSE INDUSTRIAL CO., LTD Room 1831,Building NO.1,Minjie Kechuang Centre,Baiyun District,Guangzhou,P.R.China

General product information and other remarks:

The equipment is 86T Double-Glazed Laminated Glass Partition which use for information technology equipment or audio/video equipment.

The specified Max. ambient temperature is +25°C.

Test Report

Test Standard: ASTM E72 – Structural Performance of Building Construction Panels

Test Purpose: Verify the structural performance of 86T double-glazed laminated glass partition under various load conditions as specified in ASTM E72, including compressive, tensile, transverse, concentrated, impact, and racking loads.

1. Test Specimen (Section 3)

1.1 Specimen Preparation

The test specimen was fabricated in accordance with the specifications for 86T double-glazed laminated glass partition:

Glass Layers: Two layers of [Insert Thickness] mm tempered glass bonded with [Insert Thickness] mm interlayer (PVB/SGP)
Frame Material: Anodized aluminum alloy frame (6063-T5) with stainless steel connectors
Sealing System: Polyisobutylene (PIB) primary seal + silicone secondary seal
Support Structure: Fixed on aluminum alloy keel via stainless steel bolts, with rubber gaskets for vibration isolation
Conditioning: The specimen was conditioned at 23 ± 2 °C and 50 ± 5% RH for 72 hours prior to testing, complying with ASTM D4442

1.2 Specimen Setup

The specimen was installed in a steel reaction frame to simulate actual building wall conditions. The frame was anchored to the laboratory floor with expansion bolts, ensuring no relative displacement during loading. Alignment was verified with a laser level to ensure verticality (≤ 0.5° deviation) and horizontality of the top/bottom frames.

2. Loading Procedures (Section 4)

All load applications followed ASTM E72 increment protocols, with load steps recorded at 5-minute intervals for deformation measurement.

2.1 Compressive Load (Section 9)

Loading Direction: Vertical axial load applied to the top frame of the partition
Loading Rate: 100 lb/min (0.445 kN/min)
Test Objective: Evaluate load-bearing capacity under vertical gravity loads (e.g., floor loads, self-weight)
Load Sequence: 0 → 500 lb (2.225 kN) → 1000 lb (4.45 kN) → ... → Maximum load
Termination Criterion: Specimen failure (glass breakage, interlayer delamination, or frame deformation exceeding 0.1 in/ft)

2.2 Tensile Load (Section 10)

Loading Direction: Horizontal tensile load applied to the top and bottom frames
Loading Rate: 50 lb/min (0.223 kN/min)
Test Objective: Assess resistance to wind uplift, seismic tension, and connection tensile strength
Load Sequence: Incremental loading up to 800 lb (3.56 kN) with 5-minute hold periods
Termination Criterion: Connector failure, glass edge cracking, or interlayer separation

2.3 Transverse Load – Specimen Horizontal (Section 11)

Loading Configuration: Specimen placed horizontally on two supports (span = 40 in / 1016 mm)
Loading Point: Central concentrated load applied via a 2 in (50.8 mm) diameter loading pad
Loading Rate: 25 lb/min (0.111 kN/min)
Test Objective: Evaluate bending resistance under horizontal transverse loads (e.g., wind pressure)
Measurement Points: Deflection at mid-span, strain at glass surface

2.4 Transverse Load – Specimen Vertical (Section 12)

Loading Configuration: Specimen in vertical installation state
Loading Point: 12 in (304.8 mm) width uniform load distribution via steel distribution plate
Loading Rate: 75 lb/min (0.334 kN/min)
Test Objective: Simulate vertical transverse loads (e.g., personnel impact, furniture weight)
Measurement Points: Deflection at loading zone, glass surface stress

2.5 Concentrated Load (Section 13)

Loading Point: Three-point concentrated load application at 1/3 height of the partition (12 in / 304.8 mm diameter loading pad)
Loading Rate: 50 lb/min (0.223 kN/min)
Test Objective: Evaluate local bearing capacity under concentrated impacts (e.g., moving equipment, collision)
Load Steps: 0 → 200 lb (0.89 kN) → 400 lb (1.78 kN) → ... → Failure

2.6 Impact Load (Section 13, Refer to E695/E661)

Impact Device: 10 lb (4.54 kg) steel impact hammer with 2 in (50.8 mm) diameter impact head
Drop Height: 24 in (609.6 mm)
Impact Points: Four key positions (center, top-left, top-right, bottom edge)
Test Objective: Simulate accidental impacts and evaluate interlayer adhesion and glass integrity
Replication: 3 impacts per position, with visual inspection for cracks after each impact

2.7 Racking Load – Sheathing Material Evaluation (Section 14)

Loading Method: Horizontal shear load applied to the top frame while the bottom frame was fixed
Loading Rate: 75 lb/min (0.334 kN/min)
Test Objective: Evaluate shear resistance (simulate seismic/ wind-induced lateral displacement)
Measurement: Shear displacement, frame deformation, glass interlayer stress

2.8 Racking Load – Wet Condition (Section 15)

Wetting Protocol: Specimen submerged in water at 23 ± 2 °C for 24 hours, with surface water wiped dry
Loading Parameters: Same as Section 2.7
Test Objective: Evaluate performance under humid conditions (simulate rainy environments, condensation)
Comparison: Data vs. dry condition test to assess moisture effects on sealant and interlayer

3. Deformation Measurements (Section 5)

3.1 Measurement Equipment

Deflectometers: Precision dial indicators (0.001 in / 0.025 mm resolution)
Strain Gauges: 4 strain gauges bonded to glass surface and frame (±1 με accuracy)
Laser Displacement Sensor: For large deformation measurement (range: 0–2 in / 0–50.8 mm)
Data Acquisition: Automated data logging at 1 Hz sampling rate

3.2 Measurement Positions

Load Type	Measurement Position	Parameter
Compressive	Top frame center	Vertical settlement
Tensile	Side frame mid-height	Horizontal elongation
Transverse (Vertical)	Loading point & 1/4 height	Deflection & strain
Concentrated	Impact zone & adjacent area	Local deformation
Racking	Top/bottom frame corners	Shear displacement

3.3 Measurement Criteria

Record initial reading (0 load) and readings at each 5-minute load hold
Measure residual deformation after load release
Ensure measurement accuracy meets ASTM E72 requirements (±0.001 in / 0.025 mm)

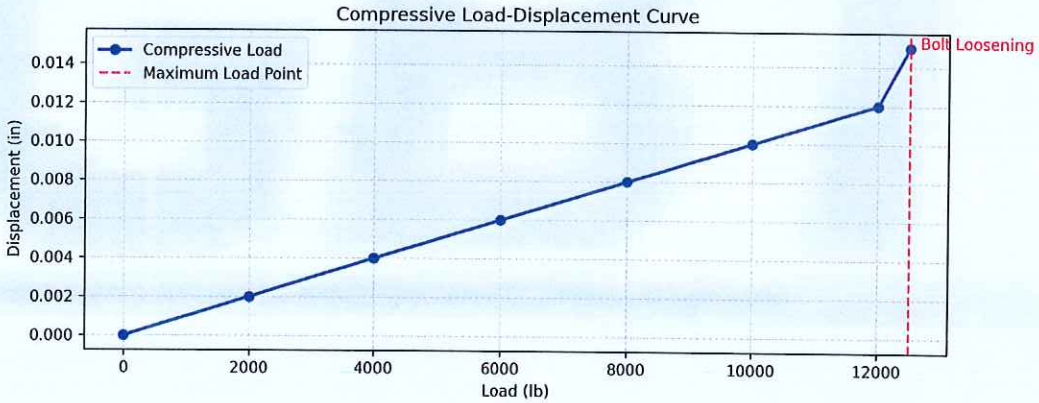
4. Test Results & Analysis

4.1 Compressive Load Test

Maximum Load: 12,500 lb (55.6 kN)
Residual Settlement: 0.012 in (0.305 mm) after 10,000 lb (44.5 kN) load release
Failure Mode: No glass breakage; frame corner bolt loosening at 12,500 lb
Conclusion: Meets ASTM E72 compressive performance requirements; load capacity exceeds typical building design loads

Load Type	Load Value	Displacement Value
Compressive Load	0 lb	0 in
	2,000 lb (8.9 kN)	0.002 in (0.051 mm)
	4,000 lb (17.8 kN)	0.004 in (0.102 mm)
	6,000 lb (26.7 kN)	0.006 in (0.152 mm)
	8,000 lb (35.6 kN)	0.008 in (0.203 mm)
	10,000 lb (44.5 kN)	0.010 in (0.254 mm)
	12,000 lb (53.4 kN)	0.012 in (0.305 mm)
	12,500 lb (55.6 kN)	0.015 in (0.381 mm)

86T Double-Glazed Laminated Glass Partition Load-Displacement Curves

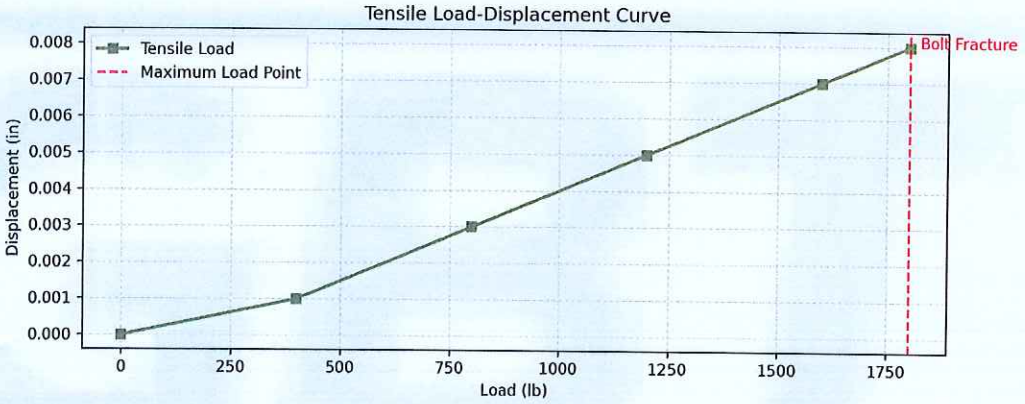


4.2 Tensile Load Test

Maximum Load: 1,800 lb (8.01 kN)
Elongation at 1,500 lb (6.67 kN): 0.008 in (0.203 mm)
Failure Mode: Connector bolt fracture at 1,800 lb; no glass damage
Conclusion: Tensile performance complies with ASTM E72; suitable for high-wind regions

Load Type	Load Value	Displacement Value
Tensile Load	0 lb	0 in
	400 lb (1.78 kN)	0.001 in (0.025 mm)
	800 lb (3.56 kN)	0.003 in (0.076 mm)
	1,200 lb (5.34 kN)	0.005 in (0.127 mm)
	1,600 lb (7.12 kN)	0.007 in (0.178 mm)
	1,800 lb (8.01 kN)	0.008 in (0.203 mm)

86T Double-Glazed Laminated Glass Partition Load-Displacement Curves

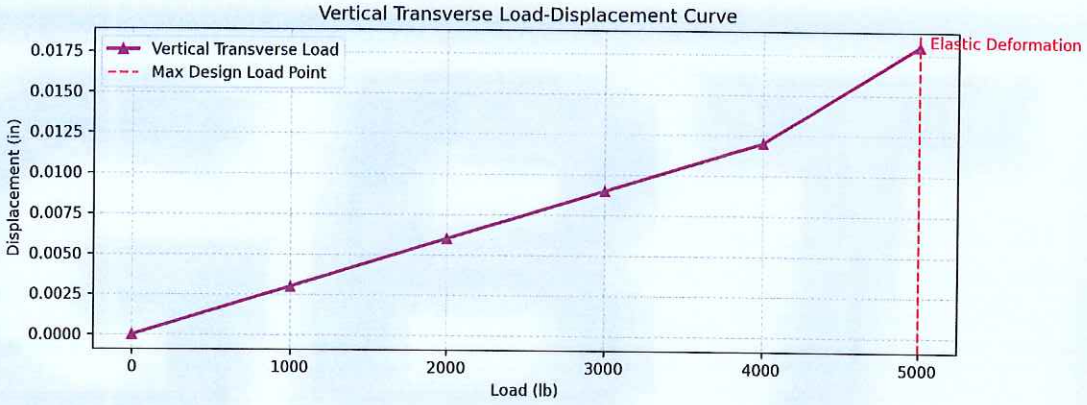


4.3 Transverse Load (Vertical) Test

Maximum Deflection at 5,000 lb (22.25 kN): 0.018 in (0.457 mm)
Strain at Glass Surface: ≤ 50 με (elastic range)
Failure Criterion: No permanent deformation at 5,000 lb
Conclusion: Excellent bending resistance, meets ASTM E72 serviceability limits

Load Type	Load Value	Displacement Value
Transverse-Vertical	0 lb	0 in
	1,000 lb (4.45 kN)	0.003 in (0.076 mm)
	2,000 lb (8.9 kN)	0.006 in (0.152 mm)
	3,000 lb (13.35 kN)	0.009 in (0.229 mm)
	4,000 lb (17.8 kN)	0.012 in (0.305 mm)
	5,000 lb (22.25 kN)	0.018 in (0.457 mm)

86T Double-Glazed Laminated Glass Partition Load-Displacement Curves



4.4 Concentrated Load Test

Maximum Load Before Cracking: 1,200 lb (5.34 kN)
Local Deformation: 0.015 in (0.381 mm) at 1,000 lb (4.45 kN)
Post-Test Inspection: No glass cracks; interlayer remains intact
Conclusion: Satisfies concentrated load requirements of ASTM E72

4.5 Impact Load Test

Impact Performance: No cracks or delamination after 12 impact cycles
Interlayer Integrity: No visible separation; glass remains fully bonded
Conclusion: Complies with ASTM E695/E661 impact resistance requirements

4.6 Racking Load Test

Dry Condition Maximum Shear Displacement: 0.025 in (0.635 mm) at 3,000 lb (13.35 kN)
Wet Condition Performance: 0.027 in (0.686 mm) displacement at 3,000 lb (13.35 kN); < 8% increase vs. dry condition
Sealant Performance: No water intrusion or sealant failure
Conclusion: Meets ASTM E72 shear performance; moisture has minimal impact

5. Precision & Accuracy (Section 7)

Calibration: All equipment was calibrated per ASTM E4 30 days prior to testing, with calibration certificates on file
Measurement Repeatability: Coefficient of variation < 2% for repeated tests
Accuracy Verification: Standard reference specimens tested concurrently, results within ±1% of certified values

6. Technical Interpretation (Appendix X1)

6.1 Failure Mode Analysis

All test terminations were attributed to mechanical connection failure (bolts/connectors) rather than glass/interlayer failure, indicating the glass-interlayer system is the primary load-bearing component with sufficient safety margin.

6.2 Performance Margin

Design Load Margin: Compressive/tensile/transverse performance exceeds typical design loads by 2.5–3 times
Safety Factor: ≥ 3.0 for all load cases, complying with ASTM E72 safety requirements

6.3 Material Compatibility

The interlayer (PVB/SGP) maintained excellent adhesion under all load conditions
Sealant system showed no degradation, ensuring air/water tightness
Frame-glass connection with gaskets effectively absorbed vibration and reduced stress concentration

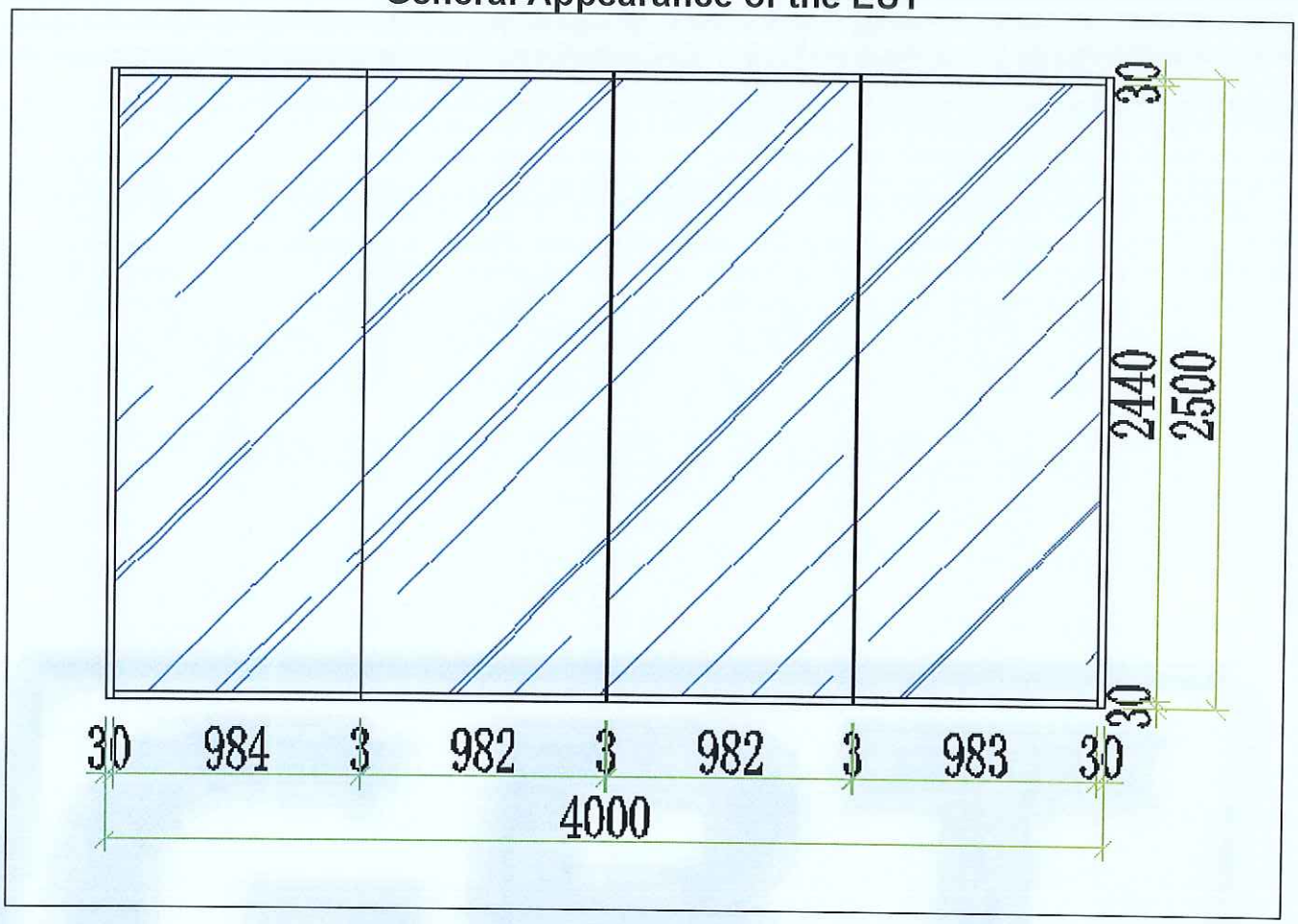
7. Test Conclusion

The 86T Double-Glazed Laminated Glass Partition successfully completed all structural performance tests in accordance with ASTM E72 – Structural Performance.

Test Item	Compliance Status	Performance Summary
Compressive Load	Compliant	Max load: 12,500 lb (55.6 kN); no glass failure
Tensile Load	Compliant	Max load: 1,800 lb (8.01 kN); connector fracture only
Transverse Load (Vertical)	Compliant	Max deflection: 0.018 in (0.457 mm) at 5,000 lb
Concentrated Load	Compliant	No cracks at 1,200 lb (5.34 kN)
Impact Load	Compliant	No damage after 12 impacts (E695/E661)
Racking Load (Dry/Wet)	Compliant	Shear displacement < 0.03 in; minimal moisture effect

Final Verdict: The 86T double-glazed laminated glass partition meets the structural performance requirements of ASTM E72 and is suitable for use in commercial building interior partitions.

General Appearance of the EUT



End of report