

SUNMODO CORPORATION MIAMI-DADE TEST REPORT

SCOPE OF WORK

TAS 100(A) TESTING ON NANOBIT MOUNT – ROOF ATTACHMENT

REPORT NUMBER

Q0060.01-109-18

TEST DATE

07/17/2023

ISSUE DATE

12/15/23

MIAMI-DADE COUNTY NOTIFICATION NO.

ATI 23011

LABORATORY CERTIFICATION NO.

22-0428.14

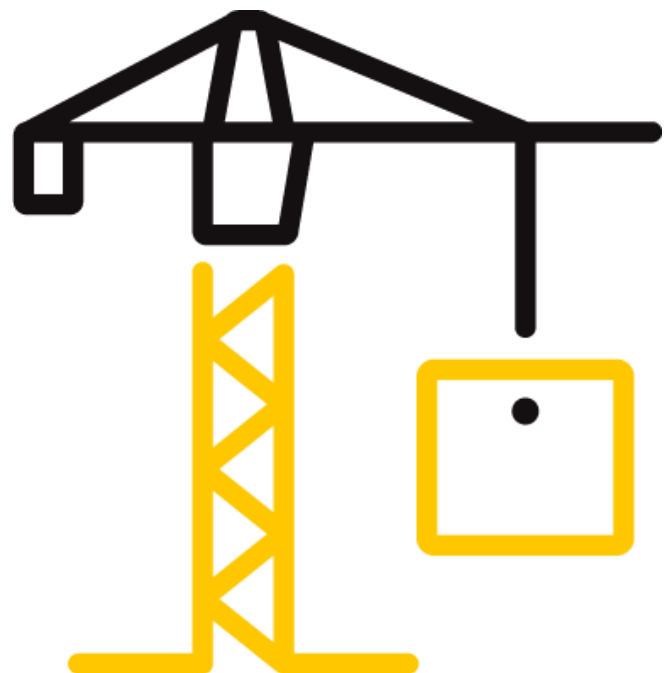
PAGES

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DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-7808 (07/12/22)

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TEST REPORT FOR SUNMODO CORPORATION

Report No.: Q0060.01-109-18

Date: 12/15/23

REPORT ISSUED TO

SUNMODO CORPORATION

14800 NE 65th Street
Vancouver, Washington 98682

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by SunModo Corporation to perform TAS 100(A) testing in accordance with Miami-Dade County requirements on their NanoBit mount. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends ten years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Christopher E. Sartalis
TITLE:	Technician – Product Testing
SIGNATURE:	
DATE:	12/15/23

REVIEWED BY:	Tanya A. Dolby, P.E.
TITLE:	Engineering Manager – Engineering Services
SIGNATURE:	
DATE:	12/15/23

CES:bsm/mas

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SECTION 2

SUMMARY OF TEST RESULTS

The specimen(s) tested met the performance requirements set forth in the protocols.

SECTION 3

SUMMARY OF TEST RESULTS

The specimen(s) tested met the performance requirements set forth in the protocols.

SECTION 4

TEST METHOD

The specimen was evaluated in accordance with the following:

TAS 100 (A)-95, *Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area*

SECTION 5

MATERIAL SOURCE

Test sample materials were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of ten years from the test completion date.

SECTION 6

EQUIPMENT/CALIBRATION

Vane Axial Fan – Y003346

Scale – 65571

Stopwatch – INT00974

Weather Station – 63316

Tape Measure Verification – 63788

Windstream, water supply, and water distribution calibration were performed prior to testing. Reference Intertek B&C Calibration Report No. Q2311.02-109-18, dated 06/27/23, for descriptions and results.

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SECTION 7

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Melchor C. George	Intertek B&C
Ken R. Stough	Intertek B&C
Tanya A. Dolby, P.E.	Intertek B&C
Christopher E. Sartalis	Intertek B&C

SECTION 8

TEST SPECIMEN DESCRIPTION

Manufacturer: SunModo Corporation

Product Type: Metal Roof Mounts

Series/Model: NanoBit Mount

Roof Deck Description: An 8' 0" wide by 6' 0" long roof deck on a 2:12 slope was utilized. The roof deck consisted of #2 Spruce-Pine-Fir nominal 2x6 intermediate supports sheathed with APA 32/16 span rated 15/32" plywood sheathing. The intermediate supports were spaced 24" on center. The plywood was secured to the rafters with 8d common nails spaced 6" on center around the perimeter and 12" on center at the intermediate supports.

Underlayment and Prepared Roof Covering Description: The underlayment consisted of a single layer of an ASTM D226 Type II, 30# felt paper with a 19-inch (483 mm) headlap; all endlaps were 4 inches (102 mm). The underlayment was attached to the deck in a grid pattern of 12 inches (305 mm) between the overlaps, with 6-inch (152 mm) spacing at the overlaps. All fasteners securing the underlayment were T50 crown staples. Standing seam metal roofing was installed over the felt paper in a vertical direction from eave to ridge. The metal panels were secured with #8 x 1-1/2" truss head screws spaced 18" on center through the lip of the standing seam. A bead of sealant was applied to the interlock of the standing seam and the next panel locked into place. The eave edge of the standing seam panels was secured with #8 x 1-1/2" hex head self-drilling screws with a rubber gasket spaced 6" on center along the eave edge and 18" on center up the left and right gable ends. All perimeter edges and openings at the eave of the standing seam were sealed with caulk to seal for testing.

Solar Mount Description/Installation:

NanoBit Mount: The mount had a 2-7/8" diameter base with an overall height of 3-1/2". The mount was constructed from cast aluminum with a single 5/16" diameter hole in the center of the base for mounting. The mount utilized a 2-3/8" diameter by 1/16" thick foam pad adhered to the bottom side of the base. A 7/32" diameter pilot hole was drilled through the metal roofing, sheathing, and into a rafter, at the mounting location of 18" down from the ridge. The pilot hole was filled with sealant and a bead of sealant was applied to the bottom of the mount. The mount was secured to the roof with one 5/16" diameter by 4-1/4" lag screw with a 3/4" self-sealing washer.

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SECTION 9

TEST RESULTS

Protocol TAS 100(A)-95, Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area.

Test Date: 07/17/23

The temperature during testing was 27°C (81°F). The results are tabulated as follows:

Test Procedure: The wind speed intervals were conducted as follows:

Interval No.	Wind Speed (mph)	Time (min)	Water Spray
1	35	15	On
2	0	5	Off
3	70	15	On
4	0	5	Off
5	90	15	On
6	0	5	Off
7	110	5	On
8	0	5	Off

Test Results: The TAS 100(A) test results are as follows:

Wind Speed	Results
35 mph	0.0 oz.
70 mph	0.0 oz.
90 mph	0.0 oz.
110 mph	0.0 oz.

Allowable: 13.92 oz.

Result(s): Pass

Note 1: Tested at a 2:12 roof pitch.

Note 2: Amount of leakage through both specimens tested was 0.0 oz.

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SECTION 10 PHOTOGRAPHS



Photo No. 1
Top Side Before Testing



Photo No. 2
Underside Before Testing

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Photo No. 3
35 MPH Top Side



Photo No. 4
35 MPH Underside

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Photo No. 5
70 MPH Top Side



Photo No. 6
70 MPH Underside

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Photo No. 7
90 MPH Top side



Photo No. 8
90 MPH Underside

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Photo No. 9
110 MPH Top Side



Photo No. 10
110 MPH Underside

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Photo No. 11
Post Test Top Side



Photo No. 12
Post Test Underside



Total Quality. Assured.

130 Derry Court
York, Pennsylvania 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

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SECTION 11

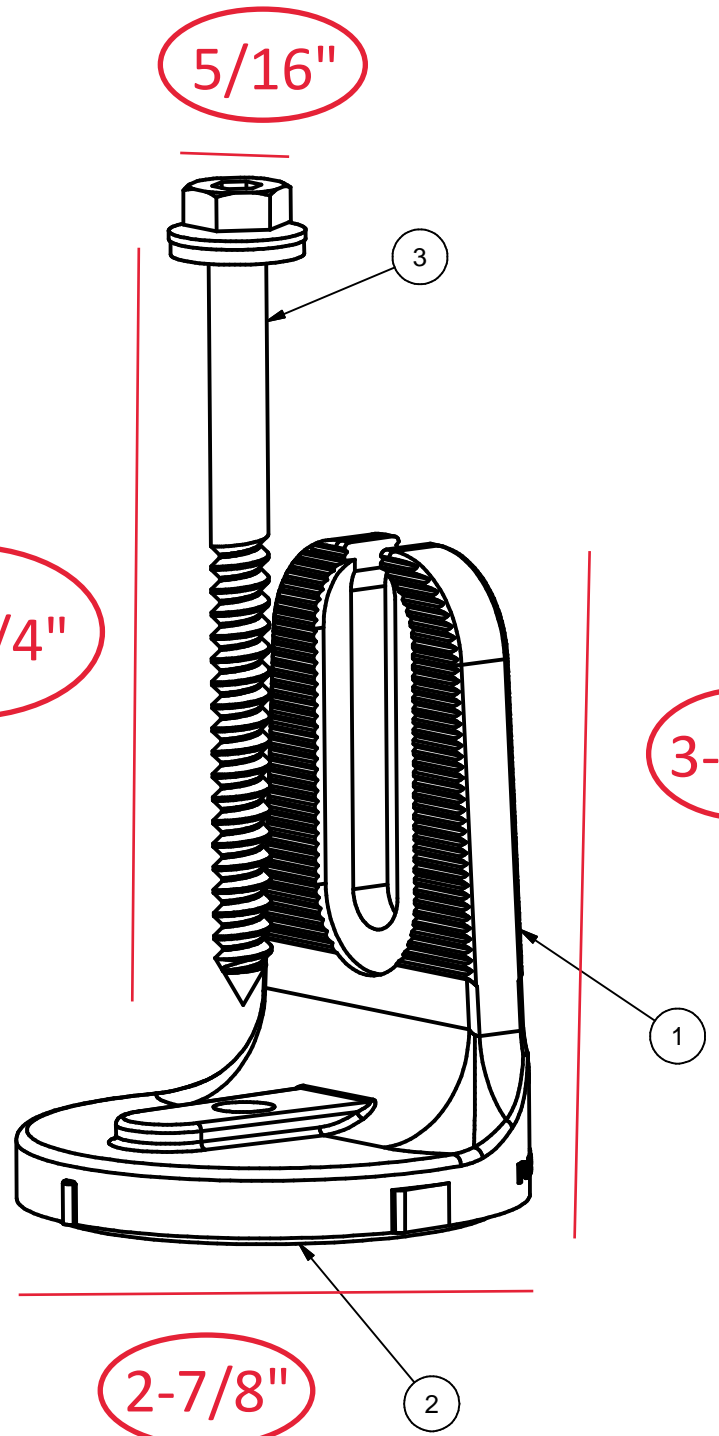
DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

REVISIONS			
REV	DESCRIPTION	BY	DATE
A	INITIAL RELEASE	KYY	10/31/2022
B	ADD K50049-BK1	LWF	03/02/2023



Report #: q0060.01
 Date: 12/15/23
 Verified by: Charles E. Jeter



ITEM	PART NUMBER	DESCRIPTION	QTY
3	K50049-BK1	LAG BOLT WITH SEALING WASHER, BLACK	1
2	C50022-001	NANO GASKET, NEOPRENE FOAM	1
1	A50264-BK1	BLACK NANOBIT MOUNT	1

MATERIAL: SEE NOTES
 Third Angle Projection:
 GENERAL SPECIFICATIONS
 All Dimensions in inches [millimeters]
 Tolerances
 X.XXX ±0.01 [0.25mm]
 X.XX ±0.02 [0.50mm]
 X.X ±0.039 [1.0mm]
 Unless otherwise spec'd
 Break all sharp edges
 .010-.020 unless otherwise specified.
 DRAWN BY: KYY
 DATE: 10/31/2022
 CHECKED BY:
 APPROVALS:

SunModo Corp.
 14800 NE 65TH STREET, VANCOUVER WA 98682
 TITLE: NANOBIT MOUNT, BLACK
 DRAWING NUMBER: B K50065-BK1
 SCALE: 1/1.5 SHEET 1 of 1

THIS DRAWING IS CONFIDENTIAL PROPERTY OF SUNMODO AND ITS CONTENTS MAY NOT BE DISCLOSED WITHOUT THE PRIOR WRITTEN CONSENT OF SUNMODO CORP.



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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	12/15/23	N/A	Original Report Issue