L. Roberto Lomas P.E.

Engineering Evaluation Report

1432 Woodford Rd Lewisville, NC 27023 434-688-0609 rllomas@lrlomaspe.com

Report No.: 512478E

Manufacturer: **Solar Innovations, Inc.**

31 Roberts Rd

Pine Grove, PA 17963

Product Line: Series SI3000 FGW 3x8 Panel Infold Aluminum Reinforced - Impact - HVHZ

Compliance:

The above mentioned product has been evaluated for compliance with the requirements of the Florida Department of Business and Professional Regulation for Statewide Acceptance per Rule 61G20-3.005 method 1(d). The product listed herein complies with requirements of the Florida Building Code.

Supporting Technical Documentation:

- 1. Approval document: drawing number 08-01792, Revision E, prepared, signed and sealed by Luis Roberto Lomas P.E.
- Test Report No.: NCTL 110-15005-1 signed and sealed by Robert Zeiders, P.E.

National Certified Testing Laboratories, York, PA.

TAS 201 Large Missile Impact Test

Uniform Static Air Pressure, ±80.0psf design pressure, 9.0psf water Penetration. TAS 202

Cyclic Pressure loading Outfold and Infold ±80.0psf design pressure TAS 203

3. Test report No.: NCTL 110-15540-1 signed and sealed by Robert H Zeiders P.E.

National Certified Testing Laboratories, York, PA

Large Missile Impact Test, Level D, Wind Zone 4 TAS 201

TAS 202 Uniform Static Air Pressure, ±70.0psf design pressure, 9.0psf water penetration.

TAS 203 Cyclic Pressure loading ±80.0psf design pressure

- I-Strut Testing:
 - Test report ETC-07-1043-19094.0, signed and sealed by Joseph Labora Doldan P.E.

ETC Laboratories, Rochester, NY, ASTM D638

Tensile strength of unexposed samples 10,390psi

Tensile strength of 4500 hour Xenon Arc exposed samples 11,004psi

Test report ETC-08-1043-20974.0 signed and sealed by Joseph Labora Doldan P.E. b. ETC Laboratories, Rochester, NY, ASTM D1929 Self ignition 740°F

Test report ATI 61261.01-106-18 signed and sealed by Joseph Reed P.E. c.

Architectural Testing Inc. York, PA

ASTM D635 Rate of burning classification: CC1 (23.9mm/min, .94in/min)

ASTM D2843 Smoke density rating: 2.1

5. EPDM testing:

Test report No.: PN 105435 Signed by Jim Drummond

Akron Rubber Development Laboratory, Inc. Akron OH an A2LA accredited testing laboratory.

Certificate numbers 255.01 and 255.02

ASTM D2240 Hardness, Shore A: 71 durometer

ASTM D395 Compression set, 22 h @ 100 C, max. %:

Ozone resistance, 100 MPa, 100 h @ 40 C, 20% elongation: No cracks **ASTM D1149**

ASTM D412 Tensile strength: 1410 psi

Elongation @ rupture, min. %: 266 ASTM D412 ASTM D573 Heat aging, 70 h @ 100 C: +4

Hardness increase, max. duro. Points ASTM D573

Change in tensile strength, max. %: +8% Change in elongation, max. %: -21%

ASTM D624 Tear strength, min: 126.2 lbf/in

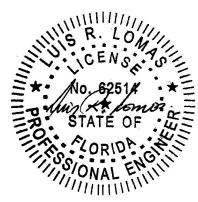
ASTM D746 Brittleness temperature, 3 minutes @ -40 C: No cracks

ASTM D925 Non-staining: No migratory stain

ASTM C1166 Flame propagation: No limit

6. Anchor calculations, report number 512478-1B, prepared, signed and sealed by Luis Roberto Lomas P.E.

7. Comparative analysis, report number 512478-2, prepared, signed and sealed by Luis Roberto Lomas P.E.



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Limitations and Conditions of use:

Maximum design pressure:
Refer to approval drawing.

 Approved configurations:
Unlimited number of panels in unlimited configurations are approved as long as individual panel area does not exceed 24.06 ft² and uses vertical

conditions as shown in approval document.

• Units must be glazed per ASTM E1300, according with glazing details in approval drawing.

• This product is rated to be used in the HVHZ.

• This product is impact resistant and does not require impact protection in wind borne debris regions.

• Frame and panel material to be extruded Aluminum 6063-T6.

Installation:

Units must be installed in accordance with manufacturer's installation details and approval document, 08-01792 Revision E.

Certification of Independence:

Please note that I don't have nor will acquire a financial interest in any company manufacturing or distributing the product(s) for which this report is being issued. Also, I don't have nor will acquire a financial interest in any other entity involved in the approval process of the listed product(s).



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