

L. Roberto Lomas P.E.

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Engineering Evaluation Report

Report No.: 512481F

Manufacturer: Solar Innovations, Inc.
31 Roberts Rd
Pine Grove, PA 17963

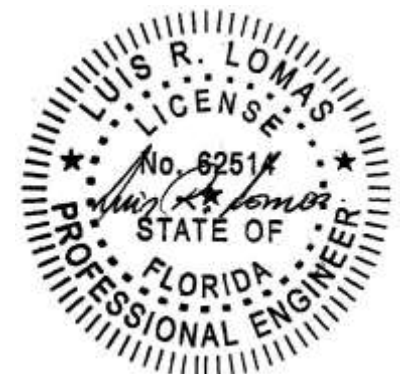
Product Line: Series SI3000 FGW 3x8 Panel Outfold All Wall – Impact - HVHZ

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 08-01795, Revision F, prepared, signed and sealed by Luis Roberto Lomas P.E.
2. Test Report No.: NCTL 110-14994-1 signed and sealed by Robert Zeiders, P.E.
National Certified Testing Laboratories, York, PA.
TAS 201 Large Missile Impact Test
TAS 202 Uniform Static Air Pressure, ± 80.0 psf design pressure, 15.0psf water penetration.
TAS 203 Cyclic Pressure loading Outfold and Infold ± 80.0 psf design pressure
3. Test Report No.: NCTL 110-15135-1 signed and sealed by Robert Zeiders, P.E.
National Certified Testing Laboratories, York, PA.
TAS 201 Large Missile Impact Test
TAS 202 Uniform Static Air Pressure, ± 65.0 psf design pressure, 15.0psf water penetration.
TAS 203 Cyclic Pressure loading Outfold and Infold ± 65.0 psf design pressure
4. Test report No.: NCTL 110-15540-1 signed and sealed by Robert H Zeiders P.E.
National Certified Testing Laboratories, York, PA
TAS 201 Large Missile Impact Test, Level D, Wind Zone 4
TAS 202 Uniform Static Air Pressure, ± 70.0 psf design pressure, 9.0psf water penetration.
TAS 203 Cyclic Pressure loading ± 80.0 psf design pressure
5. I-Strut Testing:
 - a. 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
 - b. Test report ETC-08-1043-20974.0 signed and sealed by Joseph Labora Doldan P.E.
ETC Laboratories, Rochester, NY, ASTM D1929 Self ignition 740°F
 - c. Test report ATI 61261.01-106-18 signed and sealed by Joseph Reed P.E.
Architectural Testing Inc. York, PA
ASTM D635 Rate of burning classification: CC1 (23.9mm/min, .94in/min)
ASTM D2843 Smoke density rating: 2.1



6. 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. %: 22
ASTM D1149 Ozone resistance, 100 MPa, 100 h @ 40 C, 20% elongation: No cracks
ASTM D412 Tensile strength: 1410 psi
ASTM D412 Elongation @ rupture, min. %: 266
ASTM D573 Heat aging, 70 h @ 100 C: +4
ASTM D573 Hardness increase, max. duro. Points
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

7. Anchor calculations, report number 512481-1B prepared, signed and sealed by Luis Roberto Lomas P.E.

8. Comparative analysis, report number 512481-2 prepared, signed and sealed by Luis Roberto Lomas P.E.

Limitations and Conditions of use:

- Maximum design pressure: Refer to installation instructions
- 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 instructions and approval document, 08-01795, Revision F.

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).

