Test Report # 3516-1

Issued to:

Evergreen Solar
138 Bartlett Street
Marlboro, MA 01752

March 28, 2008

Product Name/Description	Spruce Panels
Project Number	N/A
Part Number	Spruce +1
Serial Number(s)	103200803070110037, 103200803070110035, 103200803070110033, 103200803070110036, 103200803070110031
Test Description	Packaged Transportation Test
Test Standard	ISTA Procedure 2B
Test Start Date	03-19-08
Test Completion Date	03-19-08
Test Laboratory	CMG
Test Engineer(s)	Dan Gordon
Test Result	To be evaluated by Evergreen Solar

Prepared By: Dan Gordon
Dan Gordon
Environmental Group Manager

Reviewed By:
Mike Morrow
V.P. of Engineering & Operations

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1. TEST CONDITIONS

Ambient Temperature:	22.0 ºC
Relative Humidity:	36.0% RH
Barometric Pressure:	100.1 kPa

2. METHOD

A single pallet with 28 solar panels, weighing a total of 1,210 lbs was placed on the L.A.B vibration table and then subjected to 11,800 vibratory impacts with vertical motion. After 5,900 impacts the pallet was rotated 90 degrees and an additional 5,900 impacts were applied.

The pallet was then subjected to a 6 inch flat drop and 4 rotational edge drops on the bottom face, per ISTA drop testing.

The pallet was then subjected to another sequence of 11,800 vibratory impacts with vertical motion. Refer to Appendix A for vibratory impact and drop parameters.

3. RESULTS

The pallet and samples were visually inspected after each sequence of testing. No physical damage to the pallet or samples was observed after vibratory impact and the 6 inch free fall drop testing was completed. During the first front edge drop the bottom four plastic edge protector showed a small amount of movement. No other pallet or sample damage was observed. The pallet and samples were returned to Evergreen Solar for further evaluation.

4. NOTES & DEVIATIONS

Evergreen Solar provided the stated 1,210 lbs pallet weight.

Serial numbers were provided for the 5 live panels on the pallet only.

5. TEST EQUIPMENT

5.1. CMG SUPPLIED EQUIPMENT

Equipment	Model #	Serial #	Due Cal
Vibratory Impact table	4000	813023	10-24-08
Controller	4075	24583	10-24-08
Quick Release	6000	5090202	N/A
Stanley Measuring Tape	333-1	N/A	N/A
Extech Temp & Humidity	TH437	EXT003	11-03-08
Fisher Scientific Barometer	4199CC	72638330	11-05-09

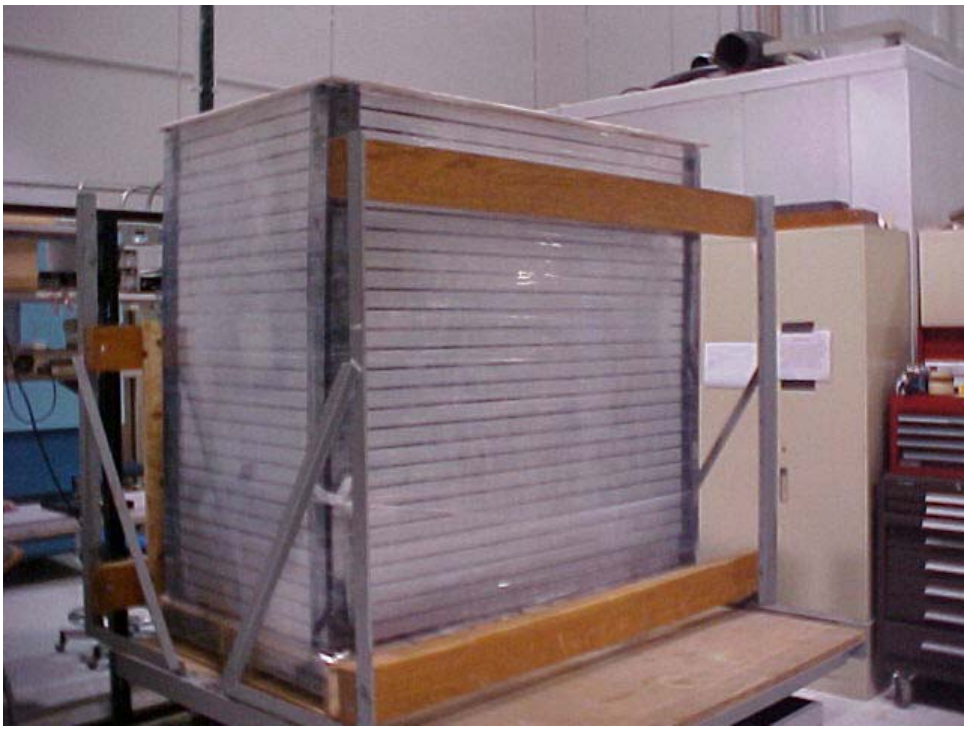
5.2. CUSTOMER SUPPLIED EQUIPMENT

Equipment	Model #	Serial #	Due Cal
N/A	N/A	N/A	N/A

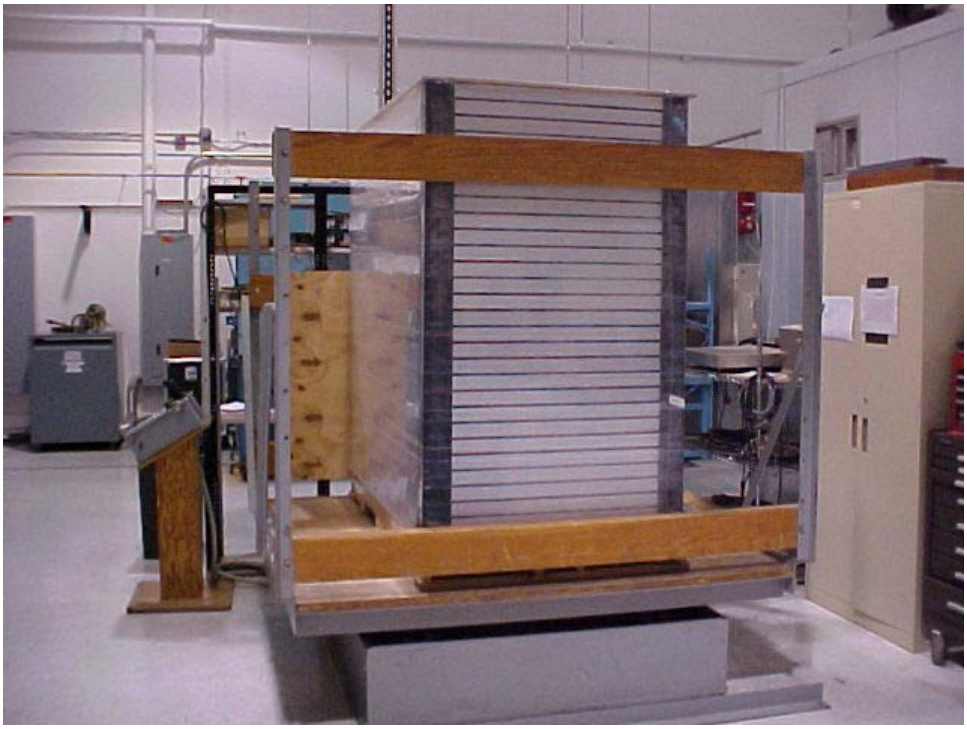
6. BLOCK DIAGRAM

N/A

7. TEST PHOTOGRAPHS



Side-side axis Vibratory Impacts



Front-rear axis Vibratory Impacts

6-inch free fall drop setup

Front-rear axis rotational drop setup

Side-side axis rotational drop setup

8. APPENDIX A

Vibratory Impacts

RPM	Duration	Direction of test	Total impacts
215	27.44 minutes	Front-rear axis	5,900
220	26.81 minutes	Side-side axis	5,900

6-Inch Free fall Drop

Drop Height	Impacted surface
6 Inches	Bottom face

Rotational Drop Test

Drop Height	Support Height	Impacted Edge
8 Inches	4 Inches	Right-bottom edge
8 Inches	4 Inches	Left–bottom edge
8 Inches	4 Inches	Front-bottom edge
8 Inches	4 Inches	Rear-bottom edge

Vibratory Impacts

RPM	Duration	Direction of test	Total impacts
220	26.81 minutes	Front-rear axis	5,900
220	26.81 minutes	Side-side axis	5,900

9. APPENDIX B

N/A

10. *The Compliance Management Group Credentials*

THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

COMPLIANCE MANAGEMENT GROUP (CMG) - MARLBORO, MA

Marlboro, MA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005*).

Presented this 26th day of October 2007.

President
For the Accreditation Council
Certificate Number 2316.01
Valid to May 31, 2009

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

BSMI Accreditation No. SL2-IN-E-1125R VCCI Registration No. R-2141 & C-2315 FCC Registration No. 595942 Korea RRL No. US0155 ISTA Member No. ST-9386