VERIFICATION OF EMC COMPLIANCE

No.:	SHEMO10070096702HSC
Applicant:	Rich Solar Technology Co., Ltd.
	No. 458 Shenli Road Qiubin Industrial Zone Jinhua Zhejiang
Manufacturer:	Rich Solar Technology Co., Ltd.
	No. 458 Shenli Road Qiubin Industrial Zone Jinhua Zhejiang
Product Description:	PV solar module
Model No:	RS-M series
Technical Data:	Monocrystalline: 5wp-295wp

Sufficient samples of the product have been tested and found to be in conformity with

Test Standard:	EN 61000-6-1:2007
	EN 61000-6-3:2007

as shown in the

Test Report Number(s):	SHEMO10070096702

This verification of EMC Compliance has been granted to the applicant based on the results of the tests, performed by laboratory of SGS-CSTC Standards Technical Services (Shanghai)Co., Ltd. on the sample of the above-mentioned product in accordance with the provisions of the relevant specific standards and Directive 2004/108/EC. The affixing of the CE marking presumes in addition that the conditions in annexes III and V of the Directive are fulfilled.

CE

Jim Xu
E&E Section Head
SGS-CSTC

August 2, 2010

SGS-CSTC Standards Technical Services (Shanghai)Co., Ltd.

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EMC TEST REPORT

Application No.: SHEMO10070096702

Applicant: Rich Solar Technology Co., Ltd.

Equipment Under Test (EUT):

NOTE: The following sample(s) submitted was/were identified on behalf of the client as

EUT Name: PV solar module

Model No.: RS-M series

Serial No.: Not supplied by client

Standards: EN 61000-6-1: 2007
EN 61000-6-3: 2007

Date of Receipt: Jul 28, 2010

Date of Test: Jul 29, 2010

Date of Issue: Aug 2, 2010

Test Result :	**PASS**

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives.

CE

Jim Xu
E&E Section Head
SGS-CSTC(Shanghai) Co., Ltd.

Thunder Jin
E&E Sr. Project Engineer
SGS-CSTC(Shanghai)Co.,Ltd

Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Conducted Emission (150K to 30MHz)	EN 61000-6-3: 2007	CISPR 16-1-2: 2006 CISPR 16-2-1: 2005	N/A	N/A Ψ
Radiated Emission (30MHz to 1000MHz)	EN 61000-6-3: 2007	CISPR 16-2-3: 2006	N/A	N/A
ESD	EN 61000-6-1: 2007	IEC 61000-4-2 :2001	Contact ±4 kV Air ±8 kV	PASS
Radio frequency electromagnetic fields, 80MHz to 1 GHz, 1.4GHz to 2 GHz, 2GHz to 2.7 GHz	EN 61000-6-1: 2007	IEC 61000-4-3: 2008	3V/m or 1V/m 80%, 1kHz, AM	N/A
Electrical Fast Transients (EFT) on AC	EN 61000-6-1: 2007	IEC 61000-4-4:2004	±1.0kV	N/A
Surges on AC	EN 61000-6-1: 2007	IEC 61000-4-5 :2005	±1kV D.M.† ±2kV C.M.†	N/A
Injected Currents on AC, 150kHz to 80MHz	EN 61000-6-1: 2007	IEC 61000-4-6 :2006	3Vrms (emf), 80%, 1kHz Amp. Mod.	N/A
Power-frequency magnetic field	EN 61000-6-1: 2007	IEC 61000-4-8 :2001	50,60 Hz 3A/m	N/A
Voltage Dips and Interruptions on AC	EN 61000-6-1: 2007	IEC 61000-4-11 :2004	0% UT* for 0.5per 0% UT* for 1per 70% UT* for 25per 0% UT* for 250per	N/A

Remark:

* U_T is the nominal supply voltage.

† D.M. – Differential Mode.

C.M. – Common Mode.

Ψ N/A –Not Applicable

2 Contents

3 General Information

3.1 Client Information

Applicant:	Rich Solar Technology Co., Ltd.
Address of Applicant:	No. 458 Shenli Road Qiubin Industrial Zone Jinhua Zhejiang
Manufacturer:	Rich Solar Technology Co., Ltd.
Address of Manufacturer:	No. 458 Shenli Road Qiubin Industrial Zone Jinhua Zhejiang

3.2 General Description of E.U.T.

EUT Name:	PV solar module
Model No.:	RS-M series
Brand Name	Rich Solar
Serial No.:	Not supplied by client

3.3 Details of E.U.T.

Power Supply:	N/A
Power Cord:	N/A

3.4 Description of Support Units

Name / Function	Model No.	Remark
N/A	N/A	N/A

3.5 Standards Applicable for Testing

The customer requested EMC tests for PV solar module.

The standards used were EN 61000-6-1: 2007 and EN 61000-6-3: 2007.

Table 1 : Tests Carried Out Under EN 61000-6-3: 2007

Standard		Status
CISPR 16-1-2: 2006		
CISPR 16-2-1: 2005	Conducted Emissions on Mains	×
CISPR 16-2-3: 2006	Radiated Emissions	×

× Indicates that the test is not applicable
√ Indicates that the test is applicable

Table 2: Tests carried out under EN 61000-6-1: 2007

Standard		Status
IEC 61000-4-2 :2001	Electrostatic discharge test	√
IEC 61000-4-3: 2008	Radio frequency electromagnetic fields test	×
IEC 61000-4-4:2004	Electrical fast transients/burst test	×
IEC 61000-4-5 :2005	Surges test	×
IEC 61000-4-6 :2006	Injected Currents test	×
IEC 61000-4-8 :2001	Power-frequency magnetic field test	×
IEC 61000-4-11 :2004	Voltage dips and interruptions test	×

× Indicates that the test is not applicable
√ Indicates that the test is applicable

Note The EUT does not contain any component which is susceptible from the magnetic field.

3.6 Deviation from Standards

None.

3.7 Abnormalities from Standard Conditions

None.

3.8 Monitoring of EUT for All Immunity Test

Visual: N/A

3.9 Test Location

All the tests were performed at:
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
No.588 West Jindu Road, Songjiang District, Shanghai, China. 201612.
Tel: +86 21 6191 5666 Fax: +86 21 6191 5655

3.10 Test Confident level

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. Date of expiry: 2011-07-29.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2012-03-17.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A. Expiry Date: 2011-09-29.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3172 and C-3514 respectively. Date of Registration: 2009-11-30. Date of Expiry: 2012-03-17.

3.11 Measurement Uncertainty

According to CISPR 16-4-2.

Test Item	Frequency Range	Measurement Uncertainty
Conducted Emission	150KHz – 30MHz	3.5dB
Radiated Emission	30MHz – 1000MHz	4.0dB

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4 Equipments Used during Test

Electrostatic Discharge Test

Item	Test Equipment	Manufacturer	Model No.	Series No.	Cal. Date	Cal. Due date
1	Electrostatic Discharge Simulator	KIKUSUI	KES4021	LL004261	2010-04-25	2011-04-24

General Equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal.Due date
1	Atmosphere pressure meter	Shanghai ZhongXuan Electronic Co;Ltd	BY-2003P	/	2009-10-15	2010-10-14
2	Digital Multimeter	FLUKE	17B	10560713	2009-09-16	2010-09-15
3	Thermo-Hygrometer	ZHICHEN	ZC1-2	01050033	2009-10-21	2010-10-20
4	Digital illuminance meter	TES electrical electronic Corp.	TES-1330A	050602219	2009-10-16	2010-10-15

5 Immunity Test Results

5.1 Performance Criteria Description in Clause 4 of EN 61000-6-1: 2007

Performance Criterion A: The apparatus shall continue to operate as intended during and after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified bythe manufacturer, either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

Performance Criterion B: The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is however allowed. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, either of these may be derived from the product description and documentation and what the user may reasonably expect from the apparatus if used as intended.

Performance Criterion C: Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls.

5.2 ESD

Test Requirement:	EN 61000-6-1: 2007	
Test Method:	IEC 61000-4-2 :2001	
Test Date:	Jul 29, 2010	
Discharge Impedance:	330 Ω / 150 pF	
Discharge Voltage:	Air Discharge:	±8 kV
	Contact Discharge:	±4 kV
	HCP:	±4 kV
	VCP:	±4 kV
Polarity:	Positive & Negative	
Number of Discharge:	Minimum 10 times at each test point for Contact and VCP Discharge; Minimum 10 times at each test point for Air Discharge	
Discharge Mode:	Single Discharge	
Discharge Period:	1 second minimum	

5.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0 °C Humidity: 49% RH Atmospheric Pressure: 1007 mbar

EUT Operation: The EUT is in representative work mode.

5.2.2 Direct Application Test Results

Observations: Test Point:

1. All insulated enclosure & seams around EUT.
2. All touchable metal material of EUT

Direct Application			Test Results	
Discharge Level (kV)	**Polarity (+/-)**	**Test Points**	**Contact Discharge**	**Air Discharge**
8	+/-	1	N/A	A
4	+/-	2	A	N/A

Indirect Application Test Results

Observations: Test Point: 1. All sides.

Indirect Application			Test Results	
Discharge Level (kV)	**Polarity (+/-)**	**Test Point**	**Horizontal Coupling**	**Vertical Coupling**
4	+/-	1	A	A

Results: Pass

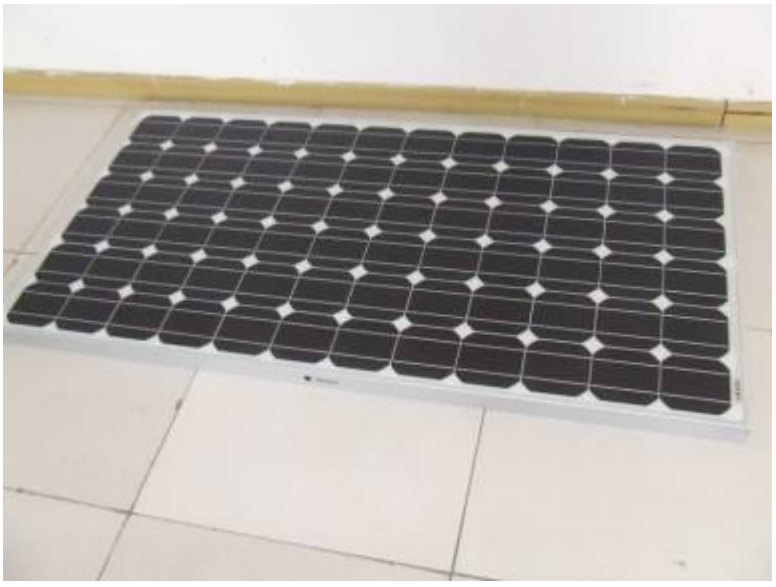
A: No degradation in the performance of the EUT was observed.

N/A: Not applicable (not required in the standard or floor moutned the EUT)

6 Photographs

6.1 ESD Test Setup

6.2 EUT Constructional Details



The end of report