



Govt. of India  
Ministry of New & Renewable Energy,  
Solar Energy Centre  
P.O & Village Gwalpahari, Distt: Gurgaon  
Haryana, India  
2012-2013

Test Report No. 267/2012/SEC/2012-Module

Date: 21 / 11/ 2012

Page 1 of 3

A.SCOPE

1.	Service Request No.	76/12
2.	Requested By (Name & Address of the organization)	M/S –EVERGREEN SOLAR SYSTEM INDIA PRIVATE LIMITED. Sulochana Mills campus,mettupalayam, vadamadurai post, Coimbatore-641017
3.	Details of the test item	
	a. Nomenclature	PV Module
	b. Manufactured By	M/S. EVERGREEN SOLAR SYSTEM INDIA PRIVATE LIMITED.
	c. Model / Type No.	Ref. page no. 02to 03
	d. Serial No.	Ref. page no. 02to 03
4.	Date of Submission of Samples	30/ 10/ 2012
5.	Condition of samples on receipt	Good
6.	Date of Completion of Tests	20 /11 / 2012
7.	Applicable test specifications	Customer's
8.	Test category	STC Performance Test as per IEC-60904-1

B.MAJOR EQUIPMENTS USED

S.N.	NOMENCLATURE	MAKE	MODEL	CAL VALIDITY
1.	SUN SIMULATOR	ENDEAS	QUICKSUN 700A	MAY 2013

NOTE:

1. This test report refers only to the particular items submitted for testing as per specifications/requirements stipulated by the customer.
2. The results reported in the Test Report are valid at the time of and under the stipulated conditions of measurements.
3. The test report shall not be reproduced except in full , unless written permission for the publication of an approved abstract has been obtained from the Director , Solar Energy Center.
4. The client is requested to collect the tested sample back within 30 days from the date of issue of the report

*Anahimasa*  
21-11-12



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Page 2 of 3

STC PERFORMANCE AFTER STABILISATION OF PV MODULES  
(Please ref. Annexure A1 to A7 for modules I-V curve details)

1. Serial No. : 1210111410  
Model No. : Multi Crystalline Si/ EGS 240  
Cell Area : 243.36 Sq.cm.  
Module Area : 16088.40Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
37.30	8.80	0.751	29.81	8.26	16.9	15.3	246	240W	Pass

2. Serial No. : 1210011981  
Model No. : Multi Crystalline Si/ ESS 100  
Cell Area : 163.80 Sq.cm.  
Module Area : 6626.40 Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
22.53	6.03	0.746	17.93	5.65	17.2	15.3	101.3	100W	Pass

3. Serial No. : 121011980  
Model No. : Multi Crystalline Si/ ESS 85  
Cell Area : 141.96Sq.cm.  
Module Area : 5812.36Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
22.56	5.25	0.751	18.08	4.92	17.4	15.3	89.0	85W	Pass

4. Serial No. : 1210011978  
Model No. : Multi Crystalline Si/ ESS 744  
Cell Area : 124.80 Sq.cm.  
Module Area : 5082.00 Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
22.53	4.545	0.758	18.17	4.273	17.3	15.3	77.6	74W	Pass



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Date: 21 / 11 / 2012

Page 3 of 3

5. Serial No. : 1210111979  
Model No. : Multi Crystalline Si/ ESS 75  
Cell Area : 124.80 Sq.cm.  
Module Area : 5082.00Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
22.56	4.543	0.759	18.23	4.270	17.3	15.3	77.8	75W	Pass

6. Serial No. : 1210011977  
Model No. : Multi Crystalline Si/ ESS 50  
Cell Area : 84.24 Sq.cm.  
Module Area : 3550.80 Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
22.03	3.065	0.764	17.88	2.885	17.0	14.5	51.6	50W	Pass

7. Serial No. : 1210011976  
Model No. : Multi Crystalline Si/ ESS 30  
Cell Area : 51.48Sq.cm.  
Module Area : 2310.006Sq.cm.

V <sub>oc</sub> (V)	I <sub>sc</sub> (A)	F.F	V <sub>mp</sub> (V)	I <sub>mp</sub> (A)	Cell eff.%	M. eff. %	P <sub>max</sub> (W)	Manufacturer's claim	Remarks
22.73	1.878	0.772	18.57	1.775	17.8	14.3	33.0	30W	Pass

**NOTE: it is required to have the qualification test certificate as per IEC 61215 before deployment of this module in the field.**

Tested By

*[Signature]*

Date.....21.11.12

*Rajesh Kumar*  
Authorised Signatory  
(Dr. Rajesh Kumar)  
Director, Solar Energy Centre  
MNRE, New Delhi

Date...22/11/12

Issued By

*[Signature]*

Date...22/11/2012