

Government of India
Ministry of Communications and Information Technology
Department of Information Technology, Standardisation Testing & Quality Certification Directorate
ELECTRONICS REGIONAL TEST LABORATORY (EAST)

TEST REPORT ON SOLAR PANEL

PAGE 01 OF 4

1.0 SCOPE

- 1.1 Service Request No.** : TE/0049/08-11
- 1.2 Test Report No.** : ERTL(E)/TES/M277/0058/08-11
Date : 05/09/2011
- 1.3 Requested by** : **MODERN SOLAR PRIVATE LIMITED**
(Name & Address of the organisation)
FALTA SEZ, PLOT NO. 47
SECTOR II
24 PARGONAS(S) NIL
WEST BENGAL
- 1.4 Description , Identification of the item to be tested**
- | | | |
|--------|---|-----------------------|
| Item | : | SOLAR PANEL |
| Make | : | MODERN SOLAR PVT. LTD |
| Model | : | ENERGIA 35 |
| Sl.No. | : | E035110611G049 |
| Qty. | : | 1 |

1.4.1 Applicable Spec.of the item(s) tested:

35 Wp

- 1.4.2 Characterisation and condition of the item**
- | | | |
|------------------|---|------------------|
| Characterisation | : | Not applicable / |
| Condition | : | Satisfactory / |

- 1.5 Date of item receipt of item** : 18/08/2011
- 1.6 Date of completion of testing** : 30/08/2011
- 1.7 Location where testing performed** : In house
- 1.8 Ambient condition during measurement** : 25 +/- 1.5°C
70% RH. Max.
- 1.9 Spec. used for testing** : MNRE SPECIFICATION
- 1.9.1 Details of non-standard method followed (if any)** : NIL



Certificate No. : T0002

Government of India
Ministry of Communications and Information Technology
Department of Information Technology, Standardisation Testing & Quality Certification Directorate
ELECTRONICS REGIONAL TEST LABORATORY (EAST)

Page 2 of 4

FORM NO. : QRF/2001-29/REV-1

TEST REPORT NO.	: ERTL (E) / TES / M 277 / 0058 / 08 - 11		
TEST REPORT ON	: SOLAR PHOTOVOLTAIC MODULE		
MAKE	: MODERN SOLAR PVT. LTD.	TEST ENGR.	DATE
MODEL / TYPE	: ENERGIA 35		
SERIAL NO.	: E035110611G049	DILIP ROY	30-Aug-11
JOB NO.	: 0058 / TE / 08 - 11		

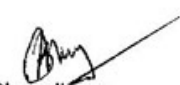
TEST RESULTS :

TEST NO.	TEST OR ENVIRONMENT	CLAUSE NO.	QUANTITY		SPECIFICATION LIMIT *	MEASURED VALUE	REMARKS
			TESTED	FAILED			
1	Peak power (Wp)	-	1	-	39.8 W (Typical)	44.176 W	---
2	Open circuit voltage (Voc)	-	1	-	21.97 V (Typical)	22.378 V	---
3	Peak voltage (V pk)	-	1	-	18.02 V (Typical)	18.603 V	---
4	Short circuit current (Isc)	-	1	-	2.378 A (Typical)	2.542 A	---
5	Peak current (I pk)	-	1	-	2.207A (Typical)	2.375 A	---
6	Fill Factor (FF)	-	1	-	Not Specified	77.7 %	---

*NOTE: Specification as mentioned on the label at the back of the panel

Tested by :
(Test. Engr.)



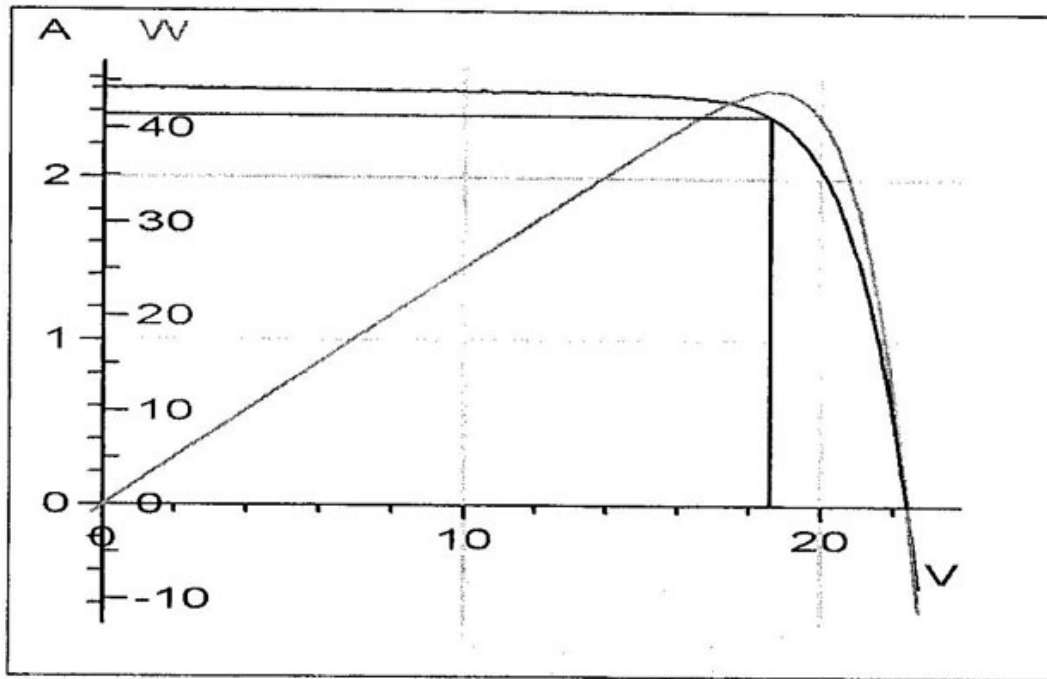

 K B Chowdhury
 Scientist 'E'
 (OIC Lab.)

Government of India
 Ministry of Communications and Information Technology
 Department of Information Technology, Standardisation Testing & Quality Certification Directorate
ELECTRONICS REGIONAL TEST LABORATORY (EAST)

TE/0049/08-11

J58

PAGE 3 OF 4



Panel :	MODERN SOLAR
Type :	ENERGIA 35
Panel no :	1
Serial no :	E035110611G049
Date :	26-08-11
Mon. cell :	Poly+Th+filter - 10-0656-01
Sensitivity :	0.000077 mV
Act. Temp. :	24.9 °C
Result :	16

Temp. =	25.0 °C
Irrad. =	1.0 kW/m2
Isc =	2.542 A
Voc =	22.378 V
Eff. =	17.6 %
FF =	77.7 %
MPP =	44.176 W
V@MPP =	18.603 V
I@MPP =	2.375 A
Rser. =	0.7 Ohm
Rsht =	704.8 Ohm
Ref Voltage	16.4 V
I Ref Voltage	2.495 A
P Ref Voltage	40.920 W

Day

[Signature]

Government of India
 Ministry of Communications and Information Technology
 Department of Information Technology, Standardisation Testing & Quality Certification Directorate
ELECTRONICS REGIONAL TEST LABORATORY (EAST)

TEST REPORT ON : SOLAR PANEL

PAGE 4 OF 4

Test Report No. : ERTL(E)/TES/M277/0058/08-11
 Date : 05/09/2011

3.0 Major Equipment used

EQPT_NO	NAME	MAKE	MODEL	CAL. VALID UPTO
1482	SUN SIMULATOR	PASAN	3C	23/11/2011

4.0 Remarks (if any)

NIL

RELEASED BY
 (signature & date)

Sona
 20/9/11
SONALI JANA
 Scientist - C
 Electronics Regional Test Laboratory (East)
 STQC Directorate, Deptt. of Info. Technology
 Ministry of Comm. & Info. Technology
 Government of India
 Kolkata-700 091