

TEST REPORT IEC 62108 CONCENTRATOR PHOTOVOLTAIC (PV) MODULES AND ASSEMBLIES - DESIGN QUALIFICATION AND TYPE APPROVAL	
Report Reference No.....	ITC/TEST/121
Tested by (name+signature).....	Naveen Chopra 
Approved by (name+signature).....	Ram Partap 
Date of issue.....	23.01 2010
Testing Laboratory.....	ITC India Pvt. Ltd.
Address.....	#372, Industrial Area Phase 1 Panchkula, Haryana (INDIA) 134113 (Testing Division)
Testing location/ address.....	--00--
Applicant's name.....	Square Engineering Pvt. Ltd.
Address.....	SHRADDHA HOUSE CTS No.1206-A/1 Plot no.887-A, Shirole road, Shivajinagar Off J.M. Road,Pune - 411 004 +91 20 25512740/41
Test specification:	
Standard.....	IEC 62108:2007
Test procedure.....	IEC 62108:2007
Non-standard test method.....	N/A
Test item description.....	Solar Modules
Trade Mark.....	
Manufacturer.....	Square Engg. Ltd.
Model/Type reference.....	TEL 37P12
Ratings.....	Pmax=300 W, Vmp=25V, Imax=12Amp., Voc=27V, Isc=15Amp., System voltage= 26 V
Sl No	21080900005.21080900006



Copy of marking plate

Manufacturer's Name	Square Engineering Pvt. Ltd.	
Model number	SUNCUBE 300	
Serial Number	21080900005	
Polarity of terminal or leads	(+) Red, (-) Black	
Maximum System voltage	26 V	
Nominal maximum out power and its tolerance	300 W/ at STC	
Date / Place of Manufacture	21/08/2009	Satara

Tests performed (name of test and test clause):

1. Visual Inspection	Cl. No.: 10.1
2. Electrical performance measurement	Cl. No.: 10.2
3. Ground path continuity test	Cl. No.: 10.3
4. Electrical Insulation Test	Cl. No.:10.4
5. Wet insulation test	Cl. No.: 10.5
6. Thermal cycling test	Cl. No.: 10.6
7. Damp heat test	Cl. No.: 10.7
8. Humidity freeze test	Cl. No.: 10.8
9. Hail impact test	Cl. No.: 10.9
10. Water spray test	Cl. No.: 10.10
11. Bypass/blocking diode thermal test	Cl. No.: 10.11
12. Robustness of terminations test	Cl. No.: 10.12
13. Mechanical load test	Cl. No.: 10.13
14. Off-axis beam damage test	Cl. No.: 10.14
15. Ultraviolet conditioning test	Cl. No.: 10.15
16. Outdoor exposure test	Cl. No.: 10.16
17. Hot-spot endurance test	Cl. No.: 10.17

10.2 (a)	TABLE: Electrical performance measurement				
Irradiance (W/m ²)	1000 W/m ²				-
Sample No.	Voc (V)	Vmp (V)	Isc (Amps)	Imp (Amps)	Pmp (W)
21080900005	29.67	24.69	14.03	13.12	323.93
21080900006	29.20	24.57	14.00	13.12	322.35

Based on the test results conducted for **the above samples, the Solar modules from M/s. Square Engg. Ltd., 300-Watts capacity meets the requirement of IEC 62108 Standard.** (First edition).





EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.
NOTIFIED BODY 1128

TATOIOU 73 & CHAR. TRIKOUPI, KIFISIA 14564, TEL: 210-6252495, FAX: 210-6203018
email: euracert@otenet.gr, site: www.euracert.gr

CERTIFICATE No: EU.IN.CE.0014-01.10

CERTIFICATE OF CONFORMITY
ARCHIVING OF TECHNICAL FILE

Manufacturer	Name	:	SQUARE ENGINEERING PRIVATE LIMITED
	Address	:	SHRADHA HOUSE, CTS NO 1206-A/I, PLOT NO. 887-A, GROUND FLOOR, SHIROLE ROAD, DFF J.M ROAD, SHIVAJINAGAR, PUNE 411004, INDIA
Relevant Equipment as described to the Test Report No.: ITC/TEST/121	Product Name	:	CONCENTRATED SOLAR PHOTOVOLTAIC MODULE
	Model	:	SUNCUBE 300 (Technical Description attached)
Applicable Standard		:	IEC 62108:2007

This is to certify that, upon the relevant request of SQUARE ENGINEERING PRIVATE LIMITED, EUROCERT S.A. as Third Party Authority, has received and archived the Technical Construction File of the above mentioned product.

The Technical Construction File has been archived at EUROCERT's records with code number EU.IN.CE.0014TCF.

All modifications to the Technical File should be first submitted to the Third Party Inspection Authority to ensure further validity of this attestation.

Third Party Authority Stamp



Date and Place of Issue
ATHENS, 26/01/2010
For EUROCERT S.A.

GEORGE BRISKOLAS
GENERAL MANAGER



**EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.
NOTIFIED BODY 1128**

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TECHNICAL DESCRIPTION

Material of Construction	Aluminum
Mass	35 kg
Environmental range	5 deg C to 60 deg C, 0 to 100% humidity, Sealed against moisture, rain & dust
Receiver Fresnel lenses	3 mm molded PMMA
Receiver width	1.02 m
Receiver height	1.02 m
Receiver depth	0.385 m
Optical Aperture	1 m ²
Survival wind speed	120 kph full face on
Peak output STC conditions (25 deg C cell temp, Low AOD Illumination, AM 1.5)	300 Wp
Voc (under above test conditions)	27 Vdc
Vmp (under above test conditions)	25 Vdc
Isc (under above test conditions)	15 A
Imp (under above test conditions)	12 A
Modular efficiency	31%
Tracker	2 axis via internal microprocessor
Tracker power drain	1.8 W during sky point adjust 0.01 W during stand by
Tracker sky point adjustment	2 seconds every minute
Half angle to the sky	2.5 deg
Tracker range	Horizon to horizon, unlimited
Stow (triggered by night, hail / object impact or heavy winds)	Le-nses facing down

