

सी पी आर आई
भारत

**CPRI
INDIA**

परीक्षण रिपोर्ट
TEST REPORT



टिप्पणी :

- अ) यह अनुपालन प्रमाणपत्र नहीं है।
- आ) परीक्षण परिणाम केवल परीक्षित वस्तुओं से संबंधित है।
- इ) पूरी रिपोर्ट का सम्पूर्ण सेट व जिस भाषा में वह लिखी गई हो, उसको छोड़कर किसी अन्य रूप में इस रिपोर्ट का प्रकाशन अथवा पुनः प्रस्तुति सी. पी. आर. आई. की लिखित सहमति के बिना अनुमत्त नहीं है।
- ई) सुधार करने / मिटाने से परीक्षण अमान्य बनेगा।
- उ) परीक्षण रिपोर्ट में छपी किसी भी असंगति / विसंगति को, जारी के दिनांक के 45 दिनों के अंदर सी. पी. आर. आई. के ध्यान में लाएं।

NOTE :

- a) *This is not a certificate of compliance.*
- b) *The test results relate only to the items tested.*
- c) *Publication or reproduction of this report in any form other than by complete set of the whole report and in the language written, is not permitted without the written consent of CPRI*
- d) *Corrections / erasings invalidate the test report.*
- e) *Any anomalies / discrepancies in the test report should be brought to CPRI notice within 45 days from the date of issue.*



हिन्दी में काम देश का सम्मान
केन्द्रीय विद्युत अनुसंधान संस्थान

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय)

प्रो. सर. सी. वी. रामन रोड सदाशिवनगर ब्लाक घर, पो. बा.सं. 8066, बंगलूर - 560 080

CENTRAL POWER RESEARCH INSTITUTE

(A Govt of India Society, Min. of Power)

Prof. Sir C. V. Raman Road, Sadashivanagar P.O., P.B. No. 8066, BANGALORE - 560 080, INDIA.

फोन: का.:
Phone: off : 91 80
फैक्स :
Fax : 91 80

CPRI/ECDD/SPV/09

25/09/2009

To,
M/s. Silicon Solar Systems
#46-790, Near Saibaba Temple,
Bhagat Singh Nagar, Chintal
Hyderabad -500 054

Dear Sir,

Please find enclosed the test report for the following:

1. Solar Lantern (2A) – 1 No..

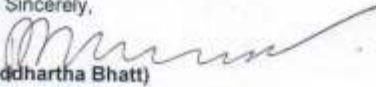
Please acknowledge the receipt of the test report. Thank you for utilizing our services.

Corrections, if any, in the report may please be brought to our notice within 30 days from the date of issue of the report.

Kindly arrange to take back the equipment tested within 15 days, failing which the same will be disposed off.

Thanking you,

Yours Sincerely,


(M. Siddhartha Bhatt)
Additional Director

- Copy to: (1) **Dr. Bibek Bandyopadhyay**
Adviser and Head,
SEC, MNRE, Block 14, CGO Complex,
Lodhi Road, New Delhi.
- (2) **Dr. O.S.Sastry,**
Director, (SPV Demo. and R&D)
MNRE, Block 14, CGO Complex,
Lodhi Road, New Delhi.



Member - STL



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**CENTRAL POWER RESEARCH INSTITUTE
ENERGY CONSERVATION AND DEVELOPMENT DIVISION**



TEST REPORT

Sl. No.	Particulars	Details
01	Test report no.	CPRI/ECDD/SPV/959/2009
02	Date	25/09/2009
03	Client's address	M/s. Silicon Solar Systems #46-790, Near Saibaba Temple, Bhagat Singh Nagar, Chintal Hyderabad -500 054
04	Reference	SSS/MKTG/CPRI/SL/TEST/09/131
05	Manufacturer's address	Same as above
06	Reference	Nil
07	Sample tested	Solar Lantern
08	Designation	-
09	Configuration	II A
10	Identification no.	ECDD/SPV/901/09
11	Serial no.	441
12	Date (s) of the test	01/09/2009 to 25/09/2009
13	No. of samples tested	One
14	Test in accordance with standards/specifications	MNRE Specifications 2009-2010
15	Client's requirement	Nil
16	Deviation (if any)	Nil
17	Name of the witnessing persons	Nil
18	Clients representative	Nil
19	Other than clients representative	Nil
20	No. of pages (including this page)	Four
21	No. of oscillograms	Nil
22	No. of drawings	Nil
23	No. of graphs	Nil
24	No. of photos	Nil
25	Whether Original Manufacturer/Not?	Yes

[Signature]
Test in-charge

[Signature]
(M. Siddhartha Bhatt)
Additional Director

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- The data reported in this test report are valid at the time of and under the stipulated conditions of measurements.
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- Correction/erasing invalidate the test report.

Total no. of pages	Page no.	Code no.
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TEST RESULTS

Sl. No.	Test description	Observations	Requirement as per MNRE specifications 2009-2010	Remarks
1.0 PV MODULE				
1.1	Type of module	Poly crystalline silicon	Mono/poly crystalline silicon	
1.2	Manufacturer	M/s. Ushodaya Solar Systems	--	
1.3	Sl. No	06092007	--	
1.4	Arrangement for mounting	Provided	Arrangement preferred	
1.5	Peak power at 16.4 V	10.58Wp	10.0 - 11.9 Wp	* See below
2.0 LAMP				
2.1	Make	M/s. Osram	--	
2.2	Power	7 W	7 W CFL	
2.3	No. of pins	4 Pins	2 or 4 pins	
2.4	Mounting configuration	Base Down	Preferably base up	
2.5	Light output			
	(a) Prior to 1000 on/off cycles	369 Lumens	370 ± 5 % lumen	
	(b) After 1000 on/off cycles	368 Lumens	Variation less than ± 10 % of the measured value (a)	
3.0 BATTERY				
3.1	Make	M/s. Leon	-	
3.2	Type of battery	SMF Lead Acid	SMF Lead Acid	
3.3	Capacity at C/20 discharge rate at 12V	7 Ah	Minimum 7.0 Ah.	
3.4	Percent of rated capacity between low and high voltage cut-off	Conforms	80 %	

* Vide test report No. T-60140/2 dated 30/06/2009 issued by ETDC, Bangalore.


Test In-charge


Test Engineer

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TEST RESULTS

Sl. No.	Test description	Observations	Requirement as per MNRE specifications 2009-2010	Remarks
4.0 ELECTRONICS				
<i>Inverter</i>				
4.1	Wave form type	Quasi sine wave	Sine or quasi sine wave	
4.2	Crest factor	1.647	< 1.7	
4.3	Frequency	29.76 kHz	20-35 kHz	
4.4	Efficiency	83.08 %	≥ 80 %	
4.5	Pre-heating arrangement	Provided	Required for 4 pin lamp only	
4.6	Idle current	0.415 mA	<1 mA	
4.7	PCB installation	Solder free	Solder free	
4.8	Battery temperature compensation	Provided	Required	
5.0 PROTECTION				
5.1	No load protection	Provided	Required	
5.2	Short circuit	Provided	Required	
5.3	Reverse polarity	Provided	Required	
5.4	Reverse flow protection (blocking diode)	Provided	Required	
<i>Battery protection</i>				
5.5	Low voltage cut off	Provided	Required	
5.6	Load reconnect	Provided	Required	
5.7	Over charge cut off	Provided	Required	
5.8	Module reconnect	Provided	Required	


Test In-charge


Test Engineer

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


TEST RESULTS

Sl. No.	Test description	Observations	Requirement as per MNRE specifications 2009-2010	Remarks
6.0 Other features				
6.1	Duty cycle	Qualifies	Required to qualify	
6.2	Indicators	Provided	Required	
6.3	Switch and cable	Provided	Required	
6.4	Marking on lantern	Provided	Required	
6.5	Marking on module	Provided	Required	
6.6	Manual	Provided	Required	
6.7	Warranty			
	(a) Module	Provided	10 years	
	(b) Lantern	Provided	2 years	

Conclusions: It is endorsed that the solar Lantern (2A) submitted by M/s. Silicon solar Systems qualifies the MNRE Specification 2009-2010 and M/s. Silicon Solar Systems is the Original manufacturer of Electronics.


Test In-charge


Test Engineer

Total no. of pages	Page no.	Code no.
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सी.पी.आर.आई. संघटन CPRI FORMATIONS

बेंगलूर

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