



केन्द्रीय विद्युत अनुसंधान संस्थान

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय)

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

CENTRAL POWER RESEARCH INSTITUTE

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

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ENERGY EFFICIENCY AND RENEWABLE ENERGY DIVISION

Phone/Tele fax: 080-23604682 email: msb@cpri.in, ered@cpri.in

CPRI/ERED/SPV/2011

04/11/2011

To,

M/s. Vinova Energy Systems (P) Ltd.
Plot No.12, Crescent Buildings,
Opp. Govt. Hospital, Tank Street,
Hosur - 635 109

Dear Sir,

Please find enclosed the test report for the following:

1. Solar street lighting systems - 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 15 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.

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CPRI

TEST REPORT

SL. No.	Particulars	Details
01	Test report no.	CPRI/ERED/SPV/1692/2011
02	Date	04/11/2011
03	Client's address	M/s. Vinova Energy Systems (P) ltd. Plot No.12, Cresnet Buildings, Opp. Govt. Hospital, Tank Street, Hosur – 635 109
04	Reference	Nil, dated 07/10/2011
05	Manufacturers address	Same as above
06	Reference	--
07	Sample tested	Street Lighting System
08	Designation	--
09	Configuration	--
10	Identification no.	ERED/SPV/1758/2011
11	Serial no.	SSL/06/11/0001
12	Date (s) of the test	07/10/2011 to 04/11/2011
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

S. J. ...
Test In-charge



(M. Siddhartha Bhatt)
(M. Siddhartha Bhatt)
Additional Director

NOTE:

- a) This is not a certificate of compliance.
- b) These test results relate only to the items tested, which are selected and submitted by the client mentioned above.
- c) The data reported in this test report are valid at the time of and under the stipulated conditions of measurements.
- d) Publications 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 consent of CPRI.
- e) Correction/erasing invalidate the test report.

Total no. of pages	Page no.	Code no.
4	1	1692

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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 or poly crystalline silicon	See below*
1.2	Manufacturer	M/s. Microsun		
1.3	SL. No.	10/00847		
1.3	Module configuration	1 x 74 W	One 74 W module or Two 37 W modules.	
1.4	Peak power at 16.4 V	79.09 Wp	74 W or 2 x 37 W	
2.0 LAMP				
2.1	Make	M/s. Osram		
2.2	Power	11 W	11 W CFL	
2.3	No. of Pins	Four pin	2 or 4 pins	
2.4	Light output			
	(a) Prior to 1000 on/off cycles	859 Lumen	850 \pm 5% lumen	
	(b) After 1000 on/off cycles	854 Lumen	Less than \pm 10 % of the measured value (a)	
3.0 BATTERY				
3.1	Make	M/s. Amco		
3.2	Type of battery	Lead Acid Tubular Plates	Lead acid tubular plate /VRLA	
3.3	Capacity at C/10 discharge rate (12V)	75Ah	75 AH.	
3.4	% of rated capacity between battery high and low	Conforms	75 %	

- Vide test report No. 60789/4 date 26/07/2010 issued by ETDC, Bangalore

S. J. J. J.
Test In-charge

[Signature]
Test Engineer

Total no. of pages	Page no.	Code no.
4	2	1692



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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	1.69	Less than 1.7	
4.3	Frequency	27.60 kHz	20 - 30 kHz	
4.4	Efficiency	81.17 %	≥80 %	
4.5	Preheating Arrangement	Provided	Required for 4 pin lamp only	
4.6	Idle current	5.184 mA	Less than 10 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	

S. Jalabari
Test In-charge


Test Engineer

Total no. of pages	Page no.	Code no.
4	3	1692



CPRI

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 lighting system	Provided	Required	
6.5	Marking on modules	Provided	Required	
6.6	Manual	Provided	Required	
6.7	Warranty			
	(a) Module	Provided	15 years	
	(b) Street lighting system	Provided	2 years	

Conclusions: It is endorsed that the solar street lighting systems submitted by M/s. Vinova Energy Systems (P) Ltd. qualifies the MNRE Specification 2009-2010 and M/s. Vinova Energy Systems (P) Ltd. is the original manufacturer of electronics.


Test In-charge


Test Engineer

Total no. of pages	Page no.	Code no.
4	4	1692