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TEST REPORT



CENTRAL POWER RESEARCH INSTITUTE
(A Govt. Of India Society)
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CENTRAL POWER RESEARCH INSTITUTE

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TEST REPORT

Test Report Number : CPRI/ERED/LED/3175/2014 **Date:** 16/06/2014

Name and address of the customer : M/s. Shri Badrinath Vaikalpik Urja
Shah Nagar, Near Railway crossing,
P.O. Defence colony, Dehradun. U.K. 248001

Name and address of the manufacturer : Same as above

Particulars of the sample tested : LED based solar street lighting system
Condition of the sample on receipt : New
Type : Solar street lighting system
Designation : LED based solar street lighting system
Serial Number : Luminaire: 001
Number of sample tested : One set
Date(s) of test(s) : 16/05/2014 to 16/06/2014
CPRI Sample Code No(s) : 2014 EREDLEDS130
Particulars of the test conducted : As per MNRE specification 2013-2014
Test accordance with
Standard/specification : As per MNRE specification 2013-2014
Sampling Plan : Submitted by the Manufacturer
Customer's Requirement : Test as per MNRE specification 2013-2014
Deviation if any : Nil
Name of the witnessing persons : Nil
Customer Representative : Nil
Other than Customer Representative : Nil
Test(s) subcontracted with : Nil
Address of the laboratory : Nil

Documents constituting this report (in words)

Number of sheets : Four
Number of oscillogram/s : Nil
Number of Photos : Nil
Number of test circuit diagrams : Nil
Number of drawings : Nil

Neha
16/06/2014
Neha Adhikari
Test in-charge



(Signature)
(M. Siddhartha Bhatt)
Additional Director

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S N	Description of components	MNRE Specifications	Manufacturer Claim	CPRI Observations	Remarks
1	PV Module				
i	a) Name of Manufacturer or Company Logo	Should be provided	M/s. Lubi electronics	M/s. Lubi electronics	
	b) Model or Type No.	Should be provided	LEEA	LEEA	
	c) Serial No.	Should be provided	LEEA40327280	LEEA40327280	
	d) Year of Make	Should be provided	2014	2014	
ii	Module Wattage at 16.4V or any other suitable voltage under STC	40 Wp at 16.4V	40.00	42.21 Wp	*see below
iii	Type of Module	Crystalline silicon	Poly crystalline	Poly crystalline	
iv	Module Efficiency	12 %	≥12.00 %	12.90 %	
v	Voc of PV Module	21.0 V	≥21.00	22.48 VDC	
2	LOAD/LIGHT (White LED based Light)				
i	Make/Origin of LED	Should be mentioned	CREE	CREE	
ii	No. of LEDs	Should be mentioned	9 LEDs	9 LEDs	
iii	Light output (in lux) from 4 meter height	Should be mentioned	>15 Lux	Avg. Lux: 17.34 Lux	
	a) at centre	15.00 Lux	24.2 Lux	19.40Lux	
	b) 1.0M dia		20.15 Lux	18.52 Lux	
	c) 2.0M dia		18.96 Lux	17.50 Lux	
	d) 4.0M dia		16.20 Lux	15.20 Lux	
3	Battery – (Sl. No.301324)				
i	Make and type of Battery	Should be provided	M/s. Luminous LMLA	M/s. Luminous LMLA	
ii	Voltage	12.00 VDC	12.00 VDC	12.00 VDC	
iii	100% capacity at C/10 or suitable Discharge rate.	40.00 Ah	40.00 Ah	40.00 Ah	
iv	%Capacity between fully charged and load cut-off condition.	80.00 %	80.00 %	90.70 % 36.28 Ah	

*PV Module is tested and certified as per IEC 61215 standards vide report No.SG ITS-6124.001 dated 28/01/2013 issued by Intertek Testing Services (Singapore) Pte. Ltd.

Neha
16/06/2014
Test in- Charge

[Signature]
Test Engineer

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TEST RESULT

S. N.	Test Description	Requirement as MNRE Specifications	Manufacturer Claim	CPRI Observations	CPRI Remarks
4	Electronic DC –DC converter				
	Parameter at 12 V				
	a) Input power	Should be mentioned	7.50 W	9.10 W	
	b) Output power	Should be mentioned	6.83 W	7.95 W	
	c) Efficiency	85%	91%	87.36 %	
5	Protections				
	i No Load protection	Should be required	Provided	Provided	
	ii Battery Protection	Should be required	Provided	Provided	
	iii Low voltage cut – off	Should be required	11.2 VDC	10.92 VDC	
	iv Load reconnect	Should be required	12.5 V DC	12.58 VDC	
	v Over charge cut-off(V)	Should be required	14.51 V DC	14.71 VDC	
	vi No load current	Less than 20 mA	4.56 mA	7.36 mA	
	vii Temperature compensation	Should be required	Not Provided	Provided	
6	Other features				
	i Duty cycle /autonomy	Required to qualify	Qualifies	Qualifies	
	ii Blocking Diode	Should be provided	Provided	Provided	
	iii Reverse Polarity	Should be provided	Provided	Provided	
	iv Fuse	Should be provided	Provided	Provided	
	v Indicator	Should be provided	Provided	Provided	
7	Warranty				
	i. PV Module	25 Years	25 Years	25 Years	
	ii. Lighting System	5 Years	5 Years	5 Years	
	iii Battery	5 Years	5 Years	5 Years	

Note: It is endorsed that the white LED based Solar Street lighting System submitted by M/s. Shri Badrinath Vaikalpik Urja qualifies the MNRE specification 2013-2014 and M/s. Shri Badrinath Vaikalpik Urja is the Original manufacturer of electronics.

Mehs
16/06/2014
Test in- Charge

[Signature]
Test Engineer

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NOTE

- a) The test results are only the Item tested
- b) Publication or reproduction of the test report/certificate in any form other than by complete set of the whole test report/Certificate and the language written is not permitted without the written consent of CPRI
- c) Any corrections/erasure invalidates the test Report/Certificate
- d) Any anomaly/Discrepancy in the test report/Certificate should be brought to the notice of CPRI within 45 days from the date of issue
- e) The verification of the sample drawings by CPRI is limited to dimensional checks only.

Moh
16/06/2014
Test in- Charge

[Signature]
Test Engineer