

टेलीफोन/ Telephone : 080-23604682  
फेक्स/ Fax : 080-23601213/23604682

ईमेल/E-mail : msb@cpri.in  
ered@cpri.in

केन्द्रीय विद्युत अनुसंधान संस्थान, बेंगलूर - ५६० ०८०

**CENTRAL POWER RESEARCH INSTITUTE, BANGALORE - 560 080**

ऊर्जा दक्षता तथा पुनर्नवीकरणयि ऊर्जा प्रभाग (ईआरईडी)

**ENERGY EFFICIENCY AND RENEWABLE ENERGY DIVISION (ERED)**

सं./No/ ERED / SPV/2015

दिनांक / Date : 01/04/15

सेवा में / To, M/s. Solar Idea (P) Ltd.,  
8-2-217/A/7, Road No-2,  
Banjara Hills, Hyderabad - 500 034

विषय / Sub : LED solar street lighting system - INO  
संदर्भ / Ref :

महोदय / Dear Sir,

उपयुक्त विषयक पत्र सं.....दिनांक.....

.....इसके साथ संबंध हैं ।

We are enclosing herewith letter No. CPRI/ERED/SPV/2015 Dated 30/03/15

.....on the subject mentioned above.

संलग्नक : उपरोक्तानुसार  
Encl : As above

भावदीय,  
yours faithfully,





# केन्द्रीय विद्युत अनुसंधान संस्थान

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय)

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

## CENTRAL POWER RESEARCH INSTITUTE

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

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

वेबसाइट/website : <http://www.cpri.in>

### ENERGY EFFICIENCY AND RENEWABLE ENERGY DIVISION

Phone/Tele fax: 080-23604682 email: [msb@cpri.in](mailto:msb@cpri.in), [ered@cpri.in](mailto:ered@cpri.in)

CPRI/ERED/SPV/2015

30/03/2015

To,

M/s. Solar Idea (P) Ltd.  
8-2-277/A/7, Road No.2,  
Banjara Hills, Hyderabad – 500 034

Dear Sir,

Please find enclosed the test report for the following:

1. LED Based Solar Street Lighting System – 1 No.

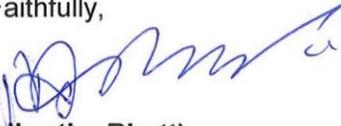
Please acknowledge the receipt of the test report. Thank you for utilizing our services.

Corrections, if any, in the report may please be brought to our notice within 45 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 as per CPRI rules.**

Thanking you,

Yours Faithfully,

  
(M. Siddhartha Bhatt)  
Additional Director

**CPRI**

## **TEST REPORT**



**CENTRAL POWER RESEARCH INSTITUTE**  
**(A Govt. Of India Society)**  
**P.B. No. 8066, Sadashivanagar Post Office**  
**Sir C.V. Raman Road**  
**Bangalore - 560080 (INDIA)**

# CENTRAL POWER RESEARCH INSTITUTE



## TEST REPORT

**Test Report Number : CPRI/ERED/LED/3650/2015**      **Date: 30/03/2015**

Name and address of the customer : M/s. Solar Idea (P) Ltd.  
8-2-277/A/7, Road No.2,  
Banjara Hills, Hyderabad – 500 034

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 with CCU: 021530100121  
Number of sample tested : One set  
Date(s) of test(s) : 24/02/2015 to 27/03/2015  
CPRI Sample Code No(s) : 2015 EREDLEDS441  
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

*R. Sudhir Kumar*  
30/03/2015

**R. Sudhir Kumar**  
Test in-charge



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

# CENTRAL POWER RESEARCH INSTITUTE



Test Report Number : CPRI/ERED/LED/3650/2015      Date: 30/03/2015

## TEST REPORT

S. N.	Test Description	Requirement as MNRE Specifications	Manufacturer Claim	CPRI Observations	CPRI Remarks
1	<b>PV Module</b>				
i	a) Name of Manufacturer or Company Logo	Should be provided	Provided M/s. Akshaya Solar Power (India) Pvt. Ltd.	Provided M/s. Akshaya Solar Power (India) Pvt. Ltd.	
	b) Model or Type No.	Should be provided			
	c) Serial No.	Should be provided	76806-6651240-112	76806-6651240-112	
	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	40.41 Wp	*see below
iii	Type of Module	Crystalline silicon	Poly crystalline	Poly crystalline	
iv	Module Efficiency	12 %	≥12.00 %	13.5 %	
v	Voc of PV Module	21.0 V	≥21.00	22.40 VDC	
2	<b>LOAD/LIGHT (White LED based Light)</b>				
i	Make/Origin of LED	Should be mentioned	M/s. Kwality Photonics (P) Ltd. KLSL8630W	M/s. Kwality Photonics (P) Ltd. KLSL8630W	
ii	No. of LEDs	Should be mentioned	35 LEDs	35 LEDs	
iii	Light output (in lux) from 4 meter height	Should be mentioned	No data provided	Avg. Lux – 20.60 Lux	
	a) at centre	15.00 Lux	No data provided	27.20 Lux	
	b) 1.0M dia		No data provided	22.40 Lux	
	c) 2.0M dia			19.70 Lux	
	d) 4.0M dia			16.47 Lux	
3	<b>Battery – (SI. No.3QF040215000738)</b>				
i	Make and type of Battery	Should be provided	M/s.Exide LMLA	M/s.Exide 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.	75.00 %	75.00 %	81.75 % 32.70 Ah	

\*PV Module is tested and certified as per IEC 61215 standards vide report No. ULI-NABL(ELT)-MNRE-0056/2013 dated 05/04/2013 issued by UL.

  
Test in- Charge

  
Test Engineer

# CENTRAL POWER RESEARCH INSTITUTE



**CPRI**

**Test Report Number : CPRI/ERED/LED/3650/2015 Date: 30/03/2015**

## TEST RESULT

S. N.	Test Description	Requirement as MNRE Specifications	Manufacturer Claim	CPRI Observations	Remarks
4	<b>Electronic DC – DC converter</b>				
	i.	Parameter at 12 V			
		a) Input power	Should be mentioned	No data provided	10.59 W
		b) Output power	Should be mentioned	No data provided	9.47 W
		c) Efficiency	85%	No data provided	89.42 %
5	<b>Protections</b>				
	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	11.52 V DC	10.82 VDC
	iv	Load reconnect	Should be required	Provided	12.34 VDC
	v	Over charge cut-off(V)	Should be required	13.45 V DC	13.88 VDC
	vi	No load current	Less than 20 mA	< 20.00mA	4.39 mA
	vii	Temperature compensation	Should be required	Provided	Provided
6	<b>Other features</b>				
	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	<b>Warranty</b>				
	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. Solar Idea (P) Ltd. qualifies the MNRE specification 2013-2014 and M/s. Solar Idea (P) Ltd. is the original manufacturer of electronics.**

**Test in- Charge**

**Test Engineer**

# CENTRAL POWER RESEARCH INSTITUTE



## TEST REPORT

Test Report Number : CPRI/ERED/LED/3650/2015

Date: 30/03/2015

### NOTE

- a) The test results are only for 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 wherever possible.

Test in- Charge

Test Engineer