राष्ट्रीय सौर ऊर्जा संस्थान

National Institute of Solar Energy
(नवीन और नवीकरणीय ऊर्जा मंत्रालय, भारत सरकार का स्वायत्त संस्थान)
(An Autonomous Institute of MNRE, Government of India)
गुरुग्राम–फरीदाबाद मार्ग, ग्वालपहाड़ी, गुरुग्राम–122 003, हरियाणा, भारत
Gurugram-Faridabad Highway, Gwal Pahari, Gurugram - 122 003, Haryana, India
दूरभाष / Tel. No. : 0124-285 3060, ईमेल / Email : dgnise.mnre@gmail.com
nise.mnre@gmail.com, वेब / Web : www.nise.res.in

फाइल नं. : 12/2022-23/LED /CSC/NISE दिनांक : 04/07/2022

सेवा में,

SUNNERGY SYSTEMS
PLOT NO. 26/27, IID CENTER GOVINDSAR
KATHUA ,JAMMU JAMMU AND KASHMIR

विषय : राष्ट्रीय सौर ऊर्जा संस्थान (नाइस) द्वारा जारी परीक्षण रिपोर्ट।

प्रिय महोदय,

कृपया दिनांक 20/06/2022 का अपना पत्र/आदेश प्रपत्र सं. 04 देखें। इस संबंध में मुझे, आपके द्वारा प्रस्तुत मूल नमूनों के संबंध में दिनांक 30/06/2022 की परीक्षण रिपोर्ट सं. 12/2022-23/LED/CSC/NISE. आपके सुलभ संदर्भ और रिकॉर्ड के लिए संलग्न करने का निर्देश हुआ है।

2. उपर्युक्त रिपोर्ट में शामिल किसी भी प्रविष्टि के संबंध में विसंगतियां, यदि कोई हों, की सूचना इस पत्र के जारी होने की तिथि से 30 दिनों के अंदर इस संस्थान के ध्यान में लाई लाएं, अन्यथा यह समझा जाएगा कि इस रिपोर्ट में की गई प्रविष्टियां सही हैं और इसके बाद इस रिपोर्ट पर आगे किसी पत्राचार पर काई विचार नहीं किया जाएगा।

3. इस संबंध में हम, आपके विचार भी जानना चाहेंगे और इसलिए इस पत्र के साथ एक फीडबैक फॉर्म इस अनुरोध के साथ संलग्न कर रहे हैं कि आप इसे यथाशीघ्र भरकर हमें भेज दें। आगे और सुधार करने तथा अपनी गुणवत्ता सेवा में सुधार करने के लिए आवश्यक कदम उठाने हेतु आपके सुझाव हमारे लिए बहुमूल्य हैं।

4. इसके अतिरिक्त, आपसे यह अनुरोध किया जाता है कि इस पत्र के जारी होने की तिथि से 60 दिनों के भीतर अपने नमूने एकत्र कर लें, अन्यथा संस्थान नमूनू का अपने अनुसार यथासंभव बेहतर ढंग से निपटान कर देगा तथा नमूने के लिए किसी भी प्रकार से संस्थान की कोई जिम्मेदारी नहीं होगी।

कृपया मूल चालान (एनवॉयस) और मूल परीक्षण रिपोर्ट सहित इस पत्र की प्राप्ति की सूचना दें।

भवदीय

(प्रमुख, ग्राहक सेवा प्रकोष्ठ)
राष्ट्रीय सौर ऊर्जा संस्थान

संलग्न :
1. परीक्षण रिपोर्ट–कुल पृष्ठ 06
2. प्रतिक्रिया (फीडबैक) फॉर्म

जानकारी हेतु अग्रेषित प्रतिलिपि :
1. कार्यालय प्रति

राष्ट्रीय सौर ऊर्जा संस्थान

(नवीन और नवीकरणीय ऊर्जा मंत्रालय, भारत सरकार का एक स्वायत्त संस्थान)

National Institute of Solar Energy

(An autonomous Institute of the Ministry of New and Renewable Energy, Govt. of India)

गुरुग्राम - फरीदाबाद मार्ग, ग्वाल पहाड़ी, गुरुग्राम122003 - , हरियाणा, भारत

Gurugram - Faridabad Road, Gwal Pahari, Gurugram – 122003, Haryana, India

ई-मेल / Email: csc@nise.res.in दूरभाष / Phone: 0124-2853110

Test Report

1.	**Service Request No.**	12/2022
2.	**Requested By (Name & Address of the organization)**	M/S SUNNERGY SYSTEMS Plot No. 26/27, IID Center Govindsar Kathua, Jammu Jammu and Kashmir
3.	**Details of the test item**	
	a) Nomenclature	SLS
	b) Capacity/Rating	12 W
	c) Manufactured By	M/S SUNNERGY SYSTEMS
	d) Model / Type No.	Street Model
	e) Serial No.	GE2022048888
	f) Trademark	
	g) Testing procedure & Testing parameters	**MNRE specifications for 12 W WHITE-LED BASED SOLAR STREET LIGHTING SYSTEM**
4.	**Date of Submission of Samples**	20/06/2022
5.	**Condition of samples on receipt**	Good
6.	**Date of Completion of Tests**	30/06/2022

NOTE:

1. **This test report refers only to the items submitted for testing as per specifications/requirements stipulated by the customer.**
2. **The results reported in the Test Report are valid at the time of and under the stipulated conditions of measurements.**
3. **The test report shall not be reproduced except in full unless written permission for the publication of an approved abstract has been obtained from the Director, National Institute of Solar Energy.**
4. **NISE does not accept any liability for any consequences including commercial or otherwise arising out of the utilization of the information contend in this report.**
5. **The center reserves the right to utilize the information contained in this report in the interest of scientific progress without disclosing the identity of the customer.**
6. **The client is requested to collect the tested sample back within 30 days from the date of issue of the report.**

Tested By
Ditipriya Bose

Prepared By
Arup Dhar

Authorized Signatory
Birinchi Bora

MAJOR EQUIPMENTS USED

S.No.	Equipment Used	Model
1	Programmable DC power supply	Chroma 62012P-100-50
2	Power meter	Hioki PW3336
3	Solar Array Simulator	Chroma 62020H
4	DC Electronic Load	Chroma 6312A
5	Lux Meter	FT3424 HIOKI
6	Integrating Sphere	Labsphere plus 2600
7	Power meter	Yokogawa WT333E
8	Infra-red Thermometer	Meco IRT 550P
9	Battery Simulator	Chroma 17020

Tested By
Ditipriya Bose

Prepared By
Arup Dhar

Authorized Signatory
Birinchi Bora

S. No.	Test Description	MNRE Specifications	NISE Observations		Remarks
1.	**PV Module:**				
	i.				
	a) Name of Manufacturer or Company	Should be provided	ADM Solar		
	b) Model or Type No.	Should be provided	ADM75-36P		
	c) Serial No.	Should be provided	ADMSP36P108210413764		
	d) Year of Make	Should be provided	2021		
	ii. Module Wattage at suitable voltage	75 W Under STC Condition	78.03 W		PASS
	iii. Type of Module	Mono/multi crystalline silicon	Multi crystalline silicon		
	iv. Module Efficiency	14 %	15.23 %		PASS
	v. Voc of PV Module	21.0 V	22.67 V		PASS
2.	**LOAD/LIGHT (White LED based Light**				
	i. Make and Origin of LED	Should be provided	Not mentioned		
	ii. No. of LEDs	Should be provided	12		
	iii. Sr. no. of Luminary	Should be provided	GE2022048888		
	iv. Photometry and Color parameters				
	a) Total Luminous Flux	≥1500 lm	1507.3 lm		PASS
	b) Luminous efficacy	≥125 lm/W	126.83 lm/W		PASS
	c) Color Temperature	Between 5500 K to 6500 K	6033 K		PASS
	d) Color Rendering Index (CRI)	≥70	68.04		FAIL
	v. Light output (in lux) from 4 metre height	Min 24 Lux at Higher illumination/12Lux at lower illumination(High Light output will be preferred)			
			Higher illumination	Lower illumination	
	a) at Centre		118.60	62.70	PASS
	b) 1.0 m dia.		108.41	56.57	
	c) 2.0 m dia.		87.45	45.68	
	d) 4.0 m dia.		42.38	22.45	
	vi. Temperature difference between Heat sink and ambient temperature during the dusk to dawn operation(°C)	≤ 20°C	Comply		
	vii. Housing including optics for focusing light	Should have proper housing and optics for uniform intensity.	Provided		
	viii. Dimming Mode	First 04 hrs. Full light (min 24 Lux), rest of the time at lower light level (50%, min. 12 Lux)	Provided		

Tested By
Ditipriya Bose

Prepared By
Arup Dhar

Authorized Signatory
Birinchi Bora

3.	**Battery**			
	i. Capacity, Make and type of Battery	Minimum 30Ah, LiFePo4	34.91 Ah, PACTO POWER CO. LiFePo4	PASS
	ii. Serial No		PPC/LFP/12821229554	
	iii. Voltage	12.8 V	12.71 V	
	iv. Weight		3.88 Kg	
4.	**Electronic DC-DC converter**			
	i. Parameter at 12.8 V	Should be provided	Provided	
	a) Input power (W)	12 W	12.35 W	
	b) Output power (W)		11.38 W	
	c) Efficiency (%)	Min. 90 %	92.19 %	PASS
	ii. Variation in output current with input voltage	No variation in output current with input voltage.	No Variation	
	iii. PCB installation	Solder Free	Solder Free	
5.	**Protections**			
	i. Charge controller type	MPPT	Provided	
	ii. No Load protection	Should be provided	Provided	
	iii. Battery Protection	Should be provided	Provided	
	(a) Low voltage cut - off (V)		11.33 V	PASS
	(b) Load reconnect (V)		12.77 V	PASS
	(c) Over charge cut-off (V)		14.76 V	PASS
	iv. Battery reverse polarity protection	Should be provided	Provided	
	v. Protection for reverse flow of current through the PV Module	Should be provided	Provided	
	vi. Load short Circuit Protection	Should be provided	Provided	
	vii. No load current	Less than 20 mA	4.80 mA	PASS
	viii. Overall MPPT efficiency	≥ 90%	72.96 %	PASS
6.	**Other features**			
	Duty Cycle	Dusk to Dawn	Comply	
	Autonomy	3 Days or min 36 hours.	Comply	
	Indicator	Two Indicators should be provided (Green indicate Charging and Red indicate Load Cut off.)	Provided	

1/7/22
Tested By
Ditipriya Bose

01/07/22
Prepared By
Arup Dhar

CSC NISE CUSTOMER SERVICE CELL National Institute of Solar Energy

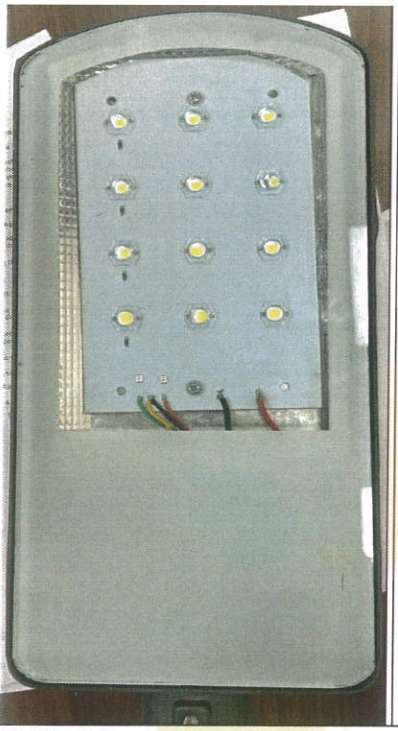
01/07/2022
Authorized Signatory
Birinchi Bora

Annexure

VISUAL SCREENING

A. Luminaire

Front view



Back view

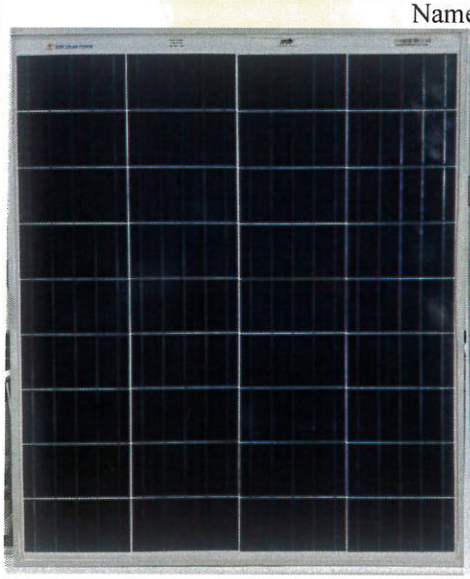
B. Battery

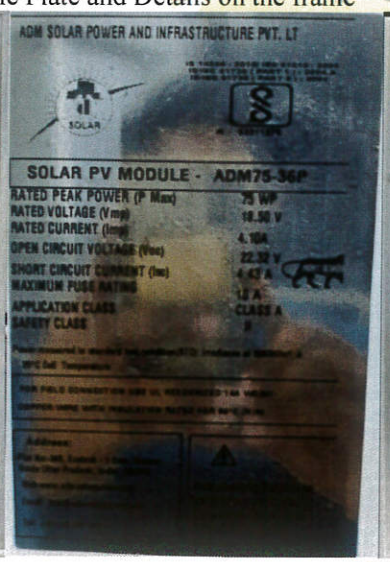
Front view

Back View

C. Module

Name Plate and Details on the frame





Tested By
Ditipriya Bose
11/7/22

Prepared By
Arup Dhar
01/07/22

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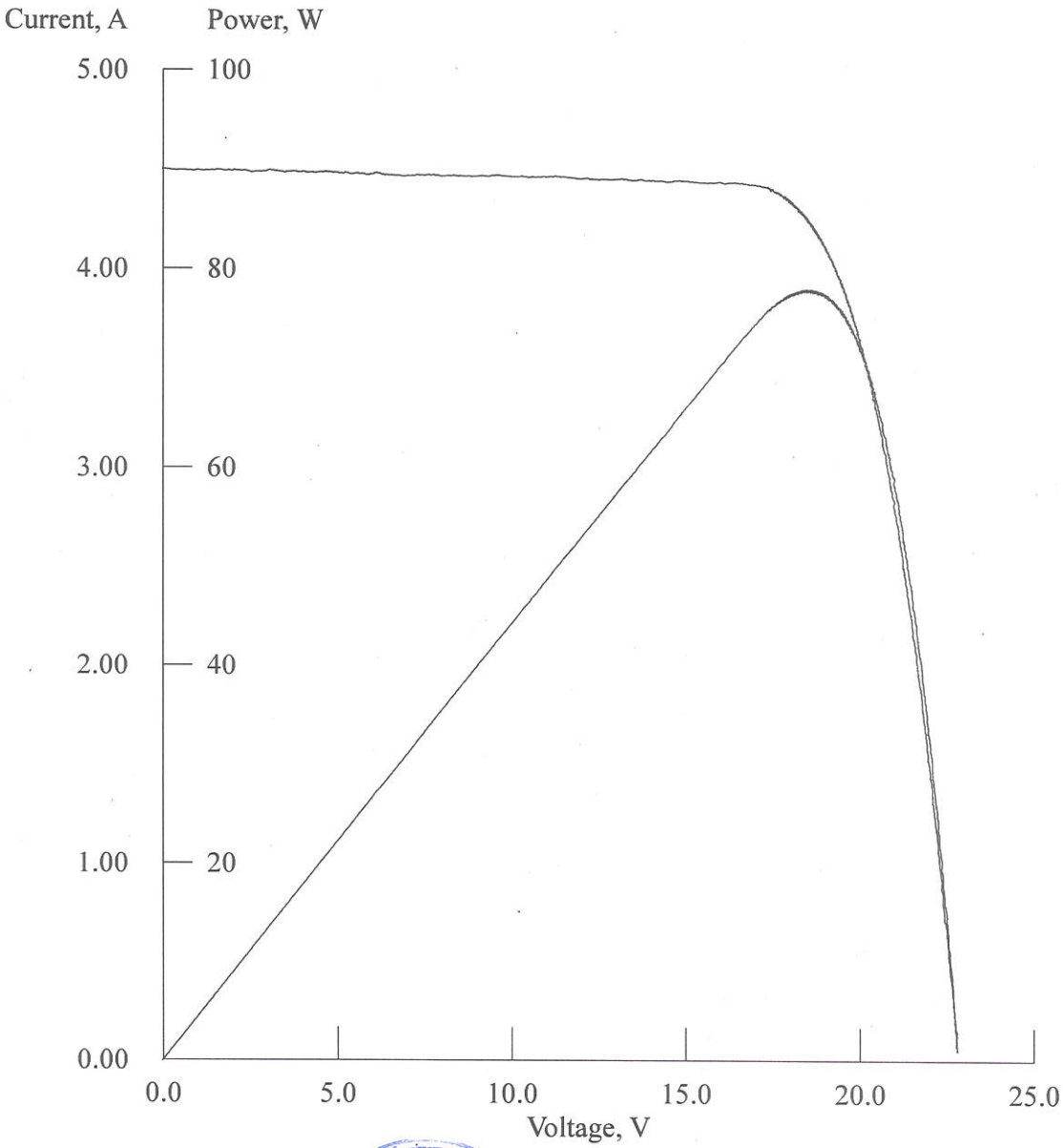
National Institute of Solar Energy

Authorized Signatory
Birinchi Bora
01/07/2022



5600

Title: Tested at NATIONAL INSTITUTE OF SOLAR ENERGY
Comment: Mgf by ADM SOLAR
Operator: Admin
ID: ADMSP36PI08210413764
Module Type: ModuleType1
16:17:56 7/1/2022
Measured Temperature = 24.3°C
Irr Meas = 100.2mW/cm²
Irr Corr = 100.0mW/cm²
Voc = 22.671V
Isc = 4.497A
Pmax = 78.036W
Vpm = 18.296V
Ipm = 4.265A
FF = 0.765
Eff,m = 15.223%
Eff,c = 8.738%
Rs = 0.505 Ohm
Rsh = 308.636 Ohm

MCCC1: 1.394
MCCC2: 1.161
Intensity V: 7.016 V
Cap Voltage: 2300 V
Load Voltage: 2.700 V
Sampling Frequency: 218000 Hz
Sweep Delay: 10 ms
Sweep Length: 100 ms
Sweep Direction: Isc->Voc
IV Points: 3890

राष्ट्रीय सौर ऊर्जा संस्थान, गुरुग्राम, हरियाणा
National Institute of Solar Energy
CUSTOMER SERVICE CELL
CSC
NISE
(An autonomous Institute of MNRE)
नवीन और नवीकरणीय ऊर्जा मंत्रालय का स्वायत्त संस्थान

Verified By
ARUP DHAR
30/7/22

Tested by: M. Naveen kumar
Naveen kumar
30/6/2022

NISE

National Institute of Solar Energy/ राष्ट्रीय सौर ऊर्जा संस्थान

(An Autonomous Institution of MNRE, GOI)
Gurgaon-Faridabad Road, Gwal Phari, Gurgaon (Haryana) - 122003

Customer Service Cell/ ग्राहक सेवा प्रकोष्ठ

Feedback/ प्रतिक्रिया

Company Name/ कंपनी का नाम:

Company Address/ कंपनी का पता:

Name of Person giving Feedback/ प्रतिक्रिया देने वाले व्यक्ति का नाम:

Designation & Location/ पदनाम और स्थान:

Sr. No.	Particulars विवरण	Feedback Ratings प्रतिक्रिया आँकन			
क्र०		Excellent*/उत्कृष्ट	Good/अच्छा	Average/औसत	Poor*/घटिया
1.	Content of Report/ रिपोर्ट की सामग्री				
2.	Sample Handling/ नमूना हैंडलिंग				
3.	Time Taken/समय लिया				
4.	Test Report Format/ टेस्ट रिपोर्ट स्वरूप				
5.	Courtesy/ शिष्टाचार				

*Please give comments/ कृपया टिप्पणी दीजिये :

Remarks/टिप्पणियां:_____

_____

_____

_____

Signature & Date of Client
हस्ताक्षर एवं दिनांक

(Name of Authorised Person)
अधिकारी का नाम

For Official Use
आफिस के लिये

Acknowledged by_____Date_____Mode: By Post/Hand/E-mail
T.A/T.M.E:

TAX INVOICE

National Institute of Solar Energy

Gwal Pahari, Gurugram Faridabad Road, Gurugram
E-mail : nise.mnre@gmail.com

GSTIN : 06AAAJN0939P1ZR
(Goods & Service Tax Identification No.)

Supplier's Ref. 12/2022-23/LED/CSC/NISE

Invoice Serial No.NISE22-23/T00012

Invoice Date. 20-06-2022

Detail of Receiver Billed To

M/s. SUNNERGY SYSTEMS.
Address:- IID Govidsar Kathua, Industrial Area Kathua,
Kathua, Jammu & Kashmir- 184102.

State & State Code:- J & K. & 01.

GSTIN/UNIQUE ID. 10AEXPG2227E3ZT.

	Particulars	HSN/SAC	Amount
1.	Training (Domestic)		
	Testing Fees	998346	36,400/-
	Consulting		

Total Inv. Value (in Words):- FOURTY TWO THOUSAND NINE HUNDRED AND FIFTY TWO RUPEES ONLY.	Total Amount Before GST	36,400/-
	Other Charges	-
	Add CGST @.....9%	-
BANK DETAILS: STATE BANK OF INDIA.	Add SGST @.....9%	-
	Add IGST @.....%	6,552/-
	GRAND TOTAL	42,952/-

E. & O. E.

Received Rs. 42,952/- by Cheque/Cash/Draft/UTR/Through Portal.

Remarks:- Testing Fees of 01 No. SOLAR STREET LIGHT SYSTEM 12 WATT AS PER MNRE @36,400/- And GST thereon.

Cheque/Cash/Draft/UTR/through portal No. NE1652689156 on Dated 16/05/2022.

Prepared by Sumit

For National Institute of Solar Energy

National Institute of Solar Energy (an autonomous Institute of MNRE) CUSTOMER SERVICE CELL CSC NISE

20/06/2022

Authorised Signatory

SUBJECT TO HARYANA JURISDICTION