



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

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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 जाएं, अन्यथा यह समझा जाएगा कि इस रिपोर्ट में की गई प्रविष्टियां सही हैं और इसके बाद इस रिपोर्ट पर आगे किसी पत्राचार पर कोई 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 नमूने 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, गुरुग्राम 122003 - , हरियाणा, भारत

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

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Test Report

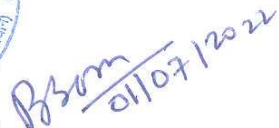
1.	Service Request No.	12/2022
2.	Requested By (Name & Address of the organization)	M/S SUNNERGY SYSTEMS Plot No. 26/27, IID Center Govindsar Kathua, Jammu Jammu and Kashmir
3.	Details of the test item	
	a) Nomenclature	SLS
	b) Capacity/Rating	12 W
	c) Manufactured By	M/S SUNNERGY SYSTEMS
	d) Model / 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 contained 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

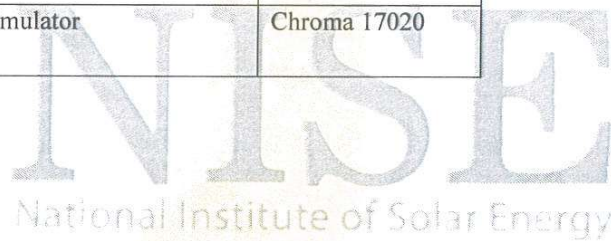

Authorized Signatory
Birinchi Bora






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

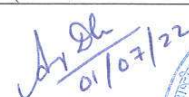

Prepared By
Arup Dhar



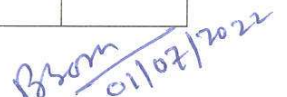

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Birinchi Bora

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	ADMSP36P108210 413764	
	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	PASS
	b) 1.0 m dia.		108.41	
	c) 2.0 m dia.		87.45	
	d) 4.0 m dia.		42.38	
	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	


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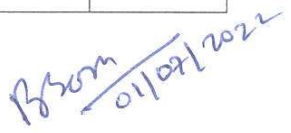

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3.	Battery i. Capacity, Make and type of Battery ii. Serial No iii. Voltage iv. Weight	Minimum 30Ah, LiFePo4 12.8 V	34.91 Ah, PACTO POWER CO. LiFePo4 PPC/LFP/128212295 54 12.71 V 3.88 Kg	PASS
4.	Electronic DC-DC converter i. Parameter at 12.8 V a) Input power (W) b) Output power (W) c) Efficiency (%) ii. Variation in output current with input voltage iii. PCB installation	Should be provided 12 W Min. 90 % No variation in output current with input voltage. Solder Free	Provided 12.35 W 11.38 W 92.19 % No Variation Solder Free	PASS
5.	Protections i. Charge controller type ii. No Load protection iii. Battery Protection (a) Low voltage cut - off (V) (b) Load reconnect (V) (c) Over charge cut-off (V) iv. Battery reverse polarity protection v. Protection for reverse flow of current through the PV Module vi. Load short Circuit Protection vii. No load current viii. Overall MPPT efficiency	MPPT Should be provided Should be provided Should be provided Should be provided Should be provided Less than 20 mA ≥ 90%	Provided Provided Provided 11.33 V 12.77 V 14.76 V Provided Provided Provided 4.80 mA 72.96 %	PASS PASS PASS PASS PASS
6.	Other features Duty Cycle Autonomy Indicator	Dusk to Dawn 3 Days or min 36 hours. Two Indicators should be provided (Green indicate Charging and Red indicate Load Cut off.)	Comply Comply Provided	

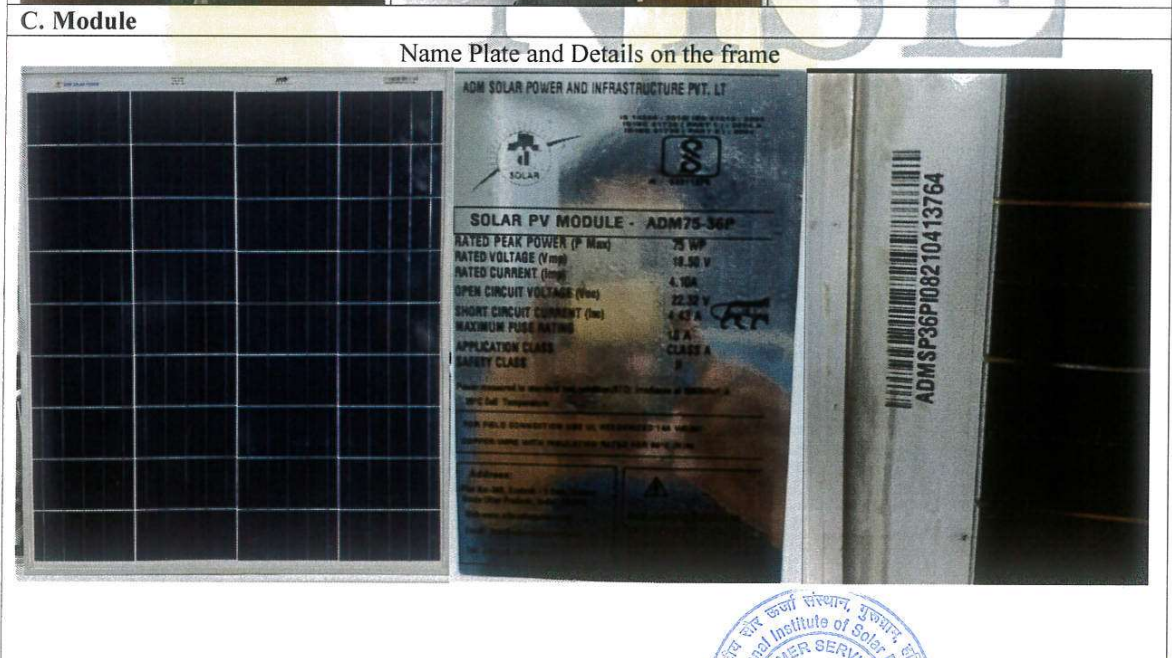

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**Annexure
VISUAL SCREENING**

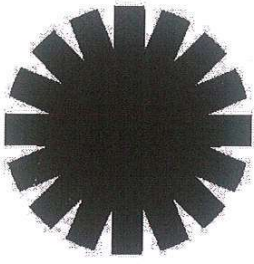


Ditipriya Bose
Tested By
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Arup Dhar
01/07/22
Prepared By
Arup Dhar



Birinchi Bora
01/07/2022
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Birinchi Bora

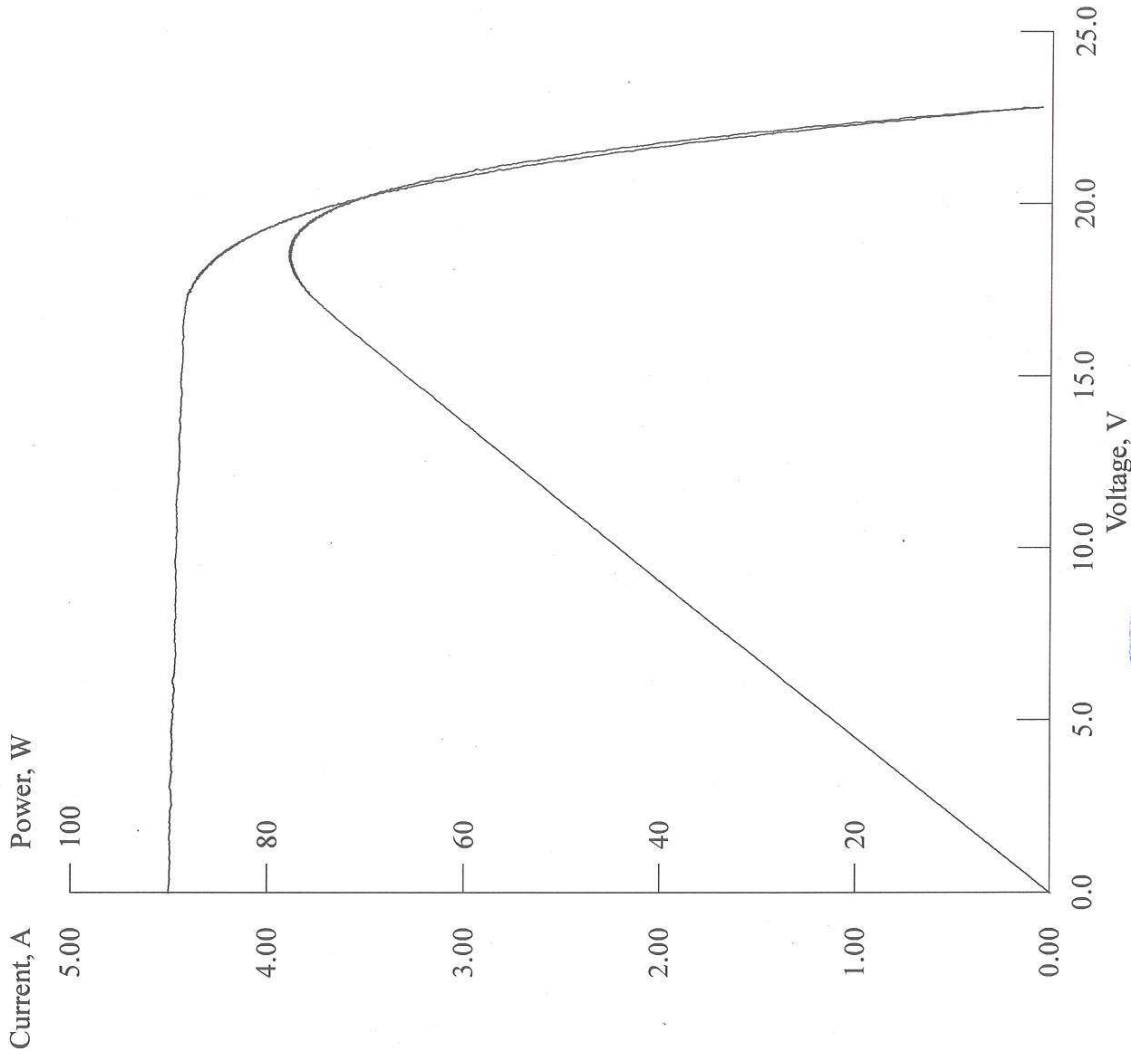


5600

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



Verified by
 Akar Dhir
 30/7/22

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