



SMSW LAB & RESEARCH CENTRE TEST REPORT



1.

Customer Details :-

Neosol Technologies Pvt.Ltd
Plot No.173,Sec-6,IMT Manesar,Gurgaon -
122051 (Haryana)

Testing Laboratory Details :-

SMSW LAB & RESEARCH CENTRE LLP
Plot No :- 90 ,Sector :- 5
IMT Manesar , Gurgaon ,
Haryana – 122052
Tel :- +91-124-4642736

2.

Test Report No :- SMSW LAB/ 2019 ~ 2020/ 11

Org. Dated :-29.07.2019, Rev No :- 01, Rev Date :- 30.07.2019

Lab Project No :- 1920/11

Details of Rev:- Pass & Fail criteria add as per Manufacturer Label Value and Receipt Date of sample change from 25.06.2019 to 25.07.2019 as this is a typographic error after releasing the test report of SMSW LAB/ 2019~ 2020/ 11 dated: 29.07.2019 Rev no : 0



Prepared By :- Gaurav Kumar
(Quality Manager)

Verified By :- Manoj Kumar
(Technical Manager)

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3. Discipline :- Electronics **3.1 Group :- Miscellaneous Products**

4.

General Details of Sample / Project

Customer Name and Address	Neosol Technologies Pvt.Ltd Plot No.173,Sec-6,IMT Manesar,Gurgaon -122051 (Haryana)				
Test Lab Location	SMSW LAB & RESEARCH LLP (For Details Address please refer the Page No 1)				
Device Under Test (DUT)	Solar Photovoltaic (PV) Module				
PV Module Manufacturer	Neosol 220Wp				
Manufacturer Sr No (If Any)	Refer the Test Result Table				
Sample Receipt Date	25.07.2019				
Test Lab Sample Identification	Refer The Test Result Table				
No of Sample	1 Nos				
DUT Condition on Receipt	Good				
Applicable Test Standard	IEC 61215:2005				
Customer Requirement if any	Yes (Customer Required Result in Pass & Fail as per Back Label Tolerance)				
Sample forwarding letter/ PO/Gate Pass No. & Date:	Gate pass No :- NSPL/19-20/GST/CH-05, Dated -25/07/2019				
Buyer Name & Address	Mr.Abhinav (Neosol Technologies PVT.LTD.)				
Test Start Date	26.07.2019	Test End Date	26.07.2019	Report Date	29.07.2019
				Reissue Date	30.07.2019
SMSW Lab Ambient Temp Condition	Temperature in ° C :- 25 ± 3° C Relative Humidity in % :- <70 % RH				
Test In-Charge Manoj Kumar (Technical Manager)	Authorized Signatory				
	Amresh Mahajan (Head of Laboratory) or	Manoj Kumar (Technical Manager) or	Gaurav Kumar (Quality Manager)		

Note :- SMSW Lab hasn't participated in the sample selection .The Applicable Standard and raw data of test report are available with SMSW Lab

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5.

Summary of Test Result (Project)

Test No	Test Name	Test Standard and Clause No	Test Lab Sample Identification	No of Sample Tested	Result
01	Maximum Power Determination at STC	IEC 61215 : 2005 Clause No :- 10.2	Refer The Test Result Table	1 Nos	NA (As standard doesn't have any criteria) Sample Pass as per Back Label Tolerance Manufacture Claim :- 220±3% Actual :- 224.287 wp

Pass = Sample Meet the Standard Requirement

Fail = Sample doesn't Meet the Standard Requirement

NA = Not Applicable

6.

Equipment Details which was used for Testing

Sr. No	ACME Test Equipment	Make & Model	ACME Lab Equipment ID	Calibration Status (Valid Up To)
1	Sun Simulator	Spire 5100 Blue	SMSW/SS/01	01 Jan 2020
2	Reference Module	GCL-P6/72H330 GCL	SMSW/RM/04	23 Oct 2020
3	Hygrometer	HTC	SMSW/HM/01	03 Jan 2020
4	Measuring Tape	Levo 5Mtr.	SMSW/MT/01	03 Jan 2020

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7.	
7.1	Test No -1. Maximum Power Maximum Power Determination at STC
Type of Test Method Used :-	
Standard Test Method	<input checked="" type="checkbox"/>
Non Standard Test Method	<input type="checkbox"/>
Laboratory Developed Test Method	<input type="checkbox"/>
Test Standard and Clause No:- IEC 61215 : 2005 Clause No :- 10.2	
Test Procedure:-	
1- As per IEC 61215:2005 Clause no 10.2 and SOP No :- SOP/LAB/02 Rev No 02, Effective Date :- 01.03.2019 and ..	
Purpose of Test:- To determine the maximum power	
Test Sample :- Total 1Nos PV Module were tested for Maximum Power Determinations at STC	
Test Set Up (Configuration) :	
The following equipment were used to perform the Maximum Power Determination Test.	
A. Class A+++ Solar Simulator as per IEC 60904-9. The test platform area of solar simulator was grater then area that is spanned by the test sample or specimen.	
B. A PV reference solar module as per IEC 60904-2 was used to calibrate the sun simulator specimen	
C. A means for monitoring the temperature of the test to an accuracy of ± 1 °C and repeatability of ± 0.5 °C.	
7.1.1	Packing Box Detail (If any):- NA
Test Set up Conditions:-	
Cell Temperature (°C)	25 °C (Corrected)
Irradiance (W/m ²)	1000 W/m ²

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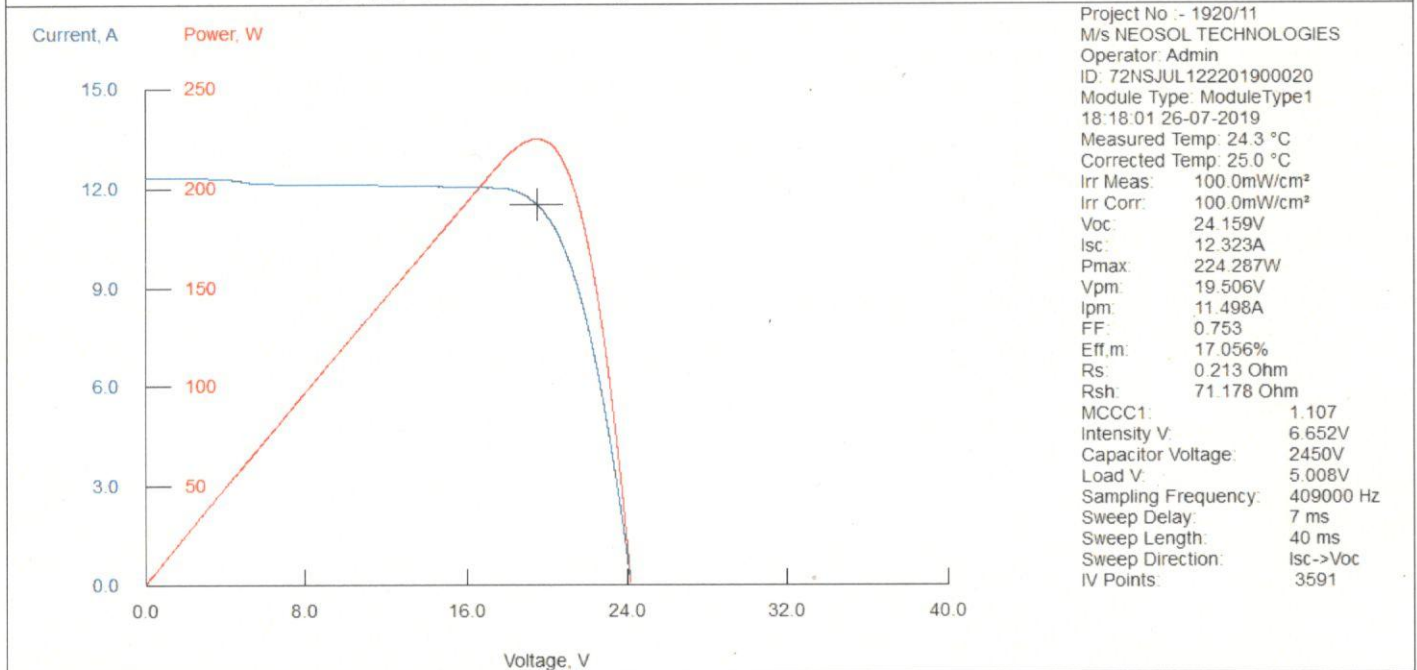


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7.1.2		Test Result Table						
LAB ID	Serial No	P Max (W)	FF	Voc (V)	Isc (Amps)	Vmp (V)	Imp (Amps)	Module Efficiency (%)
SMSW-1920-624	72NSJUL122201900020	224.287	0.753	24.159	12.323	19.506	11.498	16.400

7.1.3	Test Result (IV Curve)
LAB ID:- SMSW-1920-624, Module Sr. No:- 72NSJUL122201900020	



7.1.4	Supplementary Information
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Preconditioning not done as per customer requirement
Cell Dimension provided by customer

7.1.5	Acceptance Criteria
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NA as per IEC 61215:2005 Clause No 10.2
Measured Wp with in ± 3%

7.1.6	Photo Graphs of Sample and Other Details
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Module Size (Length x Width)	1335 mm x 985 mm
Cell Size (Length x Width)	104 mm x 156.75mm
Module Type	NS60P6-220

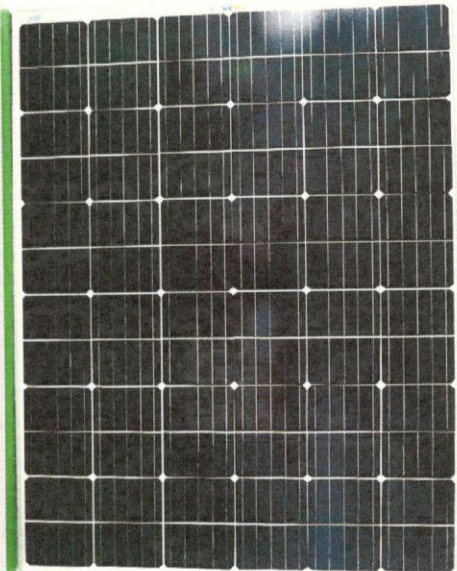
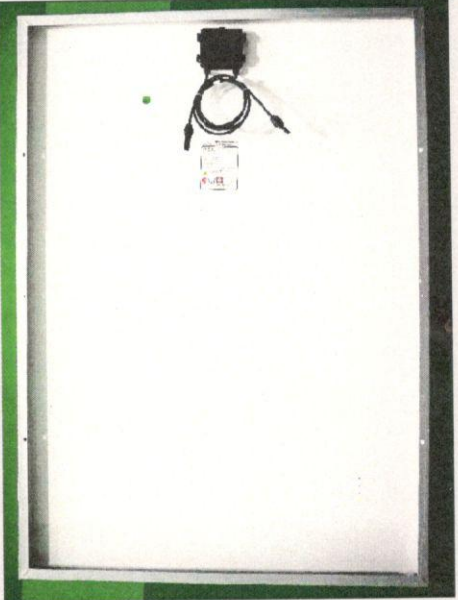
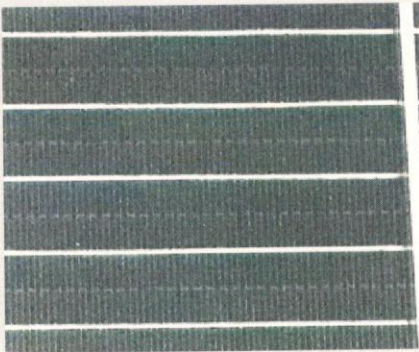

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No of Cell	72 (12 X 6 Matrix)
Maximum System Voltage	1000V
Front view of Sample	Rear view of Sample
	
Detail view of Cell	Details view of Type Label
	

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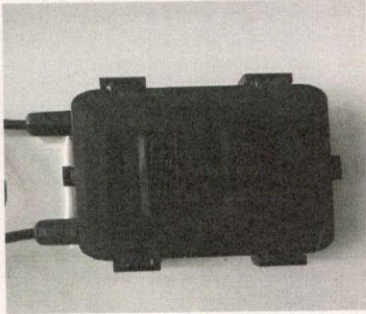
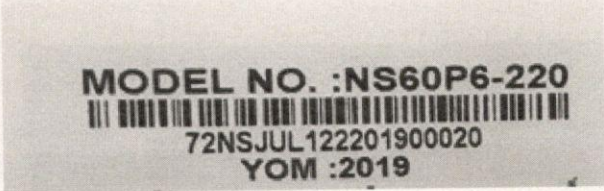
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Detail view of Junction Box	Detail View of Serial No
	

8.

Statement of the Estimated Measurement Uncertainty of Sun Simulator :-


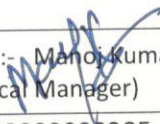
1. The Measurement Uncertainty of PMax Measurement is 2.47% with Coverage Factor $k=2$ and Confidence Level 95%
2. The Measurement Uncertainty of Current Measurement is 0.23% with Coverage Factor $k=2$ and Confidence Level 95%
3. The Measurement Uncertainty of Voltage Measurement is 0.23% with Coverage Factor $k=2$ and Confidence Level 95%

9.

NOTE:-

1. The Test Results relates only to the item(s) tested.
2. The Test Report shall not be reproduced except in full, without the written consent of Quality Manager – SMSW Lab & Research Centre
3. The results reported in this test report are valid at the time of and under the stipulated conditions of measurements.

..... End of Test Report

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