

Test Report



Novasys Greenergy Private Limited

REPORT NUMBER: 4790378634.4.1-S1

PROJECT NUMBER: 4790378634.4.1

Select the applicable test

locations:

☐ **LOCATION 1:**

UL India Private Limited,
Laboratory building, Kalyani
Platina Campus, Sy.no.129/4, EPIP
Zone, Phase II, Whitefield,
Bangalore – 560 066
P:91-80-41384400

☐ **LOCATION 2:**

UL India Private Limited,
Oak building, Kalyani Platina
Campus, Sy.No.129/4,
EPIP Zone, Phase II, Whitefield,
Bangalore, Karnataka – 560 066

☐ **LOCATION 3:**

UL India Private Limited, 30/A, I
Stage, Vishveshwarya Industrial
Estate, Doddanekkundi Industrial
Area, Bangalore - 560048

☒ **Other:**

**(#Refer Page no. 3 for Test
lab location)**



TEST DISCIPLINE: ELECTRONICS
PRODUCT GROUP: SOLAR PANEL

General details

Customer / Applicant	Novasys Greenery Private Limited KHASRA NO. 185, MOUZA-MAHALGAON, TAHSIL-KAMPTTEE, NAGPUR MAHARASHTRA 441202 INDIA		
Manufacturer	Novasys Greenery Private Limited KHASRA NO. 185, MOUZA-MAHALGAON, TAHSIL-KAMPTTEE, NAGPUR MAHARASHTRA 441202 INDIA		
Program	Other		
Item Under Test	Mono crystalline PV modules (PERC)		
Model	NOVA550MP144 (tested Model)		
Number of Samples	03 Nos.		
UL Sample Identification	Refer sample identification table	Refer Summary of Test results for multiple samples	
Manufacturer Serial Number (if any)	NOVABTMPVD00030, NOVABTMPVD00015, NOVABTMPVD00044		
Condition of IUT on receipt	Good		
Date of Receipt	29 April 2022		
Applicable Standard	IEC 62716 edition 1.0, dated 2013-06. Photovoltaic (PV) modules – Ammonia corrosion testing.		
Date of Testing (Start date)	30 June 2022	End Date	1 August 2022
UL general^ ambient condition	Temperature in °C		23 ±5°C
	Relative humidity in %		<70 %
Date of Issue	25 August 2022		
Test In-charge	Yapan Wu (China Telecommunication Technology Labs)		

Fill in the rows with information or add hyphen (-)

Supratik Ghosh Engineer Project Associate	Srimathy N Project Engineer
Reviewed by	Authorized signatory
<p>Disclaimer</p> <p>The issuance of this report in no way implies Listing, Classification or Recognition by UL and does not authorize the use of UL Listing, Classification or Recognition Marks or any other reference to UL on the product or system. UL authorizes the above named company to reproduce this Report provided it is reproduced in its entirety. UL's name or marks cannot be used in any packaging, advertising, promotion or marketing relating to the data in this Report, without UL's prior written permission. The results of testing in this report apply only to the sample product/item, which was tested. UL Lab has not participated in the sample selection for Electrical, Electronics, Mechanical, Radiology and Chemical disciplines, with exception to Chemical lab, Gurugram. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties. The applicable standard ambient condition supersedes the lab general ambient conditions and are recorded in datasheets available in the lab. Decision rule for statement(s) of conformity is based on IEC Guide 115 Clause 4.4.3 Procedure 2 "Accuracy Method".</p>	

**General Remarks (If any)**

#Test lab location (Other than UL India Private Limited)

Test Laboratory/Location	
<input checked="" type="checkbox"/> UL or Affiliate <input checked="" type="checkbox"/> Subcontract Lab	
Company Name	China Telecommunication Technology Labs
Location	CuiHu Cloud Center, No. 1 Gaolizhang Road, Wenquan Town, Haidian District, Beijing

Test witnessed by: Jason You (Senior Project Engineer, UL China)

Below listed models covered in this test report, on basis of having same construction, design and BOM as declared by manufacturer. No testing was considered necessary to cover below listed models. Only changes are the electrical ratings, number of cells and overall dimension from the tested model.

Models covered	156 cells module: NOVAxxxMP156, xxx stands for power range from 550~600, in step of 5 W; 144 cells module: NOVAxxxMP144, xxx stands for power range from 495~550, in step of 5 W; 132 cells module: NOVAxxxMP132, xxx stands for power range from 455~505, in step of 5 W; 120 cells module: NOVAxxxMP120, xxx stands for power range from 415~460, in step of 5 W; 108 cells module: NOVAxxxMP108, xxx stands for power range from 375~415, in step of 5 W; 96 cells module: NOVAxxxMP96, xxx stands for power range from 325~365, in step of 5 W; 72 cells module: NOVAxxxMP72, xxx stands for power range from 245~275, in step of 5 W.
-----------------------	--

- 1) The below got test results in this report will relate only to the items tested.
- 2) This report shall not be reproduced except in full, without the written approval of the testing laboratory.

Description of Item under Test (IUT)

Mono crystalline PV modules (PERC) of 540Wp was tested for Ammonia Test (Model- NOVA550MP144). Total 3 samples were tested, 1 sample was used as control sample.



Summary of Test Results

After the ammonia exposure test there is no evidence of major visual defects as described in IEC 61730-2:2004 including also no mechanical deterioration or corrosion of module components.

After the ammonia exposure test the maximum power was not decrease by more than 5 % of the initial value.

All the test results fulfil the requirements of standard: IEC 62716 edition 1.0, dated 2013-06. Photovoltaic (PV) modules – Ammonia corrosion testing

Test No.	Test Item	Standard references, clause	Result
1	Preconditioning	IEC 61215 second edition, dated 2005-04	Refer individual test table
2	Visual inspection	IEC 61215 second edition, dated 2005-04, 10.1	Refer individual test table
3	Maximum power determination	IEC 61215 second edition, dated 2005-04, 10.2	Refer individual test table
4	Dielectric withstand test	IEC 61215 second edition, dated 2005-04, 10.3	Refer individual test table
5	Wet leakage current test	IEC 61215 second edition, dated 2005-04, 10.15	Refer individual test table
6	Ground continuity test	IEC61730-2 first edition, dated 2004-10, 10.4	Refer individual test table
7	Ammonia corrosion test	IEC 62716 edition 1.0, dated 2013-06	Refer individual test table
8	Visual inspection after Ammonia corrosion test	IEC 61215 second edition, dated 2005-04, 10.1	Refer individual test table
9	Maximum power determination after Ammonia corrosion test	IEC 61215 second edition, dated 2005-04, 10.2	Refer individual test table
10	Dielectric withstand test after Ammonia corrosion test	IEC 61215 second edition, dated 2005-04, 10.3	Refer individual test table
11	Wet leakage current test after Ammonia corrosion test	IEC 61215 second edition, dated 2005-04, 10.15	Refer individual test table
12	Ground continuity test after Ammonia corrosion test	IEC61730-2 first edition, dated 2004-10, 10.4	Refer individual test table
13	Bypass diode functionality test after Ammonia corrosion test	IEC 62716 edition 1.0, dated 2013-06, 4.2	Refer individual test table

Abbreviations used in the report:

P _{max}	– Maximum power
V _{mp}	– Maximum power voltage
I _{mp}	– Maximum power current
I _{sc}	– Short circuit current
V _{oc}	– Open circuit voltage
FF	– Fill factor
N/A	– not apply to the object