

TEST REPORT

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TEST REPORT NO. PEL/ED/21100325A1			NAME & ADDRESS OF CUSTOMER INTEGRATED BATTERIES INDIA PRIVATE LIMITED Plot No.-40, Ecotech 10, Greater Noida, Uttar Pradesh, 201301
UIN. NO.: TL0110125005508F			
DATE OF ISSUE OF TEST REPORT: 30/08/2025			
Customer Ref. & Date if any: NIL			
Date of Sample Receipt: 30/07/2025	Start of Test Date: 30/07/2025	End of Test Date: 30/08/2025	

PART A- PARTICULARS OF THE SAMPLE SUBMITTED

NATURE OF SAMPLE	PV MODULE
Grade/Variety/ Type/ Class/Size etc.	A Grade
Declared Values, if any (declared by the manufacturer)	550W, 555W, 560W, 565W, 570W, 575W, 580W, 585W, 590W, 595W, 600W, 605W, 610W, 615W, 620W, 625W, 630W, 635W, 640W
Sr. No.	SERIAL NO.: IB5500825260723, IB5550825260724, IB5600825260725, IB5650825260726, IB5700825260727, IB5750825260728, IB5800825260729, IB5850825260730, IB5900825260731, IB5950825260732, IB6000825260733, IB6050825279891, IB6100825279892, IB6150825279893, IB6200825279894, IB6250825279895, IB6300825279896, IB6350825279897, IB6400825279898
BIS Seal and IO's sign. If any.	R-93017612
Batch no., Date of manufacture	Nil
Brand Name /Model no.	Brand: IB SOLAR / Model No.: IBMPH-550, IBMPH-555, IBMPH-560, IBMPH-565, IBMPH-570, IBMPH-575, IBMPH-580, IBMPH-585, IBMPH-590, IBMPH-595, IBMPH-600, IBMPH-605, IBMPH-610, IBMPH-615, IBMPH-620, IBMPH-625, IBMPH-630, IBMPH-635, IBMPH-640
Quantity of Samples	19 No.
Condition of the Sample when received.	OK
Standard Reference	Refer page no 2
Environmental Conditions.	Temperature 25±3°C & Relative Humidity <65%

PART B- SUPPLEMENTARY INFORMATION

- a) Deviations from the test methods as per relevant specification/work instructions, if any: NIL
b) Details of the drawings, graphs, tables, sketches or photographs as referred in the test report, if any: NIL

Notes:

- (i) This report is not to be reproduced wholly or in part without our special permission in writing.
(ii) This report refers only to the particular sample detailed above.
(iii) The results reported in this certificate are valid at the time of and under the stipulated conditions of measurement.
(iv) Sample will be disposed off after 30 days of issue of test report if no any further information is received. (v) The test with asterisk mark are non accredited test parameters.
(vi) Any recognition claim in the test report is solely for promotional/advertising purpose and has no relation with the content of The report.

Tested by	Reviewed and Authorized by	Issued By
		
MR. AMAN SINGH	MR. MANEESH KUMAR GOLE	MR. Durgesh Kumar Singh
TESTING ENGINEER	HOD	(I.C.S.)
DATE: 30/08/2025	DATE: 30/08/2025	DATE: 30/08/2025

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INDEX			
Normative reference: IEC60068-2-68,IEC 62579-1			
Sr. No.	Test Name	Section	Result
1.	Dry heat	IEC 60068-2-38	Pass
2.	Cold test	IEC 60068-2-13	Pass
3.	Change of Temperature	IEC 60068-2-14	Pass
4.	Composite Temperature Humidity Cyclic Test	IEC 60068-2-14	Pass
5.	Rain, Heavy dust/sand storm	IEC 60529	Pass
6.	Shock Test*	IEC 62759-1	Pass
7.	Impact Test	IEC 62262	Pass
8.	Rotational Edge Drop Test*	IEC 62759-1	Pass
9.	Random Vibration Testing*	IEC 62759-1	Pass
DUST TEST : (Normative : IEC 60068-2-68*)			
10.	Dust and sand Test*	IEC 60068-2-68*	Pass

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1. Dry Heat Test :(IEC 60068-2-38)			
Sl. No:	Test+ Requirements	Observations	Results/Remarks
1.	Initial measurements: The EUT shall be visually examined and electrically and mechanically checked	Before the test, the EUT is visually examined and electrically and mechanically checked	Pass
	High Temperature Test: The EUT shall be introduced in the chamber in the unpacked, switched off, ready for use state. The temperature within the chamber shall then be adjusted to the temperature and duration defined below. Temperature :+ 85°C Time Duration: 2 hours	Conditioned	Pass
	Final measurements: The EUT shall be visually inspected and functionally tested	After the test, the EUT is visually examined and functionally checked. Equipment is in working condition	Pass

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2. Cold Test (IEC 60068-2-13)			
Sl. No:	Test+ Requirements	Observations	Results/ Remarks
Low Temperature Test			
1.	Initial test: Insulation test		Pass
2.	Purpose	The purpose is to determine whether or not the module is sufficiently well-insulated between current-carrying parts and the frame or the outside world before the test	Pass
3.	Apparatus	a) DC voltage source, with current limitation, capable of applying 500 V or 1 000 V plus twice the maximum system voltage of the module according to 10.3.4 b) An instrument to measure the insulation resistance.	Pass
	Test conditions	The test shall be made on modules at -40°C of the surrounding atmosphere (see IEC 60068-2-1)	Pass
		The EUT shall be introduced in the chamber in the unpacked, switched off, ready for use state. The temperature within the chamber shall then be adjusted to the temperature and duration defined below. No Deformation observed. Sample operating normally after the test when kept for 15mins. IR in compliance.	Pass

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3. Rapid Change of Temperature: (IEC 60068-2-14)

Sl. No:	Test+ Requirements	Observations	Results/ Remarks
1.	Initial measurements: The EUT shall be visually examined and electrically and mechanically checked	Before the test, the EUT is visually examined and electrically and mechanically checked	Pass
	Rapid Change of Temperature: The EUT shall be introduced in the chamber and determines the ability of components, equipment and other articles to withstand rapid changes of ambient temperature. The exposure times to accomplish this depend upon the nature of the specimen. Temperature : -40°C to 80°C Time Duration: 2 cycles	Conditioned	Pass
	Final measurements: The EUT shall be visually inspected and functionally tested	After the test, the EUT is visually examined and functionally checked. Equipment is in working condition	Pass

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4. Composite Temperature Humidity Cyclic Test :(IEC 60068-2-14)

Sl. No:	Test+ Requirements	Observations	Results/Remarks
1.	Initial measurements: The EUT shall be visually examined and electrically and mechanically checked	Before the test, the EUT is visually examined and electrically and mechanically checked	Pass
	Composite Temperature Humidity Cyclic Test(high Temperature test): The EUT shall be introduced in the chamber and determines the accelerated breathing and the effect of the freezing of trapped water in cracks and fissures are the essential features of this composite test. Temperature : 25°C to -10°C and 25°C to 65°C 95% RH Time Duration:2 cycles	Conditioned	Pass
	Final measurements: The EUT shall be visually inspected and functionally tested	After the test, the EUT is visually examined and functionally checked. Equipment is in working condition	Pass

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5. RAIN/WATER AND DUST/SAND PROTECTION TEST : IEC 60529

Sr. No.	Test Parameter	Test / Requirement name	Test result/ observation	Verdict
1.	IP TEST		See below	Pass
	Cl.11	General Requirement	See below	Pass
		Tests for ingress of dust, solid objects and moisture:	See below	Pass
		- classification according to IP	IP65	Pass
		- mounting position during test	Normal Operating Position	Pass
	Cl.12	Test for protection against access to hazardous parts indicated by the first Characteristics numeral		N/A
	Cl.13	Tests for protection against solid foreign objects indicated in First Characteristics numeral	See Below	Pass
		Dust test for First Characteristics numeral 6	Tested in Dust Proof Chamber for 8hour	Pass
		Acceptance condition for First Characteristics numeral 6	The protection is satisfactory , No deposit of dust observable inside the enclosure at the end of the test	Pass
	Cl.14	Tests for protection against Water indicated in Second Characteristics numeral	See Below	Pass
		Test for second characteristics numeral 5	Water projected by a nozzle (6.3 mm) against enclosure from any direction have no harmful effects.	Pass
		Acceptance condition for second characteristics numeral 5	Test duration: 1 minute per square meter for 15 minutes. Water volume: 12.5 litres per minute.	Pass

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6. SHOCK TEST* (IEC 62579-1):

Shock test (Operating)

Wave Form : Half sine wave
Acceleration : 15 g
Duration Time : 11 mS
No. of Shock : 3 (Each Axis)
Shock Direction : $\pm X$, $\pm Y$, $\pm Z$ axis

TEST RESULT :

Describe	PASS	FAIL	Non-Judgment
Function judgment	✓	—	—
Appearance check	✓	—	—

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7. IMPACT TEST(IEC62262):

Test	Observation	Result
Test to verify the protection against mechanical impacts as per IK code IK07 Impact Energy : 2 Joules No. of Impact :03 Enclosure (Diffuser) shall with stand the impact test and after the test the sample shall not show any damage	Withstood	P

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8. Rotational Edge DROP TEST*

Test	Observation	Result
Drop test	Complies (no loosened part/deformation observed) (See annex-1)	Pass

DROP TEST (DROPPING ON TO A FACE)

DROP SEQUENCE NUMBER	SAMPLE TILTED ABOUT EDGE	DROP HEIGHT
1	EDGE 3-5	100mm
2	EDGE 3-4	100mm
3	EDGE 3-6	100mm
4	EDGE 3-2	100mm

DROP TEST (DROPPING ON TO A FACE)

DROP SEQUENCE NUMBER	SAMPLE TILTED ABOUT EDGE	DROP HEIGHT
1	EDGE 3-2-5	100mm
2	EDGE 3-4-5	100mm
3	EDGE 3-2-6	100mm
4	EDGE 3-4-6	100mm

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DROP TEST (DROPPING ON TO A FACE)

DROP SEQUENCE NUMBER	SAMPLE TILTED ABOUT EDGE
1	EDGE 3-5
2	EDGE 3-4
3	EDGE 3-6
4	EDGE 3-2

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9. Random Vibration test(IEC 62579-1*)

(Operating) Frequency : 5 Hz to 500 Hz

Frequency (Hz)	PSD (g) ² /Hz
5	0.00202068
500	0.00202068

Test Axis : X, Y, Z axis
Acceleration : 1 grms
Test Time : 60 min / axis
Total Test Time : 180 min

TEST RESULT :

Describe	PASS	FAIL	Non-Judgment
Function judgment	√	—	—
Appearance check	√	—	—

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10 IEC 60068-2-68*: Dust and sand test*

Sr .No.	Test Parameter	Test / Requirement name	Test result/ observation	Verdict
1.	Test :Dust and sand	The equipment part should be tested in the manner in which they are expected to be used, i.e. protective covers should be in Position and the equipment arranged, as nearly as possible, in the position it will occupy in actual use. The test chamber shall be kept closed and spraying of the dust and sand shall continue spray without interruption during the whole conditioning period 90 minutes each and at wind speeds of 9m/ s. At the end of the test, the equipment shall be the standard atmospheric conditions of the testing area for not less than 90min and no more than 90min. After that, the equipment is subjected to a visual Examination. Test acceptance Final Measurement: No major damage shall occur. A performance check shall be carried out successfully.	Sample in working condition after the test. No damage/degradation observed in the sample. The sample working after the abnormal voltage conditions in both the cases.	Pass

*****END OF TEST REPORT *****