National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : SMSW LAB & RESEARCH CENTRE LLP, PLOT NO-90, SECTOR 5 , IMT MANESAR, GURGAON, HARYANA, INDIA

Accreditation Standard ISO/IEC 17025:2017

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Validity 12/07/2021 to 11/07/2023 **Last Amended on** 20/09/2021

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	ELECTRONICS-MISCELLANEOUS PRODUCTS	Crystalline silicon terrestrial photovoltaic (PV) modules	Cl. 11.9 - Hot Spot Endurance Test [MQT 9]; Cl. 11.10 - UV Preconditioning Test [MQT 10]; Cl. 11.11 - Thermal cycling Test [MQT 11]; Cl. 11.12 - Humidity - Freeze Test [MQT 12]; Cl. 11.13- Damp Heat Test [MQT 13]; Cl. 11.14 - Robustness of Termination Test [MQT 14]; Cl. 11.15 - Wet leakage Test [MQT 15]; Cl. 11.16 - Static Mechanical Load Test [MQT 16]; Cl. 11.17 - Hail Test [MQT 17]; Cl. 11.18 - Bypass Diode Thermal Test Test [MQT 18]; Cl. 11.19- Stabilization [MQT 19, MQT 19.1, MQT 19.2]	IS 14286 (Part1 / Sec 1)
2	ELECTRONICS-MISCELLANEOUS PRODUCTS	Crystalline silicon terrestrial photovoltaic (PV) modules	Clause No 5- Marking and Documentation ; Clause No 11.1 - Visual Inspection [MQT 01]; Clause No 11.2 - Maximum Power Determination [MQT 02]; Clause No 11.3 - Insulation Test [MQT 03]; Clause No 11.4 - Measurement of Temperature coefficient [MQT 04]; Clause N0 11.5 - Measurement of Nominal Module Operating Temperature NMOT [MQT 05]; Clause No 11.6 - Performance at STC [MQT 06.1] & NMOT [06.2]; Clause No 11.7 -Performance at Low irradiance [MQT 7] ; Clause No 11.8 -Out Door Exposure Test [MQT 08]	IS 14286 (Part1 / Sec 1)
3	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Bypass Diode Thermal Test (MST 25)	IS/IEC 61730-2
4	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Bypass diode Thermal Test [MST 25]	IS/IEC 61730-2
5	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Continuity Test for equipment banding (MST 13)	IEC 61730-2 MST-13

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6	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Damp Heat (DH 1000) [MST 53]	IS/IEC 61730-2
7	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Damp Heat (DH1000) [MST 53]	IS/IEC 61730-2
8	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Damp Heat Test , Robustness of Termination Test, Wet leakage Test , Static Mechanical Load Test , Hail Test , Bypass Diode Thermal Test Test , Stabilization	IEC 61215-1-1
9	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Dielectric Withstand Test(MST 16)	IS/IEC 61730-2
10	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Ground continuity Test (MST 13)	IS/IEC 61730-2 (Clause No 10.4)
11	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	HOT - Spot Test (MST 22)	IS/IEC 61730-2
12	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Hot-Spot Endurance Test [MST 22]	IS/IEC 61730-2
13	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Humidity Freeze (HF- 10) [MST 52]	IS/IEC 61730-2
14	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Humidity freeze (HF 10) [MST52]	IS/IEC 61730-2
15	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Insulation Test [MST 16]	IS/IEC 61730-2
16	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Irradiance and Temperature Performance Measurement and Power Rating	IEC 61853-1 (Part 1)
17	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Irradiance and Temperature Performance Measurement and Power Rating	IS 16170 (Part 1)
18	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Marking	IS 14286 (Clause No 4)

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19	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Marking	IS/IEC 61730-1 (Claue No 11)
20	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Marking and Documentation	IEC 61215-1 (clause No 5)
21	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Marking and Documentation, Visual Inspection, Maximum Power Determination , Insulation Test, Measurement of Temperature coefficient ,Measurement of Nominal Module Operating Temperature NMOT , Performance at STC & NMOT ,Performance at Low irradiance, Out Door Exposure Test , Hot Spot Endurance Test, UV Preconditioning Test, Thermal cycling Test , Humidity - Freeze Test	IEC 61215-1-1
22	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Maximum Power Determination [MST 03]	IS/IEC 61730-2
23	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Mechanical Load Test (MST 34)	IS/IEC 61730-2
24	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Mechanical Load Test [MST 34]	IS/IEC 61730-2
25	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Performance at STC [MST 02]	IS/IEC 61730-2
26	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Potential Induced degradation	IEC TS 62804
27	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Potential Induced degradation	IS 17210 (Part 1)
28	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Preconditioning	IEC 61215 (Clause No 5)
29	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Preconditioning	IS 14286 (Clause No 5)

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30	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Robustness of Termination Test [MST 42]	IS/IEC 61730-2
31	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Robustness of Termination Test(MST 42)	IS/IEC 61730-2
32	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Thermal Cycling Test (TC 50 or TC 200) [MST 51]	IS/IEC 61730-2
33	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Thermal Cycling Test (TC 50 or TC 200) [MST 51]	IS/IEC 61730-2
34	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	UV preconditioning [MST 54]	IS/IEC 61730-2
35	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	UV Preconditioning test (MST 54)	IS/IEC 61730-2
36	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Visual Inspection (MST 01)	IS/IEC 61730-2 (MST 01)
37	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Visual Inspection (MST 01)	IS/IEC 61730-2(Clause No -10.1)
38	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Wet leakage Current Test [MST 17]	IS/IEC 61730-2
39	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules	Wet Leakage Current Test [MST 17]	IS/IEC 61730-2
40	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Hot Spot Endurance test	IEC 61215-2 (Clause No. 4.9)
41	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Damp heat test (2.5 * 2M * 2M)	IEC 61215 (Clause No. 10.13)
42	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Bypass diode test	IS 14286(Clause No. 10.18)
43	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Damp heat test (2.5 * 2M * 2M)	IEC 61215-2(Clause No. 4.13)

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44	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Damp heat test (2.5 * 2M * 2M)	IS 14286 (Clause No. 10.13)
45	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Hail Test	IEC 61215-2 (Clause No. 4.17)
46	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Hail Test	IS 14286 (Clause No. 10.17)
47	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Humidity Freeze Test (2.5 * 2M * 2M)	IEC 61215-2(Clause No. 4.12)
48	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Humidity Freeze Test (2.5 * 2M * 2M)	IS 14286(Clause No. 10.12)
49	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Maximum power determination/voltage, current and power measurement Test	IS 14286 (Clause No.10.2)
50	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Mechanical Load Test	IS 14286 (Clause No. 10.16)
51	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Mechanical Load Test	UL -1703 (3rd Edition) Clause 41
52	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Outdoor Exposer test	IS 14286 (Clause No. 10.8)
53	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at low irradiance	IEC 61215 (Clause No. 10.7)
54	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at low irradiance	IEC 61215-2 (Clause No. 4.7)
55	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Photovoltaic devices - part 1 Measurement of photovoltaic current - Voltage characteristics	IEC 60904-1
56	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Robustness of termination test	IEC 61215 (Clause No. 10.14)

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57	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Robustness of termination test	IS 14286 (Clause No. 10.14)
58	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Stabilization (Initial Stabilization & Final Stabilization)	IEC 61215-2 (Clause 4.19)
59	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Static and Mechanical Load test	IEC 61215-2(Clause No. 4.16
60	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Thermal cycling test (2.5 * 2M * 2M)	UL -1703 (3rd Edition) Clause 35
61	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Inspection	IS 14286 (Clause No: 10.1)
62	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Wet leakage Current test	IEC 61215-2 (Clause No. 4.15)
63	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Wet leakage Current test	IS 14286 (Clause No. 10.15)
64	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Wet leakage Current test	UL -1703 (3rd Edition) Clause 27
65	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Bypass diode test	IEC 61215 (Clause No. 10.18)
66	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Bypass diode test (Bypass diode thermal Test & Bypass diode functionality test)	IEC 61215-2 (Clause No. 4.18)
67	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Electroluminescence	IEC TS 60904-13
68	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Hail Test	IEC 61215 (Clause No. 10.17)
69	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Hot-Spot Endurance Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.9/ MQT 09] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.9)

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70	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Marking	IEC 61215 (Clause No 4)
71	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Measurement of Temperature Coefficient	IS 14286 (Part 1 & Part 2) [Clause No: 4.4/ MQT 04] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.4)
72	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Robustness of Termination Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.14/ MQT 14] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.14): 2019: 2019
73	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Stabilization	IS 14286 (Part 1 & Part 2) [Clause No: 4.19/ MQT 19] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.19)
74	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Thermal cycling test (2.5 * 2M * 2M)	IEC 61215 (Clause No. 10.11)
75	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Thermal cycling test (2.5 * 2M * 2M)	IEC 61215-2(Clause No. 4.11)
76	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Thermal cycling test (2.5 * 2M * 2M)	IS 14286 (Clause No. 10.11)
77	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Wet Leakage Current Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.15/ MQT 15] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.15)
78	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Bypass diode Thermal Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.18/ MQT 18] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.18)
79	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Damp heat test (2.5 * 2M * 2M)	IS 14286 (Part 1 & Part 2) [Clause No: 4.13/ MQT 13] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.13)
80	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Dielectric Strength	UL-1703 (3rd Edition) (Clause:26)
81	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Hail Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.17/ MQT 17] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.17)

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82	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Hot Spot Endurance test	IEC 61215 (Clause No. 10.9)
83	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Hot Spot Endurance test	IS 14286 (Clause No. 10.9)
84	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Humidity Freeze Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.12/ MQT 12] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.12)
85	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Humidity Freeze Test (2.5 * 2M * 2M)	IEC 61215 (Clause No. 10.12)
86	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Humidity Freeze Test (2.5 * 2M * 2M)	UL -1703 (3rd Edition) Clause 36
87	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Insulation Test	IEC 61215 (Clause No 10.3)
88	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Insulation Test	IEC 61215 -2 (Clause No.4.3)
89	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Insulation Test	IS 14286 (Clause No.10.3)
90	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Insulation Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.3/ MQT 03] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.3): 2019
91	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Leakage Current Test	UL-1703 (3rd Edition) (Clause:21)
92	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Marking	IS 14286 (Part 1) [Clause No: 5] & IS 14286 (Part 1/ Sec 1 ,Clause No 5)
93	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Maximum Power Determination	IS 14286 (Part 1 & Part 2) [Clause No: 4.2/ MQT 02] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.2)
94	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Maximum power determination/voltage, current and power measurement Test	IEC 61215 (Clause No.10.2)

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S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
95	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Maximum power determination/voltage, current and power measurement Test	IEC 61215-2 (Clause No.4.2)
96	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Maximum power determination/voltage, current and power measurement Test	UL-1703 (3rd Edition) (Clause 20)
97	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of nominal module operating temperature (NMOT)	IEC 61215-2 (Clause No. 4.5)
98	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of nominal module operating temperature [NMOT]	IS 14286 (Part 1 & Part 2) [Clause No: 4.5/ MQT 05] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.5)
99	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of nominal operating cell temperature (NOCT)	IEC 61215 (Clause No. 10.5)
100	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of nominal operating cell temperature (NOCT)	IS 14286 (Clause No. 10.5)
101	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of temperature coefficient (2.5 M * 2M * 2M)	IEC 61215 (Clause No. 10.4)
102	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of temperature coefficient (2.5 M * 2M * 2M)	IEC 61215-2 (Clause No. 4.4)
103	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Measurement of temperature coefficient (2.5 M * 2M * 2M)	IS 14286(Clause No. 10.4)
104	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Mechanical Load Test	IEC 61215 (Clause No. 10.16)
105	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Outdoor Exposer test	IEC 61215 (Clause No. 10.8)
106	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Outdoor Exposer test	IEC 61215-2(Clause No. 4.8)
107	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Outdoor Exposure Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.8/ MQT 08] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.8)

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108	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at low irradiance	IS 14286 (Clause No. 10.7)
109	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at Low Irradiance	IS 14286 (Part 1 & Part 2) [Clause No: 4.7/ MQT 07] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.7)
110	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at STC & NMOT	IS 14286 (Part 1 & Part 2) [Clause No: 4.6/ MQT 06] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.6)
111	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at STC and NMOT (2.5M*2M*2M)	IEC 61215-2 (Clause No. 4.6)
112	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at STC and NOCT (2.5M*2M*2M)	IEC 61215 (Clause No. 10.6)
113	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Performance at STC and NOCT (2.5M*2M*2M)	IS 14286 (Clause No. 10.6)
114	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Robustness of termination test	IEC 61215-2 (Clause No. 4.14)
115	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Static and Mechanical Load test	IS 14286 (Part 1 & Part 2) [Clause No: 4.16/ MQT 16] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.16)
116	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Thermal Cycling Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.11/ MQT 11] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.11)
117	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	UV preconditioning	IEC 61215 (Clause No. 10.10)
118	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	UV preconditioning	IEC 61215-2 (Clause No. 4.10)
119	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	UV preconditioning	IS 14286 (Clause No. 10.10)

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120	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	UV Preconditioning Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.10/ MQT 10] & IS 14286 (Part 1/ Sec 1 ,Clause No 11.10)
121	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Inspection	IEC 61215 (Clause No: 10.1)
122	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Inspection [MST 01]	IEC 61215-2(Clause No 4.1)
123	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Test	IS 14286 (Part 1 & Part 2) [Clause No: 4.1/ MQT 01] & IS 14286 (Part 1/ Sec 1, Clause No 11.1))
124	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Wet leakage Current test	IEC 61215 (Clause No. 10.15)

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Site Facility				
1	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Inspection	IS 14286 (Clause No: 10.1)
2	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W	Electroluminescence	IEC TS 60904-13
3	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Inspection	IEC 61215 (Clause No: 10.1)
4	ELECTRONICS-MISCELLANEOUS PRODUCTS	Photovoltaic Crystalline silicon terrestrial photovoltaic (PV) modules Design qualification and type approval (Max power 600 W)	Visual Inspection [MST 01]	IEC 61215-2(Clause No 4.1)