



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: July 31, 2026

Certificate Number: 1136.04

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests:

| Tests: | Test Method(s)¹: |
|---|---|
| Dielectric Breakdown Voltage and Dielectric Strength Test | UL 746A (Section 21); CAN/CSA C22.2 No.0.17 (Section 6.2); ASTM D149, ASTM D3755; IEC 60243-1, -2; JIS K6911, JIS C 2110-1, -2, -3; IPC-TM-650 (2.5.6) |
| Comparative Tracking Index Test | UL 746A (Section 24); CAN/CSA C22.2 No.0.17 (Section 6.5); ASTM D3638; IEC 60112; JIS C2134, C61730-1 |
| High Voltage, Low Current, Dry Arc Resistance Test | UL 746A (Section 23); ASTM D495; JIS K6911; CAN/CSA C22.2 No.0.17 (Section 6.4); IPC-TM-650 (2.5.1) |
| Hot Wire Ignition Test | UL 746A (Section 32); ASTM D3874; CAN/CSA C22.2 No.0.17 (Section 4.3.1) |
| Glow Wire Ignition Test | IEC 60695-2-13, IEC 60695-2-10; JIS C60695-2-13, JIS C60695-2-10; UL 746A (Section 35); CAN/CSA C22.2 No. 17 (Section 4.3.5); GB/T 5169.10 |
| Glow Wire Flame Test | IEC 60695-2-12, IEC 60695-2-10; JIS C60695-2-12, JIS C60695-2-10; GB 5169.10 |

| <u>Tests:</u> | <u>Test Method(s)¹:</u> |
|--|---|
| Glow Wire Flammability Test for End-Product Test | UL 746C (Sections 12.3 and 73); IEC 60695-2-10, IEC 60695-2-11; JIS C60695-2-11, JIS C60695-2-10; GB 5169.10, GB 5169.11; CAN/CSA C22.2 No. 17 (Section 9.3); BS EN 60695-2-11 |
| Volume/Surface Resistivity | UL 746A (Section 22); ASTM D257; JIS C5016, JIS K6911, JIS C6481, JIS C6471, JIS C2139-3-1, JIS C2139-3-2; IEC 62631-3-1, IEC 62631-3-2; CAN/CSA C22.2 No. 17 (Section 6.3) |
| <u>Testing performed on Photovoltaic Modules</u> | |
| Maximum Power Determination | IEC 61215-2 (Section 4.2, MQT 02); JIS C61215-2 (Section 4.2, MQT 02) |
| Measurement of Temperature Coefficient | IEC 61215-2 (Section 4.4, MQT 04); JIS C61215-2 (Section 4.4, MQT 04) |
| Performance at STC | IEC 61215-2 (Section 4.6, MQT 06); JIS C 61215-2(Section 4.6, MQT 06) |
| Performance at Low Irradiance | IEC 61215-2 (Section 4.7, MQT 07); JIS C61215-2 (Section 4.7, MQT 07) |
| Photovoltaic (PV) Module Performance Testing and Energy Rating | IEC 61853-1, IEC 61853-2 (Section 7.2) |
| Ground Continuity | IEC 61730-2 (MST 13); JIS C61730-2(MST 13) |
| Dielectric Withstand Test | IEC 61730-2 (MST 16); JIS C61730-2 (MST 16) |
| Insulation Test | IEC 61215-2 (Section 4.3, MQT 03); JIS C61215-2(Section 4.3, MQT 03) |
| Wet Leakage Current Test | IEC 61730-2 (MST 17), IEC 61215-2 (Section 4.15, MQT 15); JIS C61730-2 (MST 17), JIS C61215-2 (Section 4.15, MQT 15); |
| Reverse Current Overload | IEC 61730-2 (MST 26); JIS C61730-2 (MST 26) |
| Inclined Plane Tracking Test | IEC 60587; ASTM D2303; UL 746A (Section 26) |
| Detection of Potential-induced Degradation | IEC TS 62804-1; IEC 61215 (MQT 21) |

| Tests: | Test Method(s)¹: |
|---|---|
| Testing Performed on Battery | |
| Charge / Discharge; Low temperature discharge performance | IEC 62620; JIS C8715-1 |
| High rate discharge performance | IEC 62620; JIS C8715-1 |
| Capacity retention rate and capacity recovery rate | IEC 62620; JIS C8715-1 |
| AC internal resistance | IEC 62620; JIS C8715-1 |
| DC internal resistance | IEC 62620; JIS C8715-1 |
| Charge / discharge cycle durability | IEC 62620; JIS C8715-1 |
| Standby state retention durability | IEC 62620; JIS C8715-1 |
| Continuous charging test | IEC 62133-2; JIS C62133-2 |
| External short circuit test | IEC 62133-2, IEC 62619; JIS C62133-2, JIS C8715-2; JIS C8714; UN38.3; IEC 62660-2, IEC 62660-3 |
| Overcharge test | IEC 62133-2, IEC 62619; JIS C62133-2, JIS C8715-2, JIS C8714; UN38.3; IEC 62660-3 |
| Over-discharge test | IEC 62133-2, IEC 62619; JIS C62133-2, JIS C8715-2; UN38.3; IEC 62660-2 |
| Heating test | IEC 62133-2; IEC 62619; JIS C62133-2, JIS C8715-2; IEC 62660-2 |
| Crush test | IEC 62133-2; JIS C62133-2, JIS C8714; IEC 62660-3; UN38.3 |
| Thermal cycle test | IEC 62133-2; JIS C62133-2; UN38.3; IEC 62660-3; SAE J2464; ISO 16750-4 |
| Nail stab test | SAND 2005-3123, SAE J2464 |

¹ On the following materials and products: Adhesives and Sealants; Ceramics; Films and Packaging; Leather; Packaging and Containers; Paper, Paperboard and Pulp; Plastics and Polymers; Rubber and Rubber Products; Textiles; Information Technology Equipment (ITE); Photovoltaic Modules; Printed Wiring Board; Magnet Wire; Varnish; Industrial Laminate; Wire Positioning Devices.



Accredited Laboratory

A2LA has accredited

CHEMITOX, INC., YAMANASHI TESTING CENTER KAI

Yamanashi-ken, Japan

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 26th day of August 2024.

A blue ink signature of Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1136.04
Valid to July 31, 2026

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.