Organisme belge d'Accréditation
Belgische Accreditatieinstelling
Belgische Akkreditierungsstelle
Belgian Accreditation Body

EA MLA Signatory

Annexe au certificat d'accréditation
Bijlage bij accreditatiecertificaat
Annex to the accreditation certificate
Beilage zur Akkreditierungszertifikat

432-TEST

EN ISO/IEC 17025:2017

Version / Versie / Version / Fassung	8
Validité / Geldigheidsperiode / Validity / Gültigkeitsdauer	2022-02-11 - 2024-05-09

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L'accréditation est délivrée à / De accreditatie werd uitgereikt aan
The accreditation is granted to / Die akkreditierung wurde erteilt für:

ELIOSYS sa
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Test name	Internal identification testcode	Nature of samples	Measured parameters	Standard test method
Visual inspection	MQT 01, MST 01	Photovoltaic module	Detection of any visual defects in the module	IEC 61215:2016 IEC 61730
Maximum power determination	MQT 02, MST03	Photovoltaic module	Determination of the maximum power of the module before and after the various environmental tests	IEC 61215:2016 IEC 61730
Insulation test & Dielectric withstand test	MQT 03, MST 16	Photovoltaic module	Determination if the module is sufficiently well-insulated between current-carrying parts and the frame or the outside world.	IEC 61215:2016 IEC 61730
Measurement of temperature coefficient	MQT 04	Photovoltaic module	Determination of the temperature coefficients of current (α), voltage (β) and peak, power (δ) from module measurements	IEC 61215:2016
Performance at STC and NOCT/NMOT	MQT 06, MST02	Photovoltaic module	Determination of how the electrical performance of the module varies with load at STC (Standard test condition) and at NOCT or MNOT	IEC 61215:2016 IEC 61730
Performance at low irradiance	MQT 07	Photovoltaic module	Determination of how the electrical performance of the module varies with load at 25 °C and an irradiance of 200 W/m²	IEC 61215:2016
Outdoor exposure test	MQT 08	Sécurité photobiologique Evaluation du risque lié à la lumière bleue	Preliminary assessment of the ability of the module to withstand exposure to outdoor conditions and to reveal any synergistic degradation effects which may not be detected by laboratory tests	IEC 61215:2016

Test name	Internal identification testcode	Nature of samples	Measured parameters	Standard test method
Hot-spot endurance test	MQT 09, MST 22	Photovoltaic module	Determination of the ability of the module to withstand hot-spot heating effects, for example solder melting or deterioration of the encapsulation	IEC 61215:2016 IEC 61730
UV preconditioning	MQT 10, MST 54	Photovoltaic module	Preconditioning the module with ultraviolet (UV) radiation	IEC 61215:2016 IEC 61730
Thermal cycling test	MQT 11, MST 51	Photovoltaic module	Determination of the ability of the module to withstand thermal mismatch, fatigue and other stresses caused by repeated changes of temperature	IEC 61215:2016 IEC 61730
Humidity freeze test	MQT 12, MST 52	Photovoltaic module	Determination of the ability of the module to withstand the effects of high temperature and humidity followed by sub-zero temperatures	IEC 61215:2016 IEC 61730
Damp heat test	MQT 13, MST 53	Photovoltaic module	Determination of the ability of the module to withstand the effects of long-term penetration of humidity	IEC 61215:2016 IEC 61730
Robustness of termination test	MQT 14, MST 42	Photovoltaic module	Verification if that the terminations and the attachment of the module could withstand mechanical stresses.	IEC 61215:2016 IEC 61730
Wet leakage current test	MQT 15, MST 17	Photovoltaic module	Evaluation of the insulation of the module under wet operating conditions.	IEC 61215:2016 IEC 61730
Mechanical load test (static)	MQT 16, MST 34	Photovoltaic module	Determination of the ability of the module to withstand wind, snow, static or ice loads.	IEC 61215:2016 IEC 61730
Hail test	MQT 17	Photovoltaic module	Verification that the module is capable of withstanding the impact of hailstones	IEC 61215:2016
Bypass diode testing (thermal test)	MQT18, MST 07, MST 25	Photovoltaic module	Assessing the adequacy of the thermal design and relative long-term reliability of the by-pass diodes	IEC 61215:2016 IEC 61730

Test name	Internal identification testcode	Nature of samples	Measured parameters	Standard test method
Stabilisation / Light-soaking	MQT 19	Photovoltaic module	Stabilization of the electrical characteristics by means of natural sunlight or simulated solar irradiation	IEC 61215:2016
Potential induced degradation test (replacing the former PID test)	MQT 21	Photovoltaic module	Determination of the PID susceptibility	IEC 61215 IEC TS62804-1
Accessibility test	MST 11	Photovoltaic module	Determination if uninsulated electrical connections represent a shock hazard to personnel	IEC 61730
Cut susceptibility test	MST 12	Photovoltaic module	Determination whether any front and rear surfaces of the module made of polymeric materials are capable of withstanding routine handling during installation and maintenance without exposing personnel to the danger of electric shock	IEC 61730
Ground continuity test	MST 13	Photovoltaic module	Determination if that there is a conductive path between all exposed conductive surfaces of the module, so that the exposed conductive surfaces can be adequately grounded in a PV system.	IEC 61730
Impulse voltage test	MST 14	Photovoltaic module	Verification of the capability of the solid insulation of the module to withstand over-voltages of atmospheric origin	IEC 61730
Temperature test	MST 21	Photovoltaic module	Determination of the maximum reference temperatures for various components and materials used to construct the module	IEC 61730
Reverse current overload test	MST 26	Photovoltaic module	Determination of the maximum reference temperatures for various components and materials used to construct the module	IEC 61730
Module breakage test	MST 32	Photovoltaic module	Provide confidence that cutting or piercing injuries can be minimized if the module is broken	IEC 61730

Test name	Internal identification testcode	Nature of samples	Measured parameters	Standard test method
Visualization of defaults by electrolumiscence	EL	Photovoltaic module	Number and severity level of defaults affecting the electrical performance	publication UL
Insulation thickness test	MST 04	Photovoltaic module	This test shall verify compliance to the minimum insulation thickness for thin layers	IEC 61730
Markings durability	MST 05	Photovoltaic module	Verification of markings durability	IEC 61730
Sharp edge test	MST 06	Photovoltaic module	Verify that the PV module surfaces are free from dangerous sharp edges, burrs, etc.	IEC 61730
Screw connection test	MST 33	Photovoltaic module	Resistance of components such as screws and nuts transmitting contact pressure or which are likely to be tightened by the user	IEC 61730
Materials creep test	MST 37	Photovoltaic module	Verify that there is no creep or loss of adhesion between elements of the PV module when operated at high temperature	IEC 61730
Cold conditioning	MST 55	Photovoltaic module	Evaluate a PV module for applicability of Pollution Degree PD=1 (−40 °C ± 3 °C for 48 h)	IEC 61730
Dry hot conditioning	MST 56	Photovoltaic module	Evaluate a PV module for applicability of Pollution Degree PD = 1, (105 °C ± 5 °C less than 50 % relative humidity for 200 h).	IEC 61730
Ignitability test	MST 24	Photovoltaic module	This test determines the ignitability of PV modules by direct small flame impingement under zero impressed irradiance by external heat sources using vertically oriented test specimens. The test does not replace a fire test; it assesses ignitability, not flammability of outer surfaces of a module.	IEC 61730