



PHOTOVOLTAIC (PV) MODULE

**TESTING SERVICES AND CERTIFICATION
SCHEME**

**Improving the Performance of Your PV
Modules**



Deliver safe, reliable and trusted products and be recognised as a staple within the photovoltaic (PV) modules market. SIRIM QAS brings our years of experience to the table to help manufacturers, traders, and importers gain a competitive edge through an assurance of quality for your PV modules.

A Module for Quality – PV Module Testing and Certification



SIRIM

The PV modules market is growing at a fast pace as solar power becomes an increasingly popular form of renewable energy. The industry needs safe, durable and good quality PV modules to ensure effective solar power generation, and therefore testing and certification are integral to the PV modules supply chain.

SIRIM QAS can assist manufacturers, traders and suppliers through our comprehensive range of testing and product certification for crystalline silicon and thin-film PV modules. It allows you to improve the manufacturing process and product quality, and to gain recognition as a trusted brand within the market.

This is especially important as the technology for solar power generation, and PV modules continue to evolve. Companies need to ensure that their products are reliable to support large scale solar projects and to safeguard a return on investments of key stakeholders.

At SIRIM QAS, we have the necessary expertise and facilities to verify your PV modules' safety and performance based on national and international standards.

PV Module Testing

SIRIM QAS' accredited laboratory is equipped to facilitate testing for crystalline silicon and thin-film PV modules with fast turnaround time. Our tests ensure that your PV modules are able to operate in a general open-air environment and various climatic conditions.

Our testing services are based on the following standards:



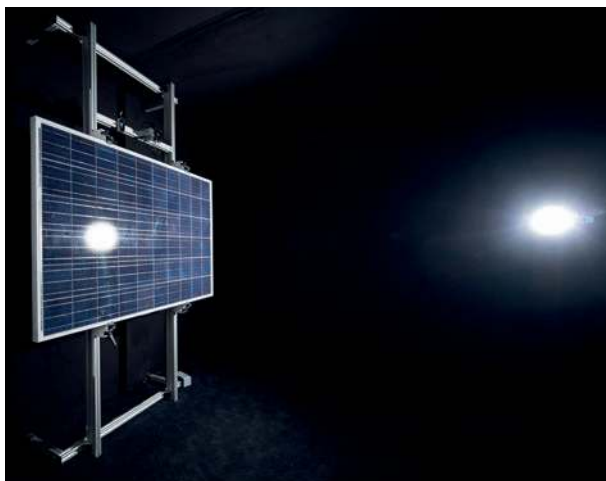
MS/IEC 61730 Series for Photovoltaic (PV) Module Safety Requirement

- Verify compliance of construction and components/parts of PV Module.
- Verify safe electrical operation of PV Module.
- Verify safe mechanical operation of PV Module.
- Ensure adequate operation of PV Module – Electric shock, Fire Hazard and Personal Injury.



MS/IEC 61215 Series for Photovoltaic (PV) Module Performance Requirement

- Determine electrical & thermal characteristics of the PV module.
- Determine the PV module's capability in an outdoor environment.
- Determine the PV module's capability to withstand prolonged exposure to environmental stress.
- Determine basic safety to operators and surroundings.



IEC TS 62804-1: Potential Induced Degradation (PID)

- Assess the durability of the PV module to constant voltage stress.

Testing can assist the industry with product development and support compliance programmes initiated by the government. We provide a wide range of PV test facilities which include:



- Solar Simulator with I-V Measurement System
- Environmental Chamber with Current Supply
- UV Conditioning Chamber
- Mechanical Load Test System (Steady-State and Dynamic)
- Hail Impact Test System
- Outdoor Exposure Test System
- Wet Leakage Current Test System
- Bypass Diode Thermal Test System
- Module Breakage Tester
- Impulse Voltage Tester
- Ground Continuity Tester
- Insulation Resistance Tester
- Electroluminescence (EL) Camera Imaging
- Cut Susceptibility Tester
- Robustness of Termination Tester
- Universal Tensile Machine (UTM)

PV Module Certification Scheme

Demonstrate the superior quality of your PV modules with SIRIM QAS Product Certification Scheme. Our professional and competent auditors can help ascertain the reliability and safety of your crystalline silicon and thin-film PV modules.

Certification criteria include the following:



1. Compliance with the following standard requirements:

- MS/IEC 61730 Series for Photovoltaic (PV) Module Safety Requirement
- MS/IEC 61215 Series for Photovoltaic (PV) Module Performance Requirement

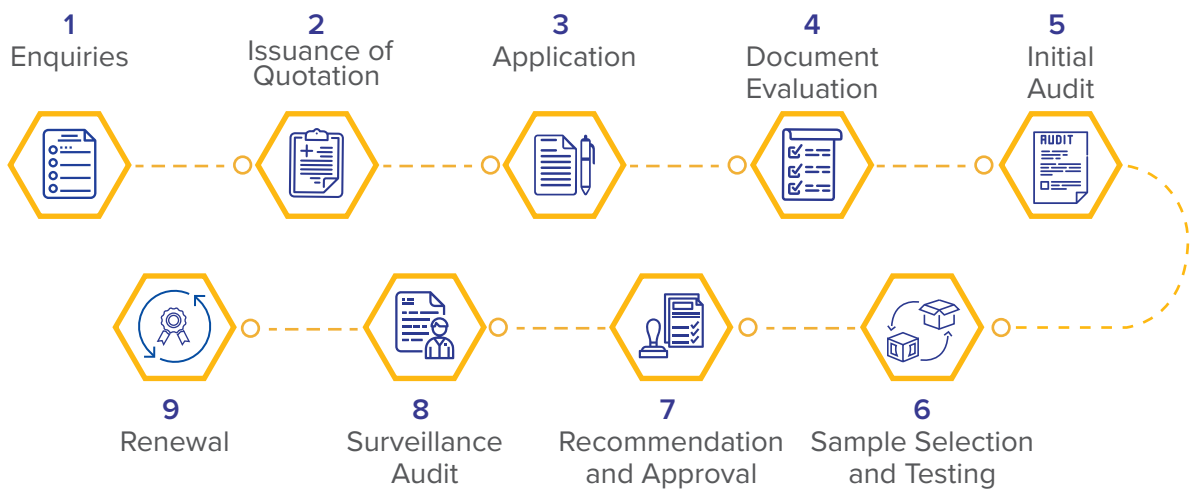
2. Effective quality control for continuous compliance with certification requirements.

A licence will be awarded to products that conform to the relevant standards and certification requirements. Certified products will be eligible to carry the certification mark, allowing companies to gain customers' trust by maintaining consistent quality.

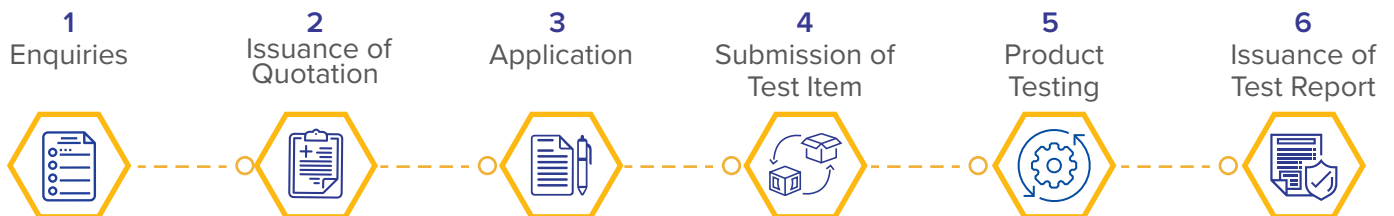
The Benefits of Testing and Certification

- Provide independent assurance that products are tested and certified to meet safety and performance standards.
- Improve production efficiency and reduce rejection, which will decrease unnecessary cost and increase profit margin.
- Leverage on SIRIM QAS' reputation as a leading Conformity Assessment Body and enhance your reputation within the global market through our Product Certification Mark.
- Gain a competitive edge over other products in the market by demonstrating compliance with national and international standards.
- Become a forerunner of the production of quality PV modules and gain the confidence of stakeholders.

Product Certification Process



Testing Services Process



SIRIM QAS – Building a Brighter Future, Together



SIRIM QAS is an internationally recognised Conformity Assessment Body with years of experience in providing testing, inspection and certification services to local and international customers.

We have gained accreditation and recognition from the Department of Standards Malaysia (STANDARDS MALAYSIA) under the National Laboratory Accreditation Scheme (SAMM) based on the requirements of MS ISO/IEC 17025. Our test report carries both SAMM and ILAC MRA logo. Furthermore, our acceptance as the CB Testing Laboratory under the IECEE CB Scheme enables us to issue CB Test Reports and CB Test Certificates which are accepted and recognised by participating National Certification Bodies (NCB) and CB Testing Laboratories (CBTL) in more than 50 countries worldwide.

STANDARDS MALAYSIA also accredits SIRIM QAS under the MS ISO/IEC 17065 for Product Certification Scheme. Our highly experienced, professional and competent auditors in a wide range of sectors are ready to guide companies through meticulous certification processes, demonstrating full compliance with standard and certification requirements.

For more information, contact us at:



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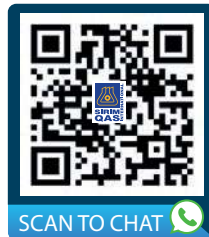
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