



IECEE PV CERTIFICATION: THE SURE WAY TO SAFETY, QUALITY AND PERFORMANCE

SYSTEM OF CONFORMITY
ASSESSMENT SCHEMES FOR
ELECTROTECHNICAL EQUIPMENT
AND COMPONENTS (IECEE)





IECEE PV PROGRAMME

The popularity of photovoltaics is rising globally. This generates increased competition, with new players entering the market. In turn, this results in a growing need to be certain that new products respect adequate safety, quality and performance parameters. New conformity assessment laboratories offering PV assessments are mushrooming accordingly.

The IECEE PV Programme addresses you only to the world's most reliable labs. That is why major players in the solar market trust the IECEE to help them design, manufacture and market quality solar electric systems for a wide range of applications in the residential, commercial and industrial sectors.

Built with confidence

PV systems require considerable investments and manufacturers need to be able to demonstrate that their products will perform for long periods, as promised, and that they will be able to cope with the harsh conditions in which PV systems operate.

All elements and components carrying the IECEE PV Quality Mark are designed, manufactured and tested ►



- ▶ according to IEC International Standards. They fulfil the highest expectations in respect to safety, performance and resistance. IECEE PV Certificates provide manufacturers with the most reliable tools for identifying and sourcing those components, which allow them to build quality PV products and systems.

The PV Quality Seal and Quality Mark provide the confidence that products will perform safely at all times.

The use of the IECEE PV Programme offers clear advantages to industry and governments.

Cost and time saving by

- Reducing the number of steps needed for international certification
- Eliminating duplicate testing
- Testing only one sample among structurally similar products
- Requiring only certain limited tests for upgraded or modified product
- Arranging faster product movement from plants to markets
- Organizing direct acceptance by regulators, retailers, buyers and vendors in many countries

Quality and safety

- PV components and equipment are manufactured in accordance with IEC International Standards and must be found to comply with required safety and performance regulations
- They provide developing countries with the guarantee that they are purchasing quality products and in this way are protecting their long-term investment

The World Bank (www.worldbank.org) recognizes the PV Quality Mark and recommends that it be specified in tenders supported by the World Bank.

Global trade

- Removes obstacles to international trade such as different national certification or approval criteria
- Assists manufacturers in obtaining certification or direct acceptance in global markets
- Opens up access to more markets ▶

THE IECCE PV QUALITY SYSTEM

► The PV Quality System

The PV Quality Seal and Quality Mark are the internationally recognized quality benchmarks for PV products and the worldwide reference for manufacturers of PV products and systems, as well as for suppliers of components used in PV products. The well-recognized logos simplify the ultimate purchase decision and provide a clear competitive advantage to component suppliers and to PV product and system manufacturers.

Once is enough

The PV Quality Seal and Quality Mark greatly simplify exporting and the global certification process. They significantly reduce the number of steps required to obtain certification at the national level and help to reduce trade barriers created by different national certification criteria. One test, one factory inspection and one certification open many international markets while reducing both costs and time to market.

In addition, for structurally similar products, only one needs to be tested, and for product upgrades or modifications, only a limited set of additional tests is required.



The PV Quality Seal

This logo is applied to PV systems such as rooftop installations, street lights and similar structures that are powered by PV modules.

The PV Quality Seal certifies that photovoltaic products and systems powered by a photovoltaic module are safe and manufactured according to IEC International Standards.



The PV Quality Mark

This logo is applied to PV components such as modules, regulators, inverters, batteries, connectors and other materials that are used in the manufacturing of PV modules

that, in turn, are part of larger PV systems. The PV Quality Mark certifies that components fulfil all relevant quality, safety and performance criteria. ►



► *Built for safety, quality and performance*

Products displaying the PV Quality Seal and Quality Mark are recognized as fulfilling state of the art requirements, and are manufactured according to IEC International Standards for safety, quality and performance. Tests also include aging and impact resistance, endurance, and energy efficiency, all geared to secure long-term PV product reliability.

To be able to display the PV Quality Seal and Quality Mark on products, the manufacturer must successfully pass the IECEE PV Conformity Assessment requirements.

A passport to the world

IECEE PV Programme supplies proof that each product from a certified factory provides the same constant quality and safety level. It is accepted in all participating countries, and speeds up certification and market access by eliminating duplicate testing, sampling and factory inspections.

This is possible because all members participating in the IECEE PV Programme mutually recognize the

Conformity Assessment Certificates and associated Conformity Assessment Reports. These also include factory inspection reports as the basis for national approval or certification, and in many cases, direct acceptance by the market.

How do you obtain a PV Quality Seal or Quality Mark for PV components, products or systems?

- You contact the NCB (National Certification Body) in the country where the factory operates
- You provide samples for testing
- You review the relevant factory and its Quality Management System during a factory inspection

If the factory meets all quality requirements, the NCB issues the PV Conformity Assessment Certificate, which gives you the right to use the PV Quality Seal or Quality Mark. Relevant test and factory reports will be shared with all member countries to which you intend to export your goods.

Harmonized procedures

IECEE PV Programme is based on the principle of mutual recognition of PV Conformity Assessment Certificates ►



► by all participants. Factory inspection procedures and guidance, all documents and forms used, as well as qualification requirements for all factory inspectors, are harmonized between members. The general idea is to have one test, one factory inspection and one certificate recognized by all participants without the need for further tests or inspections.

Who issues IECEE PV Certificates?

PV Conformity Assessment Certificates are delivered by an approved IECEE NCB (National Certification Body). Full list available on: <http://members.iecee.org/>.

Each IECEE member NCB issues relevant certificates and testifies that products conform to IEC International Standards.

What does IECEE PV Certificate cover?

IECEE PV Quality Certification covers all photovoltaic components, modules and systems that fall under the scope of IEC International Standards developed by IEC Technical Committee 82: Solar

photovoltaic energy systems. A number of other IEC International Standards complement this programme.

Want to know more about the IECEE PV Conformity Assessment Programme?

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ABOUT IECEE AND THE IEC

► **About IECEE:**

The IECEE is the world's first truly international system for mutual acceptance of test reports and certificates, dealing with the safety, performance and quality of electrical and electronic components, equipment and products. It is based on the use of IEC International Standards and the mutual recognition of test results.

The IECEE System was put in place to facilitate international trade in electrotechnical equipment and components for use in homes, offices, workshops, healthcare facilities and similar locations.

About the IEC:

The IEC publishes International Standards and handles three Conformity Assessment Systems for the millions of devices that use or produce electricity in any form.

The IEC has 162 Members and Affiliates.

- Over **10 000 experts** in **174 Technical Committees** with more than **1 000 Working Groups**
- Over **6 000 International Standards** in catalogue today
- Over **500 000 Conformity Assessment Certificates** issued

IEC International Standards and Conformity Assessment Systems cover:

Power generation, transmission, distribution, including all renewable energy sources; batteries, home appliances, office and medical equipment, all public and private transportation, semiconductors, fibre optics, nanotechnology, multimedia, information technology, and more. They also cover safety, performance and the environment. ■



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