

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Terrestrial photovoltaic (PV) modules – Quality system for PV module manufacturing**

**Modules photovoltaïques (PV) pour applications terrestres – Système de qualité pour la fabrication des modules photovoltaïques**



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**Modules photovoltaïques (PV) pour applications terrestres – Système de qualité pour la fabrication des modules photovoltaïques**

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ELECTROTECHNICAL  
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TERRESTRIAL PHOTOVOLTAIC (PV) MODULES –  
QUALITY SYSTEM FOR PV MODULE MANUFACTURING**

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International Standard IEC 62941 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
82/1635/FDIS	82/1641/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

# TERRESTRIAL PHOTOVOLTAIC (PV) MODULES – QUALITY SYSTEM FOR PV MODULE MANUFACTURING

## 1 Scope

This document is applicable to organizations manufacturing photovoltaic (PV) modules certified to IEC 61215 series and IEC 62108 for design qualification and type approval and IEC 61730 for safety qualification and type approval. The design qualification and type approval of PV modules depend on appropriate methods for product and process design, as well as appropriate control of materials and processes used to manufacture the product. This document lays out best practices for product design, manufacturing processes, and selection and control of materials used in the manufacture of PV modules that have met the requirements of IEC 61215 series, IEC 61730, or IEC 62108. These standards also form the basis for factory audit criteria of such sites by various certifying and auditory bodies.

The object of this document is to provide a framework for the improved confidence in the ongoing consistency of performance and reliability of certified PV modules. The requirements of this document are defined with the assumption that the quality management system of the organization has already fulfilled the requirements of ISO 9001 or equivalent quality management system. This document is not intended to replace or remove any requirements of ISO 9001 or equivalent quality management system. By maintaining a manufacturing system in accordance with this document, PV modules are expected to maintain their performance as determined from the test sequences in IEC 61215 series, IEC 62108, or IEC 61730.

This document is applicable to all PV modules independent of design and technology, i.e. flat panel, concentrator photovoltaic (CPV). Quality controls for CPV and nonconventional flat-plate manufacturing will differ somewhat from those of more conventional designs; this document has not considered these differences.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60812: *Failure modes and effects analysis (FMEA and FMECA)*

IEC 60891, *Photovoltaic devices – Procedure for temperature and irradiance corrections to measured I-V characteristics*

IEC 60904-1, *Photovoltaic devices – Part 1: Measurement of photovoltaic current-voltage characteristics*

IEC 60904-2, *Photovoltaic devices – Part 2: Requirements for photovoltaic reference devices*

IEC 60904-3, *Photovoltaic devices – Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data*

IEC 60904-4, *Photovoltaic devices – Part 4: Reference solar devices – Procedures for establishing calibration traceability*