



Sunset Technology, Inc.

PV Standards.

What **new things** does
the IEC have for you?

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Technical Committee 82 and its Working Groups

- **WG1: Glossary**
Task: To prepare a glossary.
- **WG2: Modules, non-concentrating**
Task: To develop international standards for non-concentrating, terrestrial photovoltaic modules-- crystalline & thin-film
- **WG3: Systems**
Task: To give general instructions for the photovoltaic system design, and maintenance.
- **WG6: Balance-of-system components**
Task: To develop international standards for balance-of-system components for PV systems.
- **WG 7: Concentrator modules**
Task: To develop international standards for photovoltaic concentrators and receivers.
- **JWG 21/TC 82 Batteries**
Task: To draw up standard requirements for battery storage systems intended for use in photovoltaic systems.
- **JWG 1--TC 82/TC 88/TC21/SC21A**
(DRE)
being
Task: To prepare guidelines for Decentralized Rural Electrification projects which are now implemented in developing countries.

TC 82 WG2

- Standards published by TC 82 can be found on the internet at:

http://www.iec.ch/dyn/www/f?p=103:23:0::::FSP_ORG_ID,FSP_LANG_ID:1276,25

Or simply go to www.iec.ch and search for TC 82 dashboard finder. Select **IEC - TC 82 Dashboard > Scope** and click on Projects/Publications. The TC 82 Work Programmed will be listed. Click on Publications to view all standards that have been published to date.

This report will focus on and list New Work Item Proposals and maintenance work that is underway.

Figures in red indicate expected completion dates, or other status on project. Standards listed in blue—specifically for thin-films.

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WG1 and WG2

- **Working Group 1**
- IEC/TS 61836 Ed. 3.0 Solar photovoltaic energy systems - Terms, definitions and symbols 2012
- **Working Group 2**
- IEC 61215 Ed. 3.0 Crystalline silicon terrestrial photovoltaic (PV) modules - Design qualification and type approval 2013
- EC 61646 Edition 2.0 Thin-film terrestrial photovoltaic (PV) modules - Design qualification and type approval Published
- EC 61730-1 am2 Ed. 1.0 Amendment 2 to IEC 61730-1 Ed.1: Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction 2013
- IEC 61730-2 Ed. 2.0 Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing 2014
- IEC 61853-2 Ed. 1.0 Photovoltaic (PV) module performance testing and energy rating - Part 2: Spectral response, incidence angle and module operating temperature measurements 2012
- IEC 62716 Ed. 1.0 Ammonia corrosion testing of photovoltaic (PV) modules 2012
- IEC 62759-1 Ed. 1.0 Transportation testing of photovoltaic (PV) modules - Part 1: Transportation and shipping of PV module stacks 2013
- IEC 62775 Ed. 1.0 Cross-linking degree test method for Ethylene-Vinyl Acetate applied in photovoltaic modules - Differential Scanning Calorimetry (DSC) 2014

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WG2

- [IEC 62782 Ed. 1.0](#) Dynamic mechanical load testing for photovoltaic (PV) modules
- [IEC 62788-1-2 Ed.1](#) Measurement procedures for materials used in photovoltaic modules - Part 1-2: Encapsulants - Measurement of resistivity of photovoltaic encapsulation and backsheet materials 2015
- [IEC 62788-1-4 Ed.1](#) Measurement procedures for materials used in Photovoltaic Modules - Part 1-4: Encapsulants - Measurement of optical transmittance and calculation of the solar-weighted photon transmittance, yellowness index, and UV cut-off frequency 2015
- [PNW 82-654 Ed. 1.0](#) Photovoltaic devices - Part11: Measurement of initial light-induced degradation of crystalline silicon solar cells and photovoltaic modules 2014
- [PNW 82-668 Ed. 1.0](#) Future IEC 6XXXX-1-3 Ed.1: Measurement procedures for materials used in photovoltaic modules - Part 1-3: Encapsulants - Measurement of dielectric strength 2015
- [PNW 82-669 Ed. 1.0](#) Future IEC 6XXXX-1-5 Ed.1: Measurement procedures for materials used in photovoltaic modules - Part 1-5: Encapsulants - Measurement of change in linear dimensions of sheet encapsulation material under thermal conditions On hold
- [PNW 82-674 Ed. 1.0](#) Junction boxes for photovoltaic modules - Safety requirements and tests 2015
- [PNW 82-675 Ed. 1.0](#) Connectors for DC-application in photovoltaic systems - Safety requirements and tests On hold

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WG2 and WG3

- [PNW 82-685 Ed. 1.0](#) System voltage durability test for crystalline silicon modules - Qualification and type approval **Closes Apr 14 2012**
- [PNW 82-689 Ed. 1.0](#) Test method for total haze and spectral distribution of haze of transparent conductive coated glass for solar cells **Closes Apr 27 2012**
- [PNW 82-690 Ed. 1.0](#) Edge protecting materials for laminated solar glass modules **Closes April 27 2012**
- [PNW 82-691 Ed. 1.0](#) Test method for transmittance and reflectance of transparent conductive coated glass for solar cells **Closes April 27 2012**
- **Working Group 3**
- [EC 61829 Ed. 2.0](#) Crystalline silicon photovoltaic (PV) array - On-site measurement of I-V characteristics **2013**
- [IEC 62548 Ed. 1.0](#) Design requirements for photovoltaic (PV) arrays **2013**
- [IEC/TS 62738 Ed. 1.0](#) Design guidelines and recommendations for photovoltaic power plants **2012**
- [IEC/TS 62748 Ed. 1.0](#) PV systems on buildings **2012**

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WG6 and WG7

- **Working Group 6**
- [IEC 62109-4 Ed. 1.0](#) Safety of power converters for use in photovoltaic power systems - Part 4: Particular requirements for combiner box **On hold**
- [PNW 82-696 Ed. 1.0](#) Safety of power converters for use in photovoltaic power systems - Part 3: Particular requirements for PV modules with integrated electronics **Closes May 18, 2012**
- **Working Group 7**
- [IEC 62670-1 Ed. 1.0](#) Concentrator photovoltaic (CPV) module and assembly performance testing and energy rating - Part 1: Performance measurements and power rating - Irradiance and temperature **2013**
- [IEC 62688 Ed. 1.0](#) Concentrator photovoltaic (CPV) module and assembly safety qualification **2013**
- [IEC 62787 Ed. 1.0](#) Concentrator photovoltaic (CPV) solar cells and cell-on-carrier (COC) assemblies - Reliability qualification **2014**
- [IEC/TS 62727 Ed. 1.0](#) Specification for solar trackers used for photovoltaic systems **2012**
- [PNW/TS 82-652 Ed. 1.0](#) Specification for concentrator cell description **On hold**

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JWG 21/TC 82 and JWG 1

- **JWG 21/TC 82 Batteries**
- **IEC 61427-2** Secondary cells and batteries for renewable energy storage Part 2:
On-grid applications **2014**
- **JWG 1--TC 82/TC 88/TC21/SC21A**
- **IEC/TS 62257-9-6 Ed. 2** Recommendations for small renewable energy and hybrid systems for rural electrification – Part 9-6 : Selection of Photovoltaic Individual Electrification Systems (PV-IES) [to include selection of PV powered LED lanterns] **2012**