

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Terrestrial photovoltaic (PV) modules – Design qualification and type approval –
Part 1-2: Special requirements for testing of thin-film Cadmium Telluride (CdTe)
based photovoltaic (PV) modules**

**Modules photovoltaïques (PV) pour applications terrestres – Qualification de la
conception et homologation –
Partie 1-2: Exigences particulières de test des modules photovoltaïques (PV) au
tellure de cadmium (CdTe) à couches minces**



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CONTENTS

FOREWORD.....	3
1 Scope and object.....	5
2 Normative references	5
3 Terms and definitions	5
4 Test samples	5
5 Marking and documentation.....	5
6 Testing	5
7 Pass criteria	6
8 Major visual defects.....	6
9 Report	6
10 Modifications	6
11 Test flow and procedures	6
11.1 Visual inspection (MQT 01).....	6
11.2 Maximum power determination (MQT 02).....	6
11.3 Insulation test (MQT 03)	6
11.4 Measurement of temperature coefficients (MQT 04).....	6
11.5 Measurement of nominal module operating temperature (NMOT) (MQT 05).....	6
11.6 Performance at STC (MQT 06.1) and NMOT (MQT 06.2)	6
11.7 Performance at low irradiance (MQT 07).....	6
11.8 Outdoor exposure test (MQT 08).....	7
11.9 Hot-spot endurance test (MQT 09).....	7
11.9.1 Purpose.....	7
11.9.2 Hot-spot effect.....	7
11.9.3 Classification of cell interconnection	7
11.9.4 Apparatus.....	7
11.9.5 Procedure.....	7
11.9.6 Final measurements	7
11.9.7 Requirements	7
11.10 UV preconditioning test (MQT 10).....	7
11.11 Thermal cycling test (MQT 11).....	7
11.12 Humidity-freeze test (MQT 12).....	7
11.13 Damp heat test (MQT 13).....	8
11.14 Robustness of terminations test (MQT 14)	8
11.15 Wet leakage current test (MQT 15)	8
11.16 Static mechanical load test (MQT 16).....	8
11.17 Hail test (MQT 17)	8
11.18 Bypass diode testing (MQT 18)	8
11.19 Stabilization (MQT 19)	8
11.19.1 Criterion definition for stabilization.....	8
11.19.2 Light induced stabilization procedure.....	8
11.19.3 Other stabilization procedures	8
11.19.4 Initial stabilization (MQT 19.1).....	8
11.19.5 Final stabilization (MQT 19.2).....	9

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TERRESTRIAL PHOTOVOLTAIC (PV) MODULES –
DESIGN QUALIFICATION AND TYPE APPROVAL –****Part 1-2: Special requirements for testing of thin-film Cadmium
Telluride (CdTe) based photovoltaic (PV) modules**

FOREWORD

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International standard IEC 61215-1-2 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

This edition cancels and replaces the second edition of IEC 61646, issued in 2008, and constitutes a technical revision.

This edition constitutes a technical revision for thin-Film CdTe based terrestrial photovoltaic modules.

This standard is to be read in conjunction with IEC 61215-1:2016 and IEC 61215-2:2016.

The text of this standard is based on the following documents:

FDIS	Report on voting
82/1182/FDIS	82/1206/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.

A list of all parts in the IEC 61215 series, published under the general title *Terrestrial photovoltaic (PV) modules – Design qualification and type approval*, can be found on the IEC website.

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 – DESIGN QUALIFICATION AND TYPE APPROVAL –

Part 1-2: Special requirements for testing of thin-film Cadmium Telluride (CdTe) based photovoltaic (PV) modules

1 Scope and object

This part of IEC 61215 lays down IEC requirements for the design qualification and type approval of terrestrial photovoltaic modules suitable for long-term operation in general open-air climates, as defined in IEC 60721-2-1. This document is intended to apply to all thin-film CdTe based terrestrial flat plate modules. As such, it addresses special requirements for testing of this technology supplementing IEC 61215-1:2016 and IEC 61215-2:2016 requirements for testing.

This document does not apply to modules used with concentrated sunlight although it may be utilized for low concentrator modules (1 to 3 suns). For low concentration modules, all tests are performed using the current, voltage and power levels expected at the design concentration.

The object of this test sequence is to determine the electrical and thermal characteristics of the module and to show, as far as possible within reasonable constraints of cost and time, that the module is capable of withstanding prolonged exposure in climates described in the scope. The actual lifetime expectancy of modules so qualified will depend on their design, their environment and the conditions under which they are operated.

This document defines PV technology dependent modifications to the testing procedures and requirements per IEC 61215-1:2016 and IEC 61215-2:2016.

2 Normative references

The normative references of IEC 61215-1:2016 and IEC 61215-2:2016 are applicable without modifications.

3 Terms and definitions

This clause of IEC 61215-1:2016 is applicable without modifications.

4 Test samples

This clause of IEC 61215-1:2016 is applicable without modifications.

5 Marking and documentation

This clause of IEC 61215-1:2016 is applicable without modifications.

6 Testing

This clause of IEC 61215-1:2016 is applicable with the following modifications: