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Photovoltaic (PV) modules - Non-uniform snow load testing

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

**Photovoltaic (PV) modules - Non-uniform snow load testing
(IEC 62938:2020)**

Modules photovoltaïques (PV) - Essais de charges de neige
non uniformes
(IEC 62938:2020)

Ungleichmäßige Schneelastprüfung von
Photovoltaikmodulen
(IEC 62938:2020)

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EN IEC 62938:2020 (E)**European foreword**

The text of document 82/1670/FDIS, future edition 1 of IEC 62938, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62938:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-03-18
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Annex ZA (normative)

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NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TS 60904-13	2018	Photovoltaic devices - Part 13: Electroluminescence of photovoltaic modules	-	-
IEC 61215-1	2016	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements	EN 61215-1	2016
IEC 61215-2	2016	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures	EN 61215-2	2017
			EN 61215-2:2017/AC	2017-07
IEC/TS 61836	-	Solar photovoltaic energy systems - Terms, definitions and symbols	-	-
IEC/TS 62915	-	Photovoltaic (PV) modules - Type approval, design and safety qualification - Retesting	-	-



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NORME INTERNATIONALE

Photovoltaic (PV) modules – Non-uniform snow load testing

Modules photovoltaïques (PV) – Essais de charges de neige non uniformes





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INTERNATIONAL STANDARD

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Photovoltaic (PV) modules – Non-uniform snow load testing

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**PHOTOVOLTAIC (PV) MODULES –
NON-UNIFORM SNOW LOAD TESTING**
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International Standard IEC 62938 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
82/1670/FDIS	82/1705/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.

PHOTOVOLTAIC (PV) MODULES – NON-UNIFORM SNOW LOAD TESTING

1 Scope

This document provides a method for determining how well a framed PV module performs mechanically under the influence of inclined non-uniform snow loads. This document is applicable for framed modules with frames protruding beyond the front glass surface on the lower edge after intended installation and as such creates an additional barrier to snow sliding down from modules. For modules with other frame constructions, such as backrails formed in frames, on the side edges, on the top edge and on the lower edge not creating an additional snow slide barrier, this document is not applicable.

The test method determines the mechanical non-uniform-load limit of a framed PV module.

The loads specified in this document apply exclusively to natural snow load distributions. Any expected artificial accumulations (e.g. from snow removal or redistribution) are considered separately.

Methods to eliminate or counteract the occurrence of inhomogeneous snow accumulation, such as a steep installation angle (more than 60°), are not included in this document. This document assumes a relationship between ground snow-cover and module snow-cover which may not be applicable in locations where the snow does not completely melt between snow falls. This document does not consider the effect of snow cover on power generation.

While the test method includes a wait time between load steps, the document does not provide a complete assessment of the fatigue behaviour of the materials of the module, such as front glass.

Because typical field failures of PV modules caused by snow load show glass breakage and frame bending, the test method aims at reproducing the load under which such failures occur.

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