



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 39938-2021

**Electric room heating - Underfloor heating - Performance
characteristics - Definitions, method of testing, sizing and
formula symbols**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this standard is equivalent to the IEC 62999.2016 "Indoor electric heating floor heating performance characteristics definition, test method, ruler

Inch and formula symbols.

The Chinese documents that have a consistent correspondence relationship with the normatively cited international documents in this standard are as follows.

---GB 4706.82-2014 Special requirements for soft sheet heating elements for safe room heating of household and similar electrical appliances

(IEC 60335-2-96.2009, IDT)

This standard was proposed by the China National Light Industry Council.

This standard is under the jurisdiction of the National Household Appliances Standardization Technical Committee (SAC/TC46).

Drafting organizations of this standard. China National Electrical Equipment Research Institute Co., Ltd., Qingdao Qindao Electric Co., Ltd., National Infrared and Industrial

Electric Heating Product Quality Supervision and Inspection Center, Foshan Quality and Standardization Research Institute, Xiamen Fulan Home Appliance Technology Co., Ltd., Zhejiang Chunhui Instrument

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1 Scope

This standard specifies the main characteristics of underfloor electric heating devices, and establishes a test method for these characteristics as user information.

This standard applies to underfloor heating appliances used in residences or buildings related to residences and similar purposes, and its maximum load-bearing value is 4kN/m².

This standard does not involve.

---Installation and safety requirements.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

IEC 60335-2-96 Safety of household and similar electrical appliances Part 2-96.Special requirements for film heating elements for room heating

(Household and similar electrical appliances-Safety-Part 2-96.Particular requirements for flexiblesheetheatingelementsforroomheating)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Electrical underfloor heating system

Underfloor electric heating devices, switches, control and regulation equipment and electrical installations.

3.1.1

Underfloorheating

Under the cast-in-place floor, an under-floor electric heating system is formed.

Note. It is usually laid on a dry, horizontal, load-bearing substructure.

3.1.2

Underfloordirectheating

Mainly through the floor surface, the heat generated by electric energy is transferred to the room to be heated with the minimum time delay.

Note. There is no limit to the time for converting electrical energy into heat.

3.1.3

Underfloorwarming

Under-floor heating and thermal insulation that increase comfort through comfortable heating of the feet.

Note. It is not necessary to calculate the room heat load, and the under-floor insulation layer is not considered when calculating the room heat load.

3.1.4

Controlledunderfloorheating

Direct heating under the floor that converts electrical energy into thermal energy, and the conversion can be interrupted according to the injection.

Note. The process of converting electrical energy into heat may be interrupted (the duration does not exceed 2h) within 24h, a total of not more than 8h. The lifetime is at least equal to the previous