

**Majapidamis- ja muude taoliste elektriseadmete ohutus.  
Osa 2-27: Erinõuded naha ultraviolett- ja  
infrapunakiiritusseadmetele**

Household and similar electrical appliances - Safety - Part 2-27: Particular requirements for appliances for skin exposure to ultraviolet and infrared radiation

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 60335-2-27:2010 sisaldab Euroopa standardi EN 60335-2-27:2010 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.08.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 04.06.2010.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 60335-2-27:2010 consists of the English text of the European standard EN 60335-2-27:2010.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.08.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 04.06.2010.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English version

**Household and similar electrical appliances -  
Safety -  
Part 2-27: Particular requirements for appliances for skin exposure  
to ultraviolet and infrared radiation**  
(IEC 60335-2-27:2002, modified + A1:2004, modified + A2:2007, modified)

Appareils électrodomestiques  
et analogues -  
Sécurité -  
Partie 2-27: Règles particulières  
pour les appareils d'exposition  
de la peau aux rayonnements ultraviolets  
et infrarouges  
(CEI 60335-2-27:2002, modifiée +  
A1:2004, modifiée + A2:2007, modifiée)

Sicherheit elektrischer Geräte  
für den Hausgebrauch und ähnliche  
Zwecke -  
Teil 2-27: Besondere Anforderungen  
für Hautbestrahlungsgeräte  
mit Ultraviolett- und Infrarotstrahlung  
(IEC 60335-2-27:2002, modifiziert +  
A1:2004, modifiziert + A2:2007,  
modifiziert)

This European Standard was approved by CENELEC on 2010-06-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of the International Standard IEC 60335-2-27:2002 (61/2181/FDIS), prepared by IEC TC 61, Safety of household and similar electrical appliance, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60335-2-27 on 2003-05-01.

The texts of IEC 60335-2-27:2002/A1:2004 and IEC 60335-2-27:2002/A2:2007, together with common modifications prepared by CENELEC Technical Committee TC 61, were approved by CENELEC on 2008-10-01.

During the meeting of CENELEC TC 61 in London in December 2008, it was decided to submit a consolidated text to a formal vote.

The text of the draft was circulated in July 2009 and was approved by CENELEC as a new edition of EN 60335-2-27 on 2010-06-01.

This European Standard supersedes EN 60335-2-27:2003 + A1:2008 + A2:2008.

In this document, the modifications to the International Standard are indicated by a vertical line in the left margin.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates are applicable:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-10-01

This Part 2 has to be used in conjunction with EN 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements*. It was established on the basis of the 2002 edition of that standard. Amendments and revisions of Part 1 have also to be taken into account and the dates when such changes become applicable will be stated in the relevant amendment or revision of Part 1.

This Part 2 supplements or modifies the corresponding clauses of EN 60335-1, so as to convert it into the European Standard: *Particular requirements for electric appliances for skin exposure to ultraviolet and infrared radiation*.

When a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as reasonable. When this standard states “addition”, “modification” or “replacement”, the relevant text in Part 1 is to be adapted accordingly.

NOTE 1 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.;
- subclauses, notes and annexes that are additional to those in the IEC standard are prefixed with the letter Z.

NOTE 2 The following print types are used:

- requirements: in roman type;

- test specifications: in italic type;
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

There are no special national conditions causing a deviation from this European Standard, other than those listed in Annex ZA to EN 60335-1.

National deviations from this European Standard are listed in Annex ZB and are in addition to those in EN 60335-1.

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## Introduction

It has been assumed in the drafting of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard covers appliances used for intentional tanning. Irradiance limit values are not to be used as safety guidelines for non-intentional UV-exposure.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal and generic standards covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards. For example, in the case of temperature requirements for surfaces on many appliances, generic standards, such as ISO 13732-1 for hot surfaces, are not applicable in addition to Part 1 or part 2 standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

An investigation by CENELEC TC 61 has shown that all risks from products within the scope of this standard are fully covered by the Low Voltage Directive, 2006/95/EC. For products having mechanical moving parts, a risk assessment in accordance with the Machinery Directive, 2006/42/EC, has shown that the risks are mainly of electrical origin and consequently this directive is not applicable. However, the relevant essential safety requirements of the Machinery Directive are covered by this standard together with the principal objectives of the Low Voltage Directive.

## 1 Scope

This clause of Part 1 is replaced by the following.

This European Standard deals with the safety of electrical appliances incorporating emitters for exposing the skin to ultraviolet or infrared radiation, for household and similar use, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

Appliances not intended for normal household use but which nevertheless may be a source of danger to the public, such as appliances intended to be used in tanning salons, beauty parlours and similar premises, are also within the scope of this standard.

As far as practicable, this standard deals with the common hazards presented by appliances that are encountered by all persons in and around the home. However, in general, it does not take into account

- persons (including children) whose
  - physical, sensory or mental capabilities; or
  - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

NOTE 101 Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour and similar authorities;
- IEC 60598-1 is applicable as far as is reasonable.

NOTE 102 This standard does not apply to

- appliances for medical purposes;
- appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

## 2 Normative references

This clause of Part 1 is applicable.

## 3 Definitions

This clause of Part 1 is applicable except as follows.

### 3.101

#### **ultraviolet emitter (UV emitter)**

radiating source constructed to emit non-ionizing electromagnetic energy at wavelengths of 400 nm or less

NOTE A fluorescent UV lamp for tanning is an example of a **UV emitter**.

### 3.102

#### **infrared emitter (IR emitter)**

radiating source constructed to emit electromagnetic energy at wavelengths of 800 nm or longer

### 3.103

#### **effective irradiance**

irradiance of electromagnetic radiation weighted according to a specified action spectrum