

INTERNATIONAL STANDARD

AMENDMENT 2

**Household and similar electrical appliances – Safety –
Part 2-27: Particular requirements for appliances for skin exposure to optical
radiation**

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IEC 60335-2-27:2009/AMD2:2015

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**Household and similar electrical appliances – Safety –
Part 2-27: Particular requirements for appliances for skin exposure to optical
radiation**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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FOREWORD

This amendment has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances.

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

FDIS	Report on voting
61/4876/FDIS	61/4912/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

The contents of the corrigenda of May 2015 and December 2016 have been included in this copy.

Title

In the title of the standard replace "ultraviolet and infrared" by "optical".

1 Scope

Replace the second paragraph by the following:

This International Standard deals with the safety of electrical appliances incorporating emitters for exposing the skin to optical radiation (wavelength 100 nm to 1 mm), for household and similar use, their **rated voltage** being not more than 250 V for single-phase appliances and 480 V for other appliances.

Replace the fourth paragraph by the following:

As far as practicable, this standard deals with the common hazards presented by appliances that are encountered by persons using the appliances in tanning salons, beauty parlours and similar premises or at home. However, in general, it does not take into account

Replace first dashed item in Note 102 by the following:

- appliances for skin or hair care (IEC 60335-2-23);
- sauna heating appliances and infrared cabins (IEC 60335-2-53);
- cosmetic and beauty care appliances incorporating lasers and intense light sources (IEC 60335-2-113)¹;
- appliances for medical purposes (IEC 60601);

2 Normative references

Replace the existing text by the following:

This clause of Part 1 is applicable except as follows.

Addition:

IEC 61228, *Fluorescent ultraviolet lamps used for tanning – Measurement and specification method*

IEC 62471:2006, *Photobiological safety of lamps and lamp systems*

3 Terms and definitions

Add the following new definitions:

3.106

IR appliance

appliance incorporating one or more **IR emitters**

3.107

visual emitter

radiating source constructed to emit electromagnetic energy at wavelengths of 400 nm to 780 nm

Note 1 to entry: **Visual emitters** are also referred to as **VIS emitters**.

3.108

VIS appliance

appliance incorporating one or more **VIS emitters**

5 General conditions for the tests

5.1 Delete the addition.

Add the following new subclause:

5.101 Appliances with IR emitters only are tested as heating appliances. All other appliances are tested as motor-operated appliances.

¹ In preparation.

7 Marking and instructions

7.1 Add the following new text after Note 103:

Appliances shall be marked with the substance of the following unless they are in the exempt group (see 6.1.1 in IEC 62471:2006):

WARNING: Do not stare at the emitter. It is required to wear the provided eyewear due to intense optical radiation. Read instructions carefully.

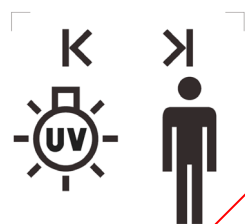
Add the following new text after Note 104:

Appliances incorporating **VIS emitters** or **IR emitters** shall be marked with the manufacturer, model name and technical specification of appropriate replacement lamps.

Unless the intended exposure distance is controlled by their construction, **UV appliances** shall be marked with symbol IEC 60417-6301 (2015-03) with the recommended exposure distance and its unit in centimetres (cm) included between the dimensional arrow heads.

Goggles shall be marked with name, trade mark or identification mark of the manufacturer and the following alpha-numeric characters IEC 60335-2-27.

7.6 Add the following new symbol:



[Symbol IEC 60417-6301 (2015-03)]

ultra-violet light source,
exposure distance

7.12 Replace the last two paragraphs by the following:

The instructions for appliances incorporating **VIS emitters** or **IR emitters** shall include the substance of the following.

- advice for the protection of the eyes against exposure to visible radiation and infrared radiation and advise that adequate precautions must be taken to safeguard the user against the dangers of excessive exposure;
- a statement that VIS appliances and IR appliances are not to be used by
 - persons suffering from sunburn;
 - persons under medical care for diseases that involve photosensitivity;
 - persons receiving photosensitising medications.
- a statement that if unexpected side effects, such as itching, occur within 48 h of the first session of using an appliance, medical advice should be sought prior to further exposure;
- information concerning the intended exposure distance (unless this is controlled by the construction of the appliance);
- recommended schedule of exposure specifying duration and intervals (based on the **emitter** characteristics, distances);
- a statement that the appliance must not be used if the timer is faulty or the filter is broken or removed;