

COMMITTEE: EL-002  
Safety of Household and Similar  
Electrical Appliances and Small Power  
Transformers

ATTENTION: Mayu Shiozaki

DR 24005 CP

**DRAFT**

# **COMBINED POSTAL BALLOT/ AUSTRALIAN / NEW ZEALAND STANDARD FOR COMMENT**

LIABLE TO ALTERATION DO NOT USE AS A STANDARD

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DATE OF ISSUE: 23 May 2024  
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DR 24005 CP

**AS/NZS 60335.2.27:2024**

**Household and similar electrical appliances –  
Safety –**

**Part 2.27: Particular requirements for  
appliances for skin exposure to optical radiation**

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**COMBINED DRAFT FOR COMMENT/POSTAL BALLOT  
STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND**

Committee EL-002- Safety of Household and Similar Electrical Appliances and Small Power Transformers

**DRAFT  
Australian/New Zealand Standard**

**Household and similar electrical appliances – Safety –**

**Part 2.27: Particular requirements for appliances for skin exposure to optical radiation**

Please note that this document is currently being voted by the committee and the results of the postal ballot will be contingent on public comment received.

Comment on the proposal is invited from persons and organizations concerned with this subject.

Attention is drawn to the fact that this document is a draft only and is liable to alteration in the light of comment received. It is not to be regarded as an Australian/New Zealand Standard until finally issued as such by Standards Australia and Standards New Zealand.

**NOTES OF THE SECRETARY:**

THE INTRODUCTION OF ANY NATIONAL VARIATIONS TO BE INCLUDED IN THIS STANDARD WILL OCCUR AFTER THE PUBLIC COMMENT HAS BEEN CONSIDERED AND PRIOR TO THE PUBLICATION OF THE STANDARD.

THIS DOCUMENT MUST BE READ IN CONJUNCTION WITH IEC 60335-2-27 ED 7, COPIES OF WHICH MAY BE VIEWED BY CONTACTING [enquiries@standards.govt.nz](mailto:enquiries@standards.govt.nz).

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL 002 - Safety of household and similar electrical appliances and small power transformers. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on xxxxxxxx and by the New Zealand Standards Approvals Board on xxxxxxxx. It was published on xxxxxxxx.

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The following interests are represented on Committee EL-002

Association of Accredited Certification Bodies

Australian Industry Group

Australian Retailers Association

Better Regulation Division (Fair Trading, Safework NSW, TestSafe)

Business New Zealand

Consumer Electronic Suppliers Association, Australia

Consumers' Federation of Australia

Electrical Regulatory Authorities, Australia

Electrical consultants

Engineers Australia

JAS-ANZ

National Retailers Association (Australia)

New Zealand Electric Fence Energizer Manufacturers' Standards Group

Testing Interests New Zealand

WorkSafe, New Zealand

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### **Keeping Standards up-to-date**

Standards are living documents, which reflect progress in science, technology and systems. To maintain their currency, all standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current standard, which should include any amendments which may have been published since the standard was purchased.

For more information about joint standards, visit [www.standards.govt.nz](http://www.standards.govt.nz) or [www.standards.org.au](http://www.standards.org.au).

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national standards organisation.

We also welcome suggestions for improvement in our standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comment to either the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the title page.

AS/NZS 60335.2.27:2024  
(IEC 60335-2-27 ED 7, MOD)

Australian/New Zealand Standard™

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**Household and similar electrical  
appliances – Safety –**

**Part 2.27: Particular requirements  
for appliances for skin exposure to  
optical radiation**

(IEC 60335-2-27 ED 7, MOD)

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**AS/NZS 60335.2.27:2024**

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –  
SAFETY –**

**Part 2.27: Particular requirements for appliances for skin exposure to optical radiation**

**Preface**

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-002 - Safety of Household and Similar Electrical Appliances and Small Power Transformers to supersede AS/NZS 60335.2.27:2020 three years from the date of publication of this Standard. During this period AS/NZS 60335.2.27:2020 and its amendments will also remain current. Regulatory authorities that reference this Standard in regulation may apply these requirements at a different time. Users of this Standard should consult with these authorities to confirm their requirements.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with safety requirements designed to give the user protection against hazards that might occur during normal operation and abnormal operation of the appliance and which may be used as the basis for approval for sale or for connection to the electricity supply mains in Australia and New Zealand.

The text of IEC 60335-2-27 ED 7, prepared by IEC Technical TC 61, was submitted to the Standards Australia/Standards New Zealand Combined Procedure (dual public comment and committee vote) for adoption of the IEC standard as a Standards Australia/Standards New Zealand joint standard.

The principal changes in this edition as compared with the 2020 edition of AS/NZS 60335.2.27 are as follows (minor changes are not listed):

- a) alignment with AS/NZS 60335.1:2022;
- b) modification or conversion of some notes to normative text (Clause 1, 7.1);
- c) clarification of product risk and liability (7.1);
- d) modification of Annex DD as a normative annex, and modification of relevant text (7.12, Annex DD);
- e) clarification of requirement for product use links provided (7.12.9);
- f) clarification of the application of test probe 18 for appliances for use in tanning salons, beauty parlours and similar premises (8.1.1, 20.2);
- g) introduction of accessible surface temperature limits (Clause 11);
- h) removal of redundancy between 22.113 and 22.114;
- i) clarification that 32.2 is not applicable for UV emitted for the tanning function of the appliance.

This Standard is an adoption with national modifications of the seventh edition of IEC 60335-2-27, *Household and similar electrical appliances – Safety – Part 2-27: Particular requirements for appliances for skin exposure to optical radiation*. It has been varied as indicated to take account of Australian and New Zealand conditions.

This part 2 has to be used in conjunction with the latest edition of AS/NZS 60335.1 *Household and similar electrical appliances – Safety – Part 1: General requirements* and its Amendments,

unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of AS/NZS 60335.1:2022.

This part 2 supplements or modifies the corresponding clauses of AS/NZS 60335.1 so as to convert it into the Australian/New Zealand Standard: Safety requirements for appliances for skin exposure to optical radiation .

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text of 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 letters AZ.

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 associated noun are also in bold.

p NOTE 3 In this document, p is used in the margin to indicate instructions for preparing a consolidated version.

The essential safety requirements in AS/NZS 3820<sup>1</sup> that could be applicable to requirements for appliances for skin exposure to optical radiation are covered by this standard.

The national variations to IEC 60335-2-27 ED 7 form the Australian and New Zealand national variations for purposes of the IECEE scheme for recognition of results of testing to standards for safety of electrical equipment (the CB scheme).

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<sup>1</sup> AS/NZS 3820 *Essential safety requirements for electrical equipment*

The text of the International Standard IEC 60335-2-27 ED 7 was approved as a joint Australia/New Zealand Standard with the agreed national variations as given below.

### AUSTRALIAN NATIONAL VARIATIONS

The following national variations to this part 2 are additional to those listed in the national variations in AS/NZS 60335.1:2022

#### 32 Radiation, toxicity and similar hazards

- p **32.101** Add the following to the test specification:

*The spectral irradiance for appliances for wavelengths in the range  $200\text{ nm} \leq \lambda \leq 280\text{ nm}$  shall not exceed  $1,0 \times 10^{-5}\text{ W/m}^2/\text{nm}$*

*The ratio ( $R$ ) of the total irradiance in the range  $280\text{ nm} \leq \lambda \leq 320\text{ nm}$  to the total irradiance in the range  $280\text{ nm} \leq \lambda \leq 400\text{ nm}$  shall fall within the limits  $0,007 < R < 0,03$ .*

#### Annex BB

- p **BB.2** At the end of the Note add the following:

**UV Type 1 appliances, UV Type 2 appliances, UV Type 4 appliances and UV Type 5 appliances** are not allowed for household use or commercial use.

### NEW ZEALAND NATIONAL VARIATIONS

The following national variations to this part 2 are additional to those listed in the national variations in AS/NZS 60335.1:2022

#### 32 Radiation, toxicity and similar hazards

- p **32.101** Add the following to the test specification:

*The spectral irradiance for appliances for wavelengths in the range  $200\text{ nm} \leq \lambda \leq 280\text{ nm}$  shall not exceed  $1,0 \times 10^{-5}\text{ W/m}^2/\text{nm}$*

*The ratio ( $R$ ) of the total irradiance in the range  $280\text{ nm} \leq \lambda \leq 320\text{ nm}$  to the total irradiance in the range  $280\text{ nm} \leq \lambda \leq 400\text{ nm}$  shall fall within the limits  $0,007 < R < 0,03$ .*

#### Annex BB

- p **BB.2** At the end of the Note add the following:

**UV Type 1 appliances, UV Type 4 appliances and UV Type 5 appliances** are not allowed for household use or commercial use.

**Annex ANZ**  
(normative)

**Normative references to international publications with their corresponding joint  
Australia/New Zealand publications**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by national variations the relevant joint Australia/New Zealand publications applies if the national variations are needed to ensure the safety of the appliance for Australia/New Zealand conditions. These international publications are indicated by (mod). If an international publication is not so indicated, then either it or the listed Australia/New Zealand publication may be used. Where there is no equivalent international publication listed to a listed Australia/New Zealand publication, then the Australia/New Zealand publication applies

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>AS/NZS</u>	<u>Year</u>
IEC 60584-1		<i>Thermocouples – Part 1: EMF specifications and tolerances</i>		
IEC 60598-1	2020	<i>Luminaires – Part 1: General requirements and tests</i>	60598.1	2017
IEC 61228		<i>Fluorescent ultraviolet lamps used for tanning – Measurement and specification method</i>		



**NOTES**

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## **Standards Australia**

Standards Australia is an independent company, limited by guarantee, which prepares and publishes most of the voluntary technical and commercial standards used in Australia. These standards are developed through an open process of consultation and consensus, in which all interested parties are invited to participate. Through a Memorandum of Understanding with the Commonwealth government, Standards Australia is recognised as Australia's peak national standards body.

## **Standards New Zealand**

The first national standards organisation was created in New Zealand in 1932. The New Zealand Standards Executive is established under the Standards and Accreditation Act 2015 and is the national body responsible for the production of standards.

## **Australian/New Zealand Standards**

Under a Memorandum of Understanding between Standards Australia and Standards New Zealand, Australian/New Zealand standards are prepared by committees of experts from industry, governments, consumers, and other sectors. The requirements or recommendations contained in published standards are a consensus of the views of representative interests and also take account of comments received from other sources. They reflect the latest scientific and industry experience. Australian/New Zealand standards are kept under continuous review after publication and are updated regularly to take account of changing technology.

## **International involvement**

Standards Australia and Standards New Zealand are responsible for ensuring that the Australian and New Zealand viewpoints are considered in the formulation of international standards and that the latest international experience is incorporated in national and joint standards. This role is vital in assisting local industry to compete in international markets. Both organisations are the national members of ISO (the International Organization for Standardization) and provide the secretariat to their respective national committees of the IEC (the International Electrotechnical Commission).

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