AS/NZS 62560:2017

Australian/New Zealand Standard™

Self-ballasted LED-lamps for general lighting services by voltage > 50 V— Safety specifications (IEC 62560:2011+AMD1:2015 CSV, MOD)

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-041, Lamps and Related Equipment. It was approved on behalf of the Council of Standards Australia on 16 January 2017 and by the New Zealand Standards Approval Board on 9 February 2017.
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The following are represented on Committee EL-041:

Australian Industry Group
Consumers' Federation of Australia
Department of the Environment and Energy
Electrical Compliance Testing Association
Electrical Contractors Association of New Zealand
Electrical Regulatory Authorities Council
Energy Efficiency and Conservation Authority of New Zealand
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Lighting Council Australia
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Additional Interests:

Australasian Fire and Emergency Service Authorities Council

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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 comments to the Chief Executive of Standards Australia or the New Zealand Standards Executive at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS 62560:2016.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment, to supersede AS/NZS IEC 62560:2014, 12 months after publication. Until that time, both editions of the Standard will operate in parallel. It is anticipated that the 2014 edition will then be withdrawn.

The objective of this Standard is to specify electrical safety requirements for self-ballasted LED-lamps, intended for general lighting services, with a rated voltage of > 50 V.

This Standard is an adoption with national modifications and has been reproduced from IEC 62560, Ed. 1.1:2015, *Self-ballasted LED-lamps for general lighting services by voltages >50 V—Safety specifications*.

The IEC edition includes the following significant technical changes with respect to the previous edition:

(a) Extended Table 1 listing lamp caps.

(b) Introduced requirements for photobiological safety.

(c) Revised the mechanical strength requirements (Clause 9).

(d) Revised the fault conditions and abnormal operation (Clauses 13 and 15).

Variations made to IEC 62560:2011+AMD1:2015 CSV form the Australian and New Zealand variations for the purpose of the IECEE CB Scheme for recognition of testing to standards for safety of electrical equipment (the CB Scheme). They are listed in Appendix ZZ.

This Standard is structured as follows:

(i) Preface.

(ii) Consolidated version of IEC 62560, Ed. 1.1:2015 and IEC 62560:2011/Amd1:2015/Cor1:2015 (Ed. 1.1:2015) (unedited from the first clause to Bibliography).

(iii) Appendix ZZ—(Australian/New Zealand) variations to the source document.

As this Standard is reproduced from an International Standard, the following applies:

(A) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.

(B) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
IEC 60529	Degrees of protection provided by enclosures (IP Code)	AS 60529	Degrees of protection provided by enclosures (IP Code)
60432	Incandescent lamps—Safety specifications	AS/NZS 60432	Incandescent lamps—Safety specifications
60432-1	Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	60432.1	Part 1: Tungsten filament lamps for domestic and similar general lighting purposes

IEC		AS/NZS	
60695	Fire hazard testing	60695	Fire-hazard testing
60695-2-11	Part 2-11: Glowing/hot-wire based test methods—Glow-wire flammability test method for end-products	60695.2.11	Part 2.11: Glowing/hot wire based test methods—Glow-wire flammability test method for end-products
60695-2-12	Part 2-12: Glowing/hot-wire based test methods—Glow-wire flammability test method for materials	60695.2.12	Part 2.12: Glowing/hot wire based test methods—Glow-wire flammability test method for materials
60695-2-13	Part 2-13: Glowing/hot-wire based test methods—Glow-wire ignitability test method for materials	60695.2.13	Part 2.1: Glowing/hot wire based test methods—Glow-wire ignitability test method for materials

Only normative references that have been adopted as Australian or Australian/New Zealand Standard have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex or appendix to which they apply. A ‘normative’ annex or appendix is an integral part of a Standard, whereas an ‘informative’ annex or appendix is only for information and guidance.

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INTRODUCTION

There will be and are already LED products in the market which substitute existing lamps, either as retrofit mains voltage incandescent or self-ballasted fluorescent lamps or as replacement for tungsten halogen lamps below 50 V.

The present document takes up the supply voltage range from > 50 V up to 250 V. A proposal for a safety standard for LED lamps with voltages ≤ 50 V may follow in due time.

Future work will also consequently comprise performance standards for all kind of LED lamps, including minimum photometric requirements for type testing.

Due to the urgent need of establishing this standard, it will be a stand-alone standard for the time being, not excluding a future relocation as a part of IEC 60968, self-ballasted lamps.

AUSTRALIAN/NEW ZEALAND STANDARD

Self-ballasted LED-lamps for general lighting services by voltage > 50 V—Safety specifications (IEC 62560:2011+AMD1:2015 CSV, MOD)

1 Scope

This International Standard specifies the safety and interchangeability requirements, together with the test methods and conditions required to show compliance of LED-lamps with integrated means for stable operation (self-ballasted LED-lamps), intended for domestic and similar general lighting purposes, having:

– a rated wattage up to 60 W;

– a rated voltage of > 50 V up to 250 V;

– caps according to Table 1.

The requirements of this standard relate only to type testing.

Recommendations for whole product testing or batch testing are identical to those given in Annex C of IEC 62031.

NOTE 1 Where in this standard the term “lamp(s)” is used, it is understood to stand for “self-ballasted LED-lamp(s)”, except where it is obviously assigned to other types of lamps.

NOTE 2 This standard includes photobiological safety.

2 Normative references

The following reference 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 reference document (including any amendments) applies.

IEC 60061-1, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 1 : Lamp caps*

IEC 60061-3, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 3 : Gauges*

IEC 60360, *Standard method of measurement of lamp cap temperature rise*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-1:2008, *Luminaires – Part 1: General requirements and tests*

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods; Glow-wire apparatus and common test procedure*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end products*

IEC 60695-2-12:2000, *Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods; Glow-wire flammability test method for materials*