

AS/NZS 60598.1:2025



Australian/New Zealand Standard™

Luminaires

Part 1: General requirements and tests (IEC 60598-1:2020 (ED. 9.0) MOD)



AS/NZS 60598.1:2025

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- Australian Industry Group
- Better Regulation Division (Fair Trading, SafeWork NSW, TestSafe)
- Consumer Electronics Suppliers Association
- Consumers Federation of Australia
- Department of Industry, Science and Resources
- Electrical Compliance Testing Association of Australia
- Electrical Regulatory Authorities Council, Australia
- Energy Efficiency Council
- IES: The Lighting Society
- Joint Accreditation System of Australia & New Zealand
- Lighting Council Australia
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- National Association of Testing Authorities Australia
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Luminaires

Part 1: General requirements and tests (IEC 60598-1:2020 (ED. 9.0) MOD)

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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lighting Equipment, to supersede AS/NZS 60598.1:2017 and its amendments.

AS/NZS 60598.1:2017 and its amendments will remain current for 36 months after the date of publication of this document, and after this time it will be superseded by this document. Regulatory authorities that reference this document in regulation may apply these requirements at a different time. Users of this document should consult with these authorities to confirm their requirements.

The objective of this document is to specify general requirements for luminaires, incorporating electric light sources, for operation from supply voltages up to 1 000 V. The requirements and related tests of this document cover classification, marking, mechanical construction and electrical construction.

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- (a) Clauses 0.2, 0.4.2, 0.5, 0.5.5 (new), 0.5.6 (new), 1.2, 3.1, 3.2.8, 3.2.8.2, 3.2.12, 3.3, 3.3.26, 4.7.2, 4.8, 4.14.6, 4.32, 4.34, 4.36, 5.2.1, 5.2.2, 5.2.16, 5.2.18, 8.2.1, 9.2, 10.2, 12.4.2, 13.3 and D.3.
- (b) Tables 5.1, 10.3 and 12.1.
- (c) Bibliography.

For the purposes of the IECEE CB Scheme, these national variations will be published in the IECEE CB Bulletin.

The essential safety requirements of AS/NZS 3820, Essential safety requirements for electrical equipment, which could be applicable to luminaires within the scope of this document, are covered by this document.

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LUMINAIRES –
Part 1: General requirements and tests
INTERPRETATION SHEET 1

This interpretation sheet has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lighting.

The text of this interpretation sheet is based on the following documents:

DISH	Report on voting
34D/1697/DISH	34D/1702/RVDISH

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

Subclause 3.2.27

[Annex R](#) – Schedule of amended clauses and subclauses containing more serious/critical requirements which call for products to be retested

The requirements of Subclause 3.2.27, and consequently the relevant requirements related to Subclause 3.2.27 in [Annex R](#), are to be considered applicable only to luminaires with built-in or independent settable or programmable LED controlgear or incorporating a constant lighting output function. The requirements are not applicable to luminaires with built-in or independent controlgear having only a fixed output.

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FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60598-1 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lamps and related equipment.

This ninth edition cancels and replaces the eighth edition published in 2014 and Amendment 1:2017. This edition constitutes a technical revision.

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

- a) Revision of [Clause 4.30](#), Fixing cover live parts of non-user replaceable light source;
- b) [Subclause 4.24.2](#), Blue Light Hazard: removal of Risk Group 0;
- c) Subclause 5.2.16: additional requirements for AC mains appliance inlets related to IEC 61984;

- d) Addition of Subclause 3.3.25, UV protection of cable;
- e) Addition of [Clause 4.34](#), Inclusion of EMF safety requirements (IEC 62493);
- f) Revision of the requirements for functional earth and protective earth;
- g) Addition of [Clause 4.35](#), Protection against fast rotating parts;
- h) Revision of [Clause 3.2](#), Rated voltage marking;
- i) Revision of Subclause 5.2.10, Cord anchorage;
- j) Revision of [Annex G](#) for touch current and protective conductor current test set-up;
- k) Addition of requirements for constant light output function and programmable current output;
- l) Revision of Subclause 8.2.3 c), touch voltage limits for interrupted DC voltage;
- m) Introduction of PELV;
- n) Introduction of Ethernet power supply connection for luminaires (PoE);
- o) [Section 9](#), Introduction of IPX9;
- p) Addition of Subclause 3.3.26 for wall mounted luminaires;
- q) Revision of [Annex D](#) introducing alternative thermal tests for luminaires with t_a marking higher than 25°C;
- r) Revision of [Table 10.3](#) and Subclause 3.3.19 for protective conductor current limits;
- s) Track-mounted luminaires: cross reference to Annex A of IEC 60570:2003/AMD2:2019;
- t) Revision of [Subclause 10.2.2](#), alternative DC electric strength test;
- u) Revision of [Annex D](#) for recessed luminaires;
- v) Subclause 4.12.5: revision of [Table 4.2](#) for torque test on metal glands;
- w) Revision of use of bridging capacitors in luminaires;
- x) Revision of electrical connection to class III plugs.

The major changes which may affect certification are given in [Annex R](#).

[Annex R](#) shows where a new text has been included which contains more serious/critical requirements requiring products to be re-tested.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
34D/1546/FDIS	34D/1560/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60598 series, published under the general title *Luminaires*, can be found on the IEC website.

NOTE In this document, the following print types are used:

- requirements: in roman type;

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under “<http://webstore.iec.ch>” in the data related to the specific document. At this date, the document will be

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

The contents of the Interpretation sheet 1 (2023-08) have been included in this copy.

IMPORTANT — The ‘colour inside’ logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

Australian/New Zealand Standard

Luminaires

Part 1: General requirements and tests (IEC 60598-1:2020 (ED. 9.0) MOD)

0 GENERAL INTRODUCTION

0.1 Scope

This Part 1 of IEC 60598 specifies general requirements for luminaires, incorporating electric light sources for operation from supply voltages up to 1 000 V. The requirements and related tests of this document cover: classification, marking, mechanical construction, electrical construction and photobiological safety.

Each section of this Part 1 is read in conjunction with this Section 0 and with other relevant sections to which reference is made.

Each part of IEC 60598-2 details requirements for a particular type of luminaire or group of luminaires on supply voltages not exceeding 1 000 V. These parts are published separately for ease of revision and additional sections will be added as and when a need for them is recognized.

The presentation of photometric data for luminaires is under consideration by the International Commission on Illumination (CIE) and is not, therefore, included in this Part 1.

Requirements are included in this Part 1 for luminaires incorporating ignitors with nominal peak values of the voltage pulse not exceeding those of [Table 11.2](#). The requirements apply to luminaires with ignitors built into ballasts and to luminaires with ignitors separate from ballasts. For luminaires with ignitors built into lamps, the requirements are under consideration.

Requirements for semi-luminaires are included in this Part 1.

In general, this Part 1 covers safety requirements for luminaires. The object of this Part 1 is to provide a set of requirements and tests which are considered to be generally applicable to most types of luminaires and which can be called up as required by the detail specifications of IEC 60598-2. This Part 1 is thus not regarded as a specification in itself for any type of luminaire, and its provisions apply only to particular types of luminaires to the extent determined by the appropriate part of IEC 60598-2.

The parts of IEC 60598-2, in making reference to any of the sections of Part 1, specify the extent to which that section is applicable and the order in which the tests are performed; they also include additional requirements as necessary.

The order in which the sections of Part 1 are numbered has no particular significance as the order in which their provisions apply is determined for each type of luminaire or group of luminaires by the appropriate part of IEC 60598-2. All parts of IEC 60598-2 are self-contained and therefore do not contain references to other parts of IEC 60598-2.

Where the requirements of any of the sections of Part 1 are referred to in the parts of IEC 60598-2 by the phrase "The requirements of section... of IEC 60598-1 apply", this phrase is interpreted as meaning that all the requirements of that section of Part 1 apply except those which are clearly inapplicable to the particular type of luminaire covered by that part of IEC 60598-2.

For explosion proof luminaires, as covered by IEC 60079, the requirements of IEC 60598 (selecting the appropriate parts 2) are applied in addition to the requirements of IEC 60079. In the event of any conflict between IEC 60598 and IEC 60079, the requirements of IEC 60079 take priority.

Improvements in safety to take into account the state of the art technology are incorporated in the standards with revisions and amendments on an ongoing basis. Regional standardization bodies can include statements in their derived standards to cover products which have complied with the previous document as shown by the manufacturer or standardization body. The statements may require that for