

Australian/New Zealand Standard™

## Luminaires

**Part 1: General requirements and tests  
(IEC 60598-1, Ed. 7.0 (2008) MOD)**



### **AS/NZS 60598.1:2013**

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 11 October 2013 and on behalf of the Council of Standards New Zealand on 17 October 2013.

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The following are represented on Committee EL-041:

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Electrical Regulatory Authorities Council  
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*This Standard was issued in draft form for comment as DR AS/NZS IEC 60598.1.*

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# Australian/New Zealand Standard™

## Luminaires

### Part 1: General requirements and tests (IEC 60598-1, Ed. 7.0 (2008) MOD)

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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 60598.1:2003, *Luminaires, Part 1: General requirements and tests (IEC 60598-1:2003, MOD)*.

The objective of this Standard 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 Standard cover: classification, marking, mechanical construction and electrical construction.

This Standard is an adoption with national modifications and has been reproduced from IEC 60598-1, Ed. 7.0 (2008), *Luminaires, Part 1: General requirements and tests* and its Corrigenda 1 (2011) and 2 (2011) which have been incorporated into the source text. The source document has been varied as indicated to take account of Australian/New Zealand conditions. The modifications are specified in Appendix ZZ.

This Standard is structured in the following layout:

- (a) Preface (including Australian and New Zealand references).
- (b) IEC 60598-1 (unedited from the contents page to the final clause of the IEC Standard).
- (c) Appendix ZZ—Australian/New Zealand variations to the IEC Standard.

The variations in Appendix ZZ include the following:

- (i) Clarifying that the Standard includes LED light sources within its scope.
- (ii) Testing requirements for 240 V supply.
- (iii) Requirements for capacitors.
- (iv) Details of means of connection to supply.
- (v) Assessment for access to live parts.
- (vi) Resistance to fire tests.

The essential safety requirements in AS/NZS 3820, *Essential safety requirements for electrical equipment*, which could be applicable to lighting products within the scope of this Standard, are covered by this Standard.

The variations described in Appendix ZZ form the Australian and New Zealand variations for the purposes of the IECEE CB Scheme for the recognition of testing to standards for safety of electrical equipment.

In this Standard, the following print types are used:

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

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

- (A) In the source text, ‘this Part 1 of International Standard IEC 60598’ 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:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
IEC		AS/NZS	
60065	Audio, video and similar electronic apparatus—Safety requirements (2001)	60065	Audio, video and similar electronic apparatus—Safety requirements (IEC 60065:2001, MOD)
60068	Environmental testing	AS	
60068-2-75	Part 2-75: Tests—Test Eh: Hammer tests	60068	Environmental testing
60269	Low-voltage fuses (series)	60068.2.75	Part 2.75: Tests—Test Eh: Hammer tests
60529	Degrees of protection provided by enclosures (IP Code)	60269	Low-voltage fuses (series)
60112	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	60529	Degrees of protection provided by enclosures (IP Code)
60155	Glow-starters for fluorescent lamps	AS/NZS	
60238	Edison screw lampholders	60112	Method for the determination of the proof and the comparative tracking indices of solid insulating materials
60245	Rubber-insulated cables—Rated voltages up to and including 450/750 V series	60155	Glow-starters for fluorescent lamps
60320	Appliance couplers for household and similar general purposes (series)	60238	Edison screw lampholders (IEC 60238, Ed.8.0 (2004) MOD)
60432	Incandescent lamps—Safety specifications	60245	Rubber-insulated cables—Rated voltages up to and including 450/750 V series
60432-1	Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	60320	Appliance couplers for household and similar general purposes (series)
60432-2	Part 2: Tungsten-halogen lamps for domestic and similar general lighting purposes	60432	Incandescent lamps—Safety specifications
60432-3	Part 3: Tungsten halogen lamps (non-vehicle)	60432.1	Part 1: Tungsten filament lamps for domestic and similar general lighting purposes
60598	Luminaires	60432.2	Part 2: Tungsten-halogen lamps for domestic and similar general lighting purposes
60598-2	Part 2: Particular requirements (series)	60432.3	Part 3: Tungsten halogen lamps (non-vehicle)
60695	Fire hazard testing	60598	Luminaires
60695-2-10	Part 2-10: Glowing/hot-wire based test methods—Glow-wire apparatus and common test procedure	60598-2	Part 2: Particular requirements (series)
60695-11-5	Part 11-5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance	60695	Fire hazard testing
		60695-2.10	Part 2.10: Glowing/hot-wire based test methods—Glow-wire apparatus and common test procedure (IEC 60695-2-10:2000, IDT)
		60695.11.5	Part 11.5: Test flames—Needle-flame test method—Apparatus, confirmatory test arrangement and guidance (IEC 60695-11-5 Ed 1.0, IDT)

IEC 60990	Methods of measurement of touch current and protective conductor current	AS/NZS 60990	Methods of measurement of touch current and protective conductor current
61058 61058-1	Switches for appliances Part 1: General requirements	61058 61058.1	Switches for appliances Part 1: General requirements (IEC 61058-1, Ed. 3.1 (2000) MOD)
61184	Bayonet lampholders	61184	Bayonet lampholders (IEC 61184, Ed. 2.0 (1997) MOD)
61347	Lamp controlgear (series)	61347	Lamp controlgear (series)
61558 (2005– 2009)	Safety of power transformers, power supplies, reactors and similar products (series)	61558 (2008– 2010)	Safety of power transformers, power supplies, reactors and similar products (series)
		AS/NZS IEC	
62471 (2006)	Photobiological safety of lamps and lamp systems	62471 (2011)	Photobiological safety of lamps and lamp systems

Only normative references that have been adopted as Australian or Australian/New Zealand Standards 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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## AUSTRALIAN/NEW ZEALAND STANDARD

**Luminaires**

## Part 1:

## General requirements and tests (IEC 60598-1, Ed. 7.0 (2008) MOD)

**SECTION 0: GENERAL INTRODUCTION****0.1 Scope and object**

This Part 1 of International Standard 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 standard cover: classification, marking, mechanical construction and electrical construction.

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.

Attention is drawn to the fact that this Part 1 covers all aspects of safety (electrical, thermal and mechanical).

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 to be 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.