

Australian/New Zealand Standard™

**Luminaires**

**Part 2.20: Particular requirements—  
Lighting chains  
(IEC 60598-2-20:2014, MOD)**



## **AS/NZS 60598.2.20:2018**

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 19 February 2018 and by the New Zealand Standards Approval Board on 5 March 2018.  
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The following are represented on Committee EL-041:

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Electrical Compliance Testing Association  
Electrical Contractors Association of New Zealand  
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*This Standard was issued in draft form for comment as DR AS/NZS 60598.2.20:2016.*

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# Australian/New Zealand Standard™

## Luminaires

### Part 2.20: Particular requirements— Lighting chains (IEC 60598-2-20:2014, MOD)

Original as AS C152-1950.

Previous editions AS/NZS 3152:1992 and AS/NZS 60598.2.20:1998.

Completely revised, amalgamated and redesignated as AS/NZS 60598.2.20:2002.

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment. AS/NZS 60598.2.20:2002, *Luminaires—Part 2.20: Particular requirements—Lighting chains (IEC 60598-2-20:1996, MOD)* will also remain current for 12 months after the date of publication of this Standard and after this time it will be superseded by AS/NZS 60598.2.20:2018. 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 specify minimum safety requirements for lighting chains fitted with series or parallel connected light sources for use of either indoors or outdoors with supply voltages not exceeding 250 V. This includes:

- (a) Festoon lighting chains.
- (b) Decorative lighting chains.
- (c) Temporary protected lighting (TPL) chains.

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.

This Standard is an adoption with national modifications and has been reproduced from IEC 60598-2-20:2014 (ED. 4.0), *Luminaires — Part 2-20. Particular requirements—Lighting chains*, and its corrigendum IEC 60598-2-20:2014 (ED. 4.0)/COR 1:2016. This Standard has been varied as indicated to take account of Australian/New Zealand conditions.

The variations made to IEC 60598-2-20:2014 (ED. 4.0) are specified in Appendix ZZ. The variations described in Appendix ZZ 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). The variations include festoon lighting chains, decorative lighting chains and temporary protected lighting (TPL) chains.

This Standard is intended to be read in conjunction with AS/NZS 60598.1, *Luminaires, Part 1: General requirements and tests (IEC 60598-1:2014, Ed. 8.0 (2014), MOD)*.

The IEC edition includes significant technical changes with respect to the previous (2010) edition. These include the removal of the requirements for rope lights (also known as sealed lighting chains) from IEC 60598-2-20:2014 (ED. 3.0). These requirements are now provided in IEC 60598-2-21, *Luminaires — Part 2-21. Particular requirements—Rope lights*.

This Standard is structured as follows:

- (i) Preface.
- (ii) IEC 60598-2-20:2014 (ED. 4.0) unedited from the first clause to the Bibliography.
- (iii) Appendix ZZ—Australian/New Zealand variations to the source document.

The variations listed in Appendix ZZ address issues including the following:

- (A) Specific provisions for festoon lighting, decorative lighting, and temporary protected lighting.
- (B) Additional normative references for use in Australia and New Zealand.
- (C) Additional terms and definitions for use in Australia and New Zealand.

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

- (1) In the source text ‘this part of IEC 60598’ should read ‘this Australian/New Zealand Standard’.
- (2) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The term 'normative' has been used in this Standard to define the application of the annex or appendix to which it applies. A 'normative' annex or appendix is an integral part of a Standard.

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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 60598-2:20 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lamps and related equipment.

This fourth edition cancels and replaces the third edition (2010).

This edition includes the following significant technical changes with respect to the previous edition, where the requirements for rope lights (sealed lighting chains) have been removed and are now dealt with in IEC 60598-2-21.

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

FDIS	Report on voting
34D/1145/FDIS	34D/1153/RVD

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

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

This standard is intended to be read in conjunction with IEC 60598-1 Luminaires – Part 1: General requirements and tests.

In this standard, the following print types are used:

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

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

The committee has decided that the contents of this 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.

## AUSTRALIAN/NEW ZEALAND STANDARD

**Luminaires**

## Part 2.20:

## Particular requirements—Lighting chains (IEC 60598-2-20:2014, MOD)

**20.1 Scope**

This part of IEC 60598 specifies requirements for lighting chains fitted with series, parallel or a combination of series/parallel connected light sources for use either indoors or outdoors on supply voltages not exceeding 250 V.

For combinations where rope lights (also known as sealed lighting chains) are included, see IEC 60598-2-21.

Lighting chains provided with fixed or detachable attachments e.g. ornamental or decorative, are considered to be covered by this standard.

For lighting chains fitted with lampholders of the push-in type, the appropriate requirements of this standard applies.

NOTE 1 A Christmas tree lighting chain is an example of a lighting chain fitted with series or series/parallel connected lamps. A chain for illuminating ski-tracks or promenades is an example of a lighting chain fitted with parallel connected lamps.

For lighting chains with non-standardised lamps (e.g. lamps of the push-in type) the lamps are regarded as a part of the lighting chain and consequently included in the testing.

NOTE 2 For products where the lighting chain is permanently fixed to a frame or pre-lit Christmas tree the relevant clauses of IEC 60598-2-4 and/or IEC 60598-2-7 can also apply.

NOTE 3 In some countries the term "strings" is used instead of "chains".

NOTE 4 Candlestick luminaires are tested according to IEC 60598-2-4.

**20.2 Normative references**

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

IEC 60227-5:2011, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)*

IEC 60238, *Edison screw lampholders*

IEC 60245-4:2011, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 4: Cords and flexible cables*

IEC 60320 (all parts), *Appliance couplers for household and similar general purposes*

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

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