AS 4934.2:2021

Australian STANDARD®

STANDARDS Australia

Incandescent Lamps for General Lighting Services

Part 2: Energy performance and marking requirements

AS 4934.2:2021

This Australian Standard ® was prepared by EL-041, Lamps and Related Equipment. It was approved on behalf of the Council of Standards Australia on 09 March 2021.

This Standard was published on 19 March 2021.

The following are represented on Committee EL-041:

Australian Industry Group
Better Regulation Division — NSW Fair Trading
CHOICE
Consumer Electronics Suppliers Association
Consumers Federation of Australia
Department of Industry, Science, Energy and Resources (Australian Government)
Electrical Compliance Testing Association of Australia
Electrical Regulatory Authorities Council
Energy Efficiency Council
IES: The Lighting Society
Joint Accreditation System of Australia and New Zealand
Lighting Council Australia
Master Electricians Australia

This Standard was issued in draft form for comment as DR AS 4934.2:2020.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:
www.standards.org.au

ISBN 978 1 76113 246 9

Incandescent Lamps for General Lighting Services

Part 2: Energy performance and marking requirements

Originated as AS/NZS 4934.2(Int):2008.
Revised and designated as AS 4934.2—2011.
This edition 2021.

Published by SAI Global Pty Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia.

Preface

This Standard was prepared by the Australian members of the joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment, to supersede AS 4934.2:2011 *Incandescent lamps for general lighting services, Part 2: Minimum Energy Performance Standards (MEPS) requirements*.

The objective of this document is to specify the requirements for minimum energy performance standards (MEPS), maximum wattage, and other requirements for tungsten filament, tungsten halogen and carbon filament incandescent lamps designed to produce a visible, optical radiation.

If a Standard is referenced in legislation, the legislative instrument or regulation specifies the date on which the Standard comes into effect. Refer to the relevant regulatory authority for further information on the date of application of this document.

Major changes in this edition include:

(a) Adjustments to the scope:

  (i) Increased range of lamps to be covered by the standard, with the scope defined by cap (base) type and voltage.

  (ii) Updated exclusions in the standard. For example, lamps that are specified for aircraft and aircraft navigation are excluded (based on their requirement to adhere to another standard) as more efficient alternatives are not available.

  (iii) Where there is not currently a suitable, efficient replacement, but this is anticipated in the future, for example for G9 capsule lamps, the scope may be expanded at a later date.

  Many specialist lamps have voltages or caps that are outside of the scope of this document.

(b) Inclusion of guidance on a test report format.

(c) Removal of exclusions for the following:

  (i) Automotive lights, as these products are not within scope.

  (ii) Lamps intended for traffic signals, as halogen and incandescent versions are no longer supplied, and many of these lights have been converted to LEDs or have caps outside the scope of this document.

  (iii) Lamps intended for sea navigation — as those within scope are either replaceable with LED lamps or can be registered as extra low voltage (11 V to 13 V).

  (iv) Reinforced construction (rough use or vibration lamps), as they are replaceable by LED lamps.

  (v) Coloured and crown reflector lamps, as they are replaceable by LED lamps.

(d) Increased minimum efficacy level for mains voltage incandescent lamps within scope which is intended to phase-out the supply of these products.

(e) Revised scope for 11 V to 13 V halogen lamps which continue to be subject to a minimum efficacy level which the more efficient models within scope can achieve. Suppliers will need to register these lamps for supply in Australia and meet the MEPS specified (see Appendix B).

NOTE 1 The exclusion of high temperature lamps (see Clause 1.1.3.2) is intended to ensure lamps are available for use in ovens and wood drying kilns. The exclusion of infrared heat lamps (see Clause 1.1.3.5) is intended to also ensure lamps used for heating for animals remain available.

NOTE 2 The GEMS Act allows suppliers to request an exemption from the GEMS regulator for specific models when the determination comes into effect. For example, a supplier may apply for an exemption where an efficient replacement is unavailable or unsuitable. In some cases, it has been impractical to define a specific exclusion to the scope of this document that could be applied under the GEMS Act. Suppliers of the following lamps, in cases where more efficient lamps are not available, may need to apply for an exemption for specific models within scope: reference lamps used in photometric laboratories, some lamps used in medical and scientific equipment, lamps for specific industries or conditions, and lamps used in lava lamps. The GEMS regulator is responsible for deciding to grant exemptions. Applications are considered on their merits by the GEMS regulator against the criteria under the GEMS Act. Information on how to apply for an exemption under the GEMS Act can be found at: https://www.energyrating.gov.au/document/form-application-exemption.

The term “normative” is used in Standards to define the application of the appendix to which it applies. A “normative” appendix is an integral part of a Standard.

Contents

Introduction

In Australia, the *Greenhouse and Energy Minimum Standards Act 2012* (GEMS Act) is the national framework for the regulation of in-scope products' energy efficiency. The GEMS regulator is the sole party responsible for administering the legislation in Australia. The specific requirements for incandescent lamps for general lighting services regulated under the GEMS Act are set out in a legislative instrument called a GEMS Determination.

The new Determination will phase out a broader range of mains voltage incandescent and halogen lamps, building on the phase out and MEPS introduced in 2009, as agreed by the Council of Australian Governments Energy Council Ministers in 2018.

NOTES

Australian Standard®

Incandescent Lamps for General Lighting Services

Part 2: Energy performance and marking requirements

1 Scope and general

1.1 Scope

1.1.1 General

This document specifies requirements for minimum energy performance standards (MEPS), maximum wattage, and other requirements for tungsten filament, tungsten halogen and carbon filament incandescent lamps designed to produce a visible, optical radiation.

This document covers lamps as defined in Clause 1.1.2 that are supplied as individual lamps or as part of a luminaire.

This document does not cover the lamp types as listed in Clause 1.1.3.

1.1.2 Inclusions

1.1.2.1 Mains voltage incandescent lamps

These lamps have the following attributes:

(a) Rated voltage > 140 V a.c.

(b) Lamp burner: tungsten filament, tungsten halogen or carbonised material.

(c) Cap: E13, E14, E26, E27, BA15d, B15d, B22d, GU10, or GZ10 (as described in IEC 60061).

1.1.2.2 Incandescent lamps 11 V to 13 V

These lamps have the following attributes:

(a) Rated Voltage ≥ 11V and ≤ 13V a.c.

(b) Lamp burner: tungsten filament, tungsten halogen or carbonised material.

(c) Cap: G4, GY6.35, GU4, GZ4, GU5.3, GX5.3 or G53 (as described in IEC 60061).

1.1.3 Exclusions

1.1.3.1 Low power decorative lamps

These lamps have all of the following attributes:

(a) Rated voltage > 140 V a.c.

(b) Cap: E13, E14, E26, E27, BA15d, B15d, or B22d (as described in IEC 60061).

(c) Shape: round (P), candle (B), pigmy (S), tubular (T), globe (G) or pilot lamps (as described in IEC 60630).

(d) Rated power: less than 10 W.