Australian/New Zealand Standard™

Performance of electrical lighting equipment—
Ballasts for fluorescent lamps

Part 2: Energy labelling and minimum energy performance standards requirements

Standards Australia

STANDARDS NEW ZEALAND
Paerewa Aotearoa

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 29 November 2002 and on behalf of the Council of Standards New Zealand on 13 December 2002. It was published on 23 December 2002.

The following are represented on Committee EL-041:

Association of Consulting Engineers, Australia
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Electrical Compliance Testing Association of Australia
Electrical Regulatory Authorities Council (Australia)
Energy Efficiency and Conservation Authority of New Zealand
Illuminating Engineering Society of Australia and New Zealand
International Accreditation of NZ (IANZ)
Ministry of Economic Development, New Zealand

Additional interests participating in the preparation of this Standard:

Australian Greenhouse Office
National Appliance and Equipment Energy Efficiency Committee (Australia)

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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 either Standards Australia International or Standards New Zealand at the address shown on the back cover.

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PREFACE

This Standard was prepared by the Joint Standards Australia/ Standards New Zealand Committee EL-041, Lamps and Related Equipment with contributions from the Subcommittee EL-041-08, Lighting Equipment—Energy Performance.

While this Standard was drafted by the Joint Committee EL-041-08, (to ensure that there is a seamless interface with the Standard AS/NZS 4783.1 *Performance of electrical lighting equipment—Ballast for fluorescent lamps* Part 1: *Method of measurement to determine energy consumption and performance of ballast lamp circuits*), it is under the effective joint control of the State and Territory energy regulators and the New Zealand energy efficiency regulator who have to approve the Standard prior to its publication.

This Standard is published with the approval of these regulatory authorities and is structured to be suitable for reference within energy labelling and minimum standards regulation.

This Standard is Part Two of a series which consists of the following:

AS/NZS	
4783	Performance of electrical lighting equipment—Ballasts for fluorescent lamps
4783.1	Part 1: Method of measurement to determine energy consumption and performance of ballast-lamp circuits
4783.2	Part 2: Energy labelling and minimum energy performance standards requirements (this Standard)

The objective of this Standard is summarized below:

(a) To specify the minimum energy performance requirements (MEPS) for ballasts used with certain fluorescent lamps sold in Australia and New Zealand.

NOTE: The MEPS levels for Australia and New Zealand are not the same.

(b) To specify an energy performance labelling scheme. The scheme is—

(i) mandatory for ballasts subject to MEPS and sold in Australia;

(ii) voluntary for other ballasts outside the scope of MEPS and sold in Australia;

(iii) voluntary for ballasts sold in New Zealand but alternative energy performance labelling schemes are not permitted.

MEPS in Australia

Since 1994, regulatory authorities have been working with industry and other interested parties negotiating agreed MEPS levels and marking provisions.

In March 2002, the relevant Government Ministers responsible for energy efficiency agreed to implement MEPS and mandatory marking not earlier than 1 March 2003.

MEPS in New Zealand

On 12 December 2001 the council of Standards New Zealand published a handbook containing the MEPS requirements, NZHB 4783.2:2001, the contents of which were based on the previous draft of this Standard. The handbook is referenced by the New Zealand Energy Efficiency (Energy Using Products) Regulations 2002, which were gazetted on 7 February 2002. The MEPS requirement for ballasts applies from 1 February 2003.

This Standard has normative appendices. A ‘normative’ appendix is an integral part of a Standard.

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FOREWORD

The performance criteria of ballast for fluorescent lamps in Australia and New Zealand have been derived from methods and procedures practiced in many parts of the world. Elements in this Standard are drawn from a wide range of sources including Europe, Japan, Korea and North America. A major portion of this Standard is drawn from the European (CENELEC) Standard EN 50294 with significant restructuring undertaken.

The cumulative contents of the Standards AS/NZS 4783.1 and AS/NZS 4783.2 with respect to the declaration of Energy Efficiency Index are equivalent to EN 50294. The labelling scheme is fully harmonized with the European Classification operated by CELMA except that a small allowance is added to the maximum permitted corrected total input power for an EEI of B2 for ferromagnetic ballasts rated at 240 V or 250 V and over.

The Energy Efficiency Index (EEI) in this Standard is based on the average performance (total circuit power) for the ballast model. To comply with the Minimum Energy Performance Standards (MEPS), each unit tested must meet the relevant requirements (i.e. must not exceed the specified total circuit power).

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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1 SCOPE

This Standard specifies requirements for the classification of ballasts for a range of fluorescent lamp types (refer to Tables 1 to 3) according to their Energy Efficiency Index (EEI) and the form of labelling of the EEI, which is generally shown on the ballast rating plate.

This Standard also specifies the minimum energy performance standards (MEPS) requirements for certain fluorescent lamp ballasts.

The ballasts covered by this Standard are the ferromagnetic or electronic type, that are used with fluorescent lamps with a rated lamp power from 10 W to 70 W, for use on 50 Hz supplies of 230/240/250 V or a range which includes one or more of these voltages.

This Standard covers ballasts that are supplied as separate components or as part of a luminaire.

This Standard does not cover the following ballast-lamp combinations:

(a) Primarily for use on d.c. supply or batteries.

(b) Primarily for the production of light outside the visible spectrum, ie. 400 nm to 800 nm.

(c) For exit signs within the scope of AS/NZS 2293.

(d) Hazardous area lighting equipment, within the scope of AS/NZS 2380, AS/NZS 60079 and AS/NZS 61241 Series of Standards.

2 APPLICATION

This Standard provides a classification and energy labelling scheme for ballasts for fluorescent lamps and in addition defines MEPS requirements. This Standard shall be read in conjunction with AS/NZS 4783.1.

3 REFERENCED DOCUMENTS

The documents below are referred to in this Standard:

AS/NZS	
2293	Emergency evacuation lighting for buildings
2380 (all parts)	Electrical equipment for explosive atmospheres—Explosion-protection techniques
4783	Performance of electrical lighting equipment — Ballasts for fluorescent lamps
4783.1	Part 1: Method of measurement to determine energy consumption and performance of ballast-lamp circuits
60079 (all parts)	Electrical apparatus for explosive gas atmospheres