AS/NZS 6742.4:2024

STANDARDS NEW ZEALAND
TE MANA TAUTĪKANGA O AOTEAROA

STANDARDS Australia

Australian/New Zealand Standard™

Cycles — Lighting and retro-reflective devices

Part 4: Lighting systems powered by the cycle's movement (ISO 6742-4:2023, MOD)

AS/NZS 6742.4:2024

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee CS-110, Bicycles and Bicycle Accessories. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 03 October 2024 and by the New Zealand Standards Approval Board on 02 October 2024.

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The following are represented on Committee CS-110:

Association of Accredited Certification Bodies
AusCycling
Australian Chamber of Commerce and Industry
Australian Competition and Consumer Commission
Bicycle Industries Australia
Bicycle Industry Association of New Zealand
Centre for Accident Research and Road Safety, Queensland
Consumers Federation of Australia
Cycling and Walking Australia and New Zealand
Ministry of Transport, Te Manatu Waka
Monash University Accident Research Centre
National Retail Association Australia
Transport for NSW
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First published as AS/NZS 6742.4:2024.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-110, Bicycles and Bicycle Accessories.

The objective of this document is to specify requirements and test methods for the performance of lighting systems powered by the cycle's movement. It applies to lighting and light signalling devices complying with AS/NZS 6742.1:2024. Lighting systems include lighting and light signalling devices and power supplied by cycle's movement such as generator.

This document is applicable to lighting devices used on cycles intended to be used on public roads and, especially, bicycles complying with ISO 4210 and ISO 8098.

This document is an adoption with national modifications, and has been reproduced from, ISO 6742-4:2023, *Cycles — Lighting and retro-reflective devices — Part 4: Lighting systems powered by the cycle's movement*. The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the modifications to ISO 6742-4:2023, for the application of this document in Australia and New Zealand.

This document is intended to be read in conjunction with AS/NZS 1927 for Australian and New Zealand conditions.

As this document has been reproduced from an International document, 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 terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

National Foreword

Bicycle lights which conform to this document are considered suitable for cycling activities where the use of light and retro-reflective devices allow the bicycle to be visible to other road users, provide the rider with sufficient illumination to safely view the direction of travel, or both.

This document allows for the design of lights which support use in illuminated areas and unlit areas (e.g. areas utilised for mountain bike or trail riding).

Although this document does not define the use of each lighting level, manufacturers should show consideration in the design and promotion of lighting devices to prevent "dazzle" or a reduction in the visibility of others from high lumen, bright light, or intense flashing devices.

A limitation on lumen, lux or light spread was considered but due to the wide usage requirements of bicycle lights, it was deemed more appropriate for urban or road usage to be a consideration of state and territory road legislation.

For a light to achieve expected performance and ensure effective capacity, the light should be appropriately fixed to a bicycle and secured in a manner that prevents the angle of light from negatively affecting other road users.

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

This second edition cancels and replaces the first edition (ISO 6742-4:2015), which has been technically revised.

The main changes are as follows:

— terms and definitions "open system" and "closed system" were added;

— overall structure changes to clarify requirements and test methods;

— addition of "6 V/3 W with electric load" positive drive generators;

— changes in generator characteristic requirements;

— clarify test methods and improvement of requirements for open systems;

— changes in closed system requirements and test methods;

— improvement of Clause 8;

— improvement of Clause 9;

— improvement of Annex A;

— improvement of Annex B;

— improvement of Annex C.

A list of all parts in the ISO 6742 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Australian/New Zealand Standard

Cycles — Lighting and retro-reflective devices

Part 4: Lighting systems powered by the cycle's movement (ISO 6742-4:2023, MOD)

1 Scope

This document is applicable to lighting systems used on cycles intended to be used on public roads and, especially, bicycles complying with ISO 4210[1] and ISO 8098[2].

This document specifies requirements and test methods for the performance of lighting systems powered by the cycle's movement. It applies to lighting and light signalling devices complying with ISO 6742-1. Lighting systems include lighting and light signalling devices and power supplied by cycle's movement such as generator.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6742-1:2023, *Cycles — Lighting and retro-reflective devices — Part 1: Lighting and light signalling devices*

ISO 6742-3:2023, *Cycles — Lighting and retro-reflective devices — Part 3: Installation and use of lighting and retro-reflective devices*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6742-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
frictional drive generator
generator for which the rotor or stator is linked to a pulley which press against the driving wheel over a resilient bearing through force

3.2
positive drive generator
generator which is not concerned by the definition of *frictional drive generator* (3.1)

3.3
open system
system of lamp and power source (i.e. generator or battery) combinations which are interchangeable if they meet the requirements

Note 1 to entry: The requirements are specified in this document or ISO 6742-5[3].