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Fourth edition
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Cycles — Lighting and retro-reflective devices —

Part 1: Lighting and light signalling devices

Cycles — Éclairage et dispositifs rétroréfléchissants —

Partie 1: Équipements de signalisation et d'éclairage

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Foreword

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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).

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

This fourth edition cancels and replaces the third edition (ISO 6742-1:2015), which has been technically revised.

The main changes are as follows:

— terms and definitions: “continuous light” and “light emitting surface” were added;

— some terms and definitions were reviewed;

— improvement of Clause 4;

— addition of Table 3 in 4.4.2;

— addition of 4.9 “Daytime running lamp”;

— addition of 6.4;

— addition 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.

Cycles — Lighting and retro-reflective devices —

Part 1:
Lighting and light signalling devices

1 Scope

This document is applicable to lighting devices 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 the functions, safety requirements, photometric performance and test methods of lighting and signalling devices that can be used on cycles.

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 6742-4, *Cycles — Lighting and retro-reflective devices — Part 4: Lighting systems powered by the cycle's movement*

ISO 6742-5, *Cycles — Lighting and retro-reflective devices — Part 5: Lighting systems not powered by the cycle's movement*

ISO/CIE 19476, *Characterization of the performance of illuminance meters and luminance meters*

CIE 1931, *XYZ colour space of the International Commission on Illumination*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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
front position lamp
lamp emitting a white or an amber light to the front of the cycle, so as to indicate its presence on the road

3.2
headlamp
lamp to light the road to the front of the cycle that has either low beam, high beam or both

3.3
rear lamp
lamp emitting a red light to the rear of the cycle and used to indicate its presence on the road

3.4
stop lamp
lamp used to indicate to other road users that the cycle brakes or significantly decelerates

3.5
low beam
light that illuminates the road in front of the cycle without dazzling other road users from the opposite direction

3.6
high beam
light that illuminates the road for a long distance ahead of the cycles

3.7
direction indicator
lamp used to indicate to other road users that the cyclist intends to change direction to the right or left

3.8
stand light
light emitted by a lamp for a time after the cycle has stopped

3.9
daytime running lamp
lamp facing in forward direction used to make the cycle more easily visible when driving during daytime

3.10
reference axis
characteristic horizontal axis of the lamp, as determined by the manufacturer or by the direction light is emitted with greatest intensity, to serve as a direction of reference during use in service and during test measurements

3.11
H-H line
horizontal line parallel to the ground plane passing through the *reference axis* (3.10)

3.12
V-V line
vertical line perpendicular to the ground plane through the *reference axis* (3.10)

3.13
public road
any designated and adopted road, pavement, path, or track on which a cycle is legally permitted to travel and, on most through not all such public roads, cycles will share use with other forms of transport including motorized traffic

[SOURCE: ISO 4210-1:2023, 3.3.3, modified — "bicycle" has been changed to "cycle".]

3.14
short pulse
light flash shorter than 0,2 s

3.15
light source
source of illumination

Note 1 to entry: For example, light bulbs, LEDs and OLEDs.

3.16
continuous light
light with a frequency above 50 Hz