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Belysningsmateriel för allmän användning – Elektromagnetisk kompatibilitet (EMC) – Immunitet

*Equipment for general lighting purposes –
EMC immunity requirements*

Som svensk standard gäller europastandarden EN IEC 61547:2023. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61547:2023.

Nationellt förord

Europastandarden EN IEC 61547:2023

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61547, Third edition, 2020 - Equipment for general lighting purposes – EMC immunity requirements**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61547, utg 2:2009 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2026-03-08.

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English Version

Equipment for general lighting purposes - EMC immunity
requirements
(IEC 61547:2020)

Equipements pour l'éclairage à usage général - Exigences
concernant l'immunité CEM
(IEC 61547:2020)

Einrichtungen für allgemeine Beleuchtungszwecke - EMV-
Störfestigkeitsanforderungen
(IEC 61547:2020)

This European Standard was approved by CENELEC on 2023-03-08. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 34/676/FDIS, future edition 3 of IEC 61547, prepared by IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61547:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-12-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-03-08

This document supersedes EN 61547:2009 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61547:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

- | | | |
|----------------|------|-------------------------------|
| IEC 60598-2-22 | NOTE | Approved as EN IEC 60598-2-22 |
| IEC 61000-6-1 | NOTE | Approved as EN IEC 61000-6-1 |
| CISPR 12 | NOTE | Approved as EN 55012 |

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-161	-	International Electrotechnical Vocabulary. Chapter 161: Electromagnetic compatibility	-	-
IEC 60050-845	-	International Electrotechnical Vocabulary. Lighting	-	-
IEC 60598-1 (mod)	2014	Luminaires - Part 1: General requirements and tests	EN 60598-1	2015
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+ A1	2007		+ A1	2008
+ A2	2010		+ A2	2010
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
+ A1	2017		+ A1	2017
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-8	2009	Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test	EN 61000-4-8	2010

EN IEC 61547:2023 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-11	2004	Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	2004
+ A1	2017		+ A1	2017
IEC CISPR 15	2018	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	EN IEC 55015	2019
-	-		+ A11	2020

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Equipment for general lighting purposes – EMC immunity requirements

Équipements pour l'éclairage à usage général – Exigences concernant l'immunité CEM

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

EQUIPMENT FOR GENERAL LIGHTING PURPOSES – EMC IMMUNITY REQUIREMENTS

FOREWORD

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International Standard IEC 61547 has been prepared by IEC technical committee 34: Lamps and related equipment.

This third edition cancels and replaces the second edition, published in 2009. This edition constitutes a technical revision

This edition includes the following significant technical changes with respect to the previous edition:

- a) extension of scope with end-user replaceable modules and the combination of end-user replaceable module and independent auxiliary;
- b) clarification of module testing in a host system;
- c) increased ESD and surge test levels for road and street lighting equipment;
- d) the introduction of ESD testing under normal operation and handling conditions;
- e) removal of line to ground surge test for self-ballasted lamps ≤ 25 W.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
34/676/FDIS	34/689/RVD

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

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

This document is to be read in conjunction with the relevant basic and/or product standard(s).

A list of all parts in the IEC 61547 series, published under the general title *Equipment for general lighting purposes – EMC immunity requirements*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

EQUIPMENT FOR GENERAL LIGHTING PURPOSES – EMC IMMUNITY REQUIREMENTS

1 Scope

This part of IEC 61547 which deals with electromagnetic immunity requirements, applies to lighting equipment which is within the scope of IEC technical committee 34, including apparatus such as lamps, luminaires, and modules.

Excluded from the scope of this document are:

- components or modules intended to be built into lighting equipment and which are not end-user replaceable;
- equipment for which the electromagnetic compatibility requirements in the radio-frequency range are explicitly formulated in other product immunity standards, even if they incorporate a built-in lighting function.

NOTE Examples of exclusions are:

- equipment with built-in lighting devices for display back lighting, scale illumination and signaling;
- SSL-displays;
- range hoods, refrigerators, freezers;
- photocopiers, projectors;
- electronic switches for fixed installations;
- lighting equipment for road vehicles (within the scope of CISPR 12);
- lighting equipment for aircraft and airfield facilities.

However, in multi-function equipment where the lighting function operates independently from other functions, the electromagnetic immunity requirements of this document apply to the lighting function only.

Lighting equipment with a wireless control function are also within the scope of this document. However, the test is limited to the control of the lighting function only. Radio properties like frequency stability or spurious emissions are not assessed.

EXAMPLE Colour/light level control via a wireless interface are meant to stay intact after an immunity test.

Also included in the scope of this document is lighting equipment that interfaces with systems or installations other than common power supply networks.

The requirements of this document are based on the requirements for domestic, commercial and light-industrial environments as given in IEC 61000-6-1:2016, but modified to lighting engineering practice.

It can be expected that lighting equipment complying with the requirements of this document will operate satisfactorily in other environments. In some special cases, measures can be taken to provide higher immunity. In this document it is impracticable to deal with all these possibilities. Such requirements can be established by contractual agreement between supplier and purchaser.

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.

IEC 60050-161, *International Electrotechnical Vocabulary – Part 161: Electromagnetic Compatibility* (available at <http://www.electropedia.org>)

IEC 60050-845, *International Electrotechnical Vocabulary – Part 845: Lighting* (available at <http://www.electropedia.org>)

IEC 60598-1:2014, *Luminaires – Part 1: General requirements and tests*

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio frequency, electromagnetic field immunity test*
IEC 61000-4-3:2006/AMD1:2007
IEC 61000-4-3:2006/AMD2:2010

IEC 61000-4-4:2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5:2014, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*
IEC 61000-4-5:2014/AMD1:2017

IEC 61000-4-6:2013, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8:2009, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

IEC 61000-4-11:2004, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*
IEC 61000-4-11:2004/AMD1:2017

IEC CISPR 15:2018, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*