

BSI Standards Publication

Primary batteries

Part 2-2: Physical and electrical specifications of lithium batteries



This is a preview of BS EN IEC 60086-2-2:2026. [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN IEC 60086-2-2:2026. It is identical to IEC 60086-2-2:2026. Together with BS EN IEC 60086-2-1:2026, it supersedes BS EN IEC 60086-2:2021 which will be withdrawn on 30 September 2029.

The UK participation in its preparation was entrusted to Technical Committee CPL/35, Primary cells.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Amendments/corrigenda issued since publication

Date	Text affected
30 September 2026	Correction to supersession details in national foreword

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EUROPÄISCHE NORM

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Supersedes EN IEC 60086-2:2021; EN IEC 60086-2:2021/AC:2022-07; EN IEC 60086-2:2021/AC:2026-04

English Version

Primary batteries - Part 2-2: Physical and electrical specifications
of lithium batteries
(IEC 60086-2-2:2026)

Piles électriques - Partie 2-2: Spécifications physiques et
électriques des piles au lithium
(IEC 60086-2-2:2026)

Primärbatterien - Teil 2-2: Physikalische und elektrische
Eigenschaften von Lithiumbatterien
(IEC 60086-2-2:2026)

This European Standard was approved by CENELEC on 2026-08-05. 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.

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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

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European foreword

The text of document 35/1592/FDIS, future edition 1 of IEC 60086-2-2, prepared by TC 35 "Primary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60086-2-2:2026.

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) 2027-09-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2029-09-30

This document supersedes EN IEC 60086-2:2021 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.

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 60086-2-2:2026 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 60086-2-1	NOTE	Approved as EN IEC 60086-2-1
IEC 60086-3	NOTE	Approved as EN IEC 60086-3
IEC 60086-4	NOTE	Approved as EN IEC 60086-4
IEC 62281	NOTE	Approved as EN IEC 62281

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(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.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60086-1	2026	Primary batteries - Part 1: General	EN IEC 60086-1	— ¹
ISO 1101	-	Geometrical product specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out	EN ISO 1101	-

¹ Under preparation. Stage at the time of publication: FprEN IEC 60086-1:2026.

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Primary batteries - Part 2-2: Physical and electrical specifications of lithium batteries

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 60086-2-2 has been prepared by IEC technical committee 35: Primary cells and batteries. It is an International Standard.

This first edition cancels and replaces the fourteenth edition of IEC 60086-2 published in 2021. This edition constitutes a technical revision.

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

- a) the physical and electrical specifications of IEC 60086-2:2021 were divided into two new standards based on their electrolyte types. IEC 60086-2-1 provides specifications for standardized primary batteries containing aqueous electrolyte. IEC 60086-2-2 covers specifications for standardized lithium-based primary batteries;
- b) maximum open circuit voltage of FR10G445 and FR14505 was changed from 1,83 to 1,90 V;

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modified;

- d) portable lighting test was added for FR10G445;
- e) motor/toy and radio /clock /remote control test was added for FR14505;
- f) in Clause 3, terms were reordered according to their functions: basic terms, electrochemical systems, electrical characteristics and specifications;
- g) Annex D for common designation of IEC 60086-2:2021 was moved to IEC 60086-1:2026, as Annex H;
- h) Annex E for Compliance checklist of IEC 60086-2:2021 was removed and merged into Annex J of IEC 60086-1:2026.

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

Draft	Report on voting
35/1592/FDIS	35/1598/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60086 series, under the general title *Primary batteries*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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The technical content of this part of IEC 60086 provides physical dimensions, discharge test conditions and discharge performance requirements. IEC 60086-2-1 and IEC 60086-2-2 complement the general information and requirements of IEC 60086-1. Safety information of IEC 60086-2-2 is available in IEC 60086-4 and IEC 62281.

This document was prepared to benefit primary battery users, device designers and battery manufacturers by furnishing the specifics of form, fit and function for individual standardized primary cells and batteries. Over the years, this document has been changed to improve its contents and might again be revised in due course in the light of comments made by national committees and experts on the basis of practical experience and changing technology.

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This part of IEC 60086 is applicable to primary batteries which are based on standardised lithium (non-aqueous) electrochemical systems.

It specifies

- the physical dimensions,
- the discharge test conditions and discharge performance requirements.

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 60086-1:2026, *Primary batteries - Part 1: General*

ISO 1101, *Geometrical product specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60086-1:2026 and the following apply.

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

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

primary cell

primary battery

cell or battery that is not designed to be electrically recharged

3.2

round cell

round battery

cell or battery with circular cross section

3.3

button cell

button battery

small round cell or battery where the overall height is less than the diameter, containing aqueous electrolyte

Note 1 to entry: For the specifications, refer to IEC 60086-2-1.