

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications – Part 3: Prismatic and cylindrical lithium secondary cells, and batteries made from them

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide – Accumulateurs au lithium pour applications portables – Partie 3: Éléments et batteries d'accumulateurs au lithium, parallélépipédiques et cylindriques



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE
OR OTHER NON-ACID ELECTROLYTES – SECONDARY LITHIUM CELLS
AND BATTERIES FOR PORTABLE APPLICATIONS –****Part 3: Prismatic and cylindrical lithium secondary cells,
and batteries made from them**

FOREWORD

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International Standard IEC 61960-3 has been prepared by subcommittee 21A: Secondary cells and batteries containing alkaline or other non-acid electrolytes, of IEC technical committee 21: Secondary cells and batteries.

This first edition cancels and replaces the second edition of IEC 61960 published in 2011. It is a technical revision.

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

- adding definition of portable applications (Scope),
- update of examples of cells (Table 1 and 2),

- adding “Dimensions of the cell with a laminate film case” (Annex A),
- adding “Capacity after storage” (from the date of manufacture) (Annex B).

The text of this standard is based on the following documents:

FDIS	Report on voting
21A/618/FDIS	21A/625/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.

A list of all parts in the IEC 61960 series, published under the general title *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications*, 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- withdrawn,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.

SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SECONDARY LITHIUM CELLS AND BATTERIES FOR PORTABLE APPLICATIONS –

Part 3: Prismatic and cylindrical lithium secondary cells, and batteries made from them

1 Scope

This part of IEC 61960 specifies performance tests, designations, markings, dimensions and other requirements for secondary lithium single cells and batteries for portable applications.

The objective of this document is to provide the purchasers and users of secondary lithium cells and batteries with a set of criteria with which they can judge the performance of secondary lithium cells and batteries offered by various manufacturers.

Portable applications comprise hand-held equipment, transportable equipment and movable equipment.

Examples of the main uses are shown below:

- a) hand-held equipment: smartphone, tablet PCs, audio/video players, and similar equipment;
- b) transportable equipment: notebook computers, CD players, and similar equipment;
- c) movable equipment
 - 18 kg or less in mass and not fixed in place, or
 - provided with wheels, castors or other means to facilitate movement by an ordinary person as required to perform its intended use,
 - power tools, power-assisted cycles, business-use video cameras, and similar equipment.

NOTE 1 All applications using batteries whose nominal voltages are equal to or over the hazardous voltage of 60 V DC are excluded.

NOTE 2 EESS (Electric Energy Storage Systems) and UPS, which use batteries over 500 Wh of electric energy are excluded.

NOTE 3 Self-propelled vehicles are excluded.

This document defines a minimum required level of performance and a standardized methodology by which testing is performed and the results of this testing reported to the user. Hence users will be able to establish the viability of commercially available cells and batteries via the declared specification and thus be able to select the cell or battery best suited for their intended application. The end user can handle only batteries which have completely fulfilled all the requirements of this document and others concerning safety such as IEC 62133-2.

This document covers secondary lithium cells and batteries with a range of chemistries. Each electrochemical couple has a characteristic voltage range over which it releases its electrical capacity, a characteristic nominal voltage and a characteristic final voltage during discharge. Users of secondary lithium cells and batteries are requested to consult the manufacturer for advice.