



ANSI/CAN/UL 2056:2025

JOINT CANADA-UNITED STATES
NATIONAL STANDARD

STANDARD FOR SAFETY

Power Banks



SCC FOREWORD

National Standard of Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

UL Standard for Safety for Power Banks, ANSI/CAN/UL 2056

First Edition, Dated October 22, 2024

Summary of Topics

This revision of ANSI/CAN/UL 2056 dated February 18, 2025 includes changes to the enclosure requirements: [4.3](#) and [6.1.4](#).

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The revised requirements are substantially in accordance with Proposal(s) on this subject dated November 29, 2024

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of ULSE Inc. (ULSE).

ULSE provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will ULSE be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if ULSE or an authorized ULSE representative has been advised of the possibility of such damage. In no event shall ULSE's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold ULSE harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

No Text on This Page



ANSI/UL 2056-2025



OCTOBER 22, 2024

(Title Page Reprinted: February 18, 2025)

1

ANSI/CAN/UL 2056:2025

Standard for Power Banks

First Edition

October 22, 2024

This ANSI/CAN/UL Safety Standard consists of the First Edition including revisions through February 18, 2025.

The most recent designation of ANSI/UL 2056 as an American National Standard (ANSI) occurred on February 18, 2025. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This Standard has been designated as a National Standard of Canada (NSC) on February 18, 2025.

© 2025 ULSE Inc. All rights reserved.



Documents

Document Sharing Hub

No Text on This Page

CONTENTS

Preface	5
---------------	---

INTRODUCTION

1 Scope	7
2 Units of Measurement	7
3 Components	7
4 Referenced Publications	8
5 Glossary	10

CONSTRUCTION

6 General	12
6.1 Casing and enclosure	12
6.2 Cells	12
6.3 Wiring and terminals	13
6.4 External power bank connectors	13
6.5 Printed wiring boards	13
6.6 Lithium ion systems only	13
6.7 Direct plug-in construction	14
6.8 Wireless charging and discharging function	14

PERFORMANCE

7 General	14
8 Protective Devices	15
9 Samples	15
10 Important Test Considerations	16
11 Temperature Measurements	16

ELECTRICAL TESTS

12 Short-Circuit of Output Port Test	16
13 Abnormal Charging of the Battery Test	17
14 Abusive Overcharge of the Battery Test	18
15 Forced-Discharge of the Cells Test	19
16 Temperature Test and BMS Verification	20
17 Power Input Test	22
18 Overload of Output Ports Test	22
19 Flammability of Photovoltaic Cells Test	22
20 Capacity Verification Test	23

ENCLOSURE TESTS

21 General	23
22 Steady Uniform Force Test	23
23 Flexing Force Test	24
24 Mold Stress Relief Test	25
25 Drop Impact Test	25
26 Label Permanence Test	26

MARKINGS

27	General	26
----	---------------	----

INSTRUCTIONS

28	General	27
29	Instructions Pertaining to Risk of Fire or Injury to Persons.....	28

**ANNEX A (Normative for Canada and Informative for the US) – SAFETY MARKING
TRANSLATIONS**

Preface

This is the First Edition of ANSI/CAN/UL 2056, Standard for Power Banks.

ULSE is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

This ANSI/CAN/UL 2056 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

Comments or proposals for revisions on any part of the Standard may be submitted at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

Our Standards for Safety are copyrighted by ULSE Inc. Neither a printed nor electronic copy of a Standard should be altered in any way. All of our Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of ULSE Inc.

This Edition of the Standard has been formally approved by the Technical Committee (TC) on Power Banks, TC 2056.

This list represents the TC 2056 membership when the final text in this Standard was balloted. Since that time, changes in the membership may have occurred.

TC 2056 Membership

Name	Representing	Interest Category	Region
Akhlesi, Kamran	Health Canada	Government	Ontario, Canada
Aman, Simon	Stanley Black & Decker	Producer	USA
Bolton, David	Air Canada	Commercial/Industrial User	Quebec, Canada
Brenner, Rick	Products Safety Advisors	Supply Chain	USA
Bullock, Nathaniel	Geiger	Supply Chain	USA
Byczek, Rich	Intertek	Testing and Standards Org.	USA
Chen, Yanqi	Kunshan Ntek Testing Technology	Testing and Standards Org.	China
Furukawa, Akio	TDK Corporation	Supply Chain	Japan
Holmdahl, Bryan	Amazon	Producer	USA
Huang, Leo	APCB Electronics (Kunshan) Co Ltd	Supply Chain	China

TC 2056 Membership Continued on Next Page

TC 2056 Membership Continued

Name	Representing	Interest Category	Region
Jordan, Diana Pappas	UL Standards & Engagement	TC Chair – Non-Voting	USA
Kadiwala, Jay	US Consumer Product Safety Commission	Non-Voting	USA
Liang, Alex	UL Solutions	Testing and Standards Org.	Taiwan
Murray, Nickolas	Consumer Association of Canada	Consumer	New Brunswick, Canada
Ogard, John	United Airlines	Commercial/Industrial User	USA
Rahardi, Susanto	Balai Besar Bahan dan Barang Teknik (B4T) (Representing BSN)	International Delegate	Indonesia
Savage, Michael	Marion County, FL	Authorities Having Jurisdiction	USA
Sudler, Samuel	SEA Ltd	General Interest	USA
VanHeirseede, Megan	UL Standards & Engagement	TC Project Manager – Non-Voting	USA
Wunderlich, Heather	Staples Promotional Products	Supply Chain	USA
Zhang, Guanghui	Vertiv	Commercial/Industrial User	China

International Classification for Standards (ICS): 29.220.10; 29.220.20; 29.220.30

For information on ULSE Standards, visit <https://www.shopulstandards.com>, call toll free 1-888-853-3503 or email us at ClientService@shopULStandards.com.

This Standard is intended to be used for conformity assessment.

The intended primary application of this Standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for this particular application.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

INTRODUCTION

1 Scope

1.1 These requirements cover power banks, sometimes also known as portable USB chargers or portable back-up battery power, which are standalone devices that incorporate primary or secondary batteries for mobile powering of low voltage electronic devices.

1.2 These requirements cover products with the following power characteristics:

a) Input:

1) Supplied by isolated dc power source rated maximum 60 Vdc; or

2) Supplied by ac mains power source, through direct plug-in construction.

b) Output: Provides dc output(s) rated maximum 60 Vdc; and

c) The watt-hour rating of the power bank does not exceed 100 Wh.

1.3 These requirements are intended to reduce the risk of fire or explosion of power banks.

1.4 These requirements also cover products with integral photovoltaic cells as a power source.

1.5 These requirements do not cover products under the scope of the Standard for Portable Power Packs, UL 2743.

2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Components

3.1 A component of a product covered by this Standard shall:

a) Comply with the requirements for that component as specified in this Standard;

b) Be used in accordance with its rating(s) established for the intended conditions of use; and

c) Be used within its established use limitations or conditions of acceptability.

3.2 A component of a product covered by this Standard is not required to comply with a specific component requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product;

b) Is superseded by a requirement in this Standard; or

c) Is separately evaluated when forming part of another component, provided the component is used within its established ratings and limitations.

3.3 A component shall be used in accordance with its rating established for the intended conditions of use.