

UL 2388

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Flexible Lighting Products

Underwriters Laboratories Inc. (UL)
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UL Standard for Safety for Flexible Lighting Products, UL 2388

First Edition, Dated July 3, 2002

Revisions: This Standard contains revisions through and including September 27, 2002.

The following table lists the future effective dates with the corresponding reference.

Future Effective Date	References
November 1, 2003	Entire Standard

The revised effective date is in accordance with UL's Bulletin(s) on this subject dated August 19, 2002. The bulletin(s) is now obsolete and may be discarded.

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New product submittals made prior to a specified future effective date will be judged under all of the requirements in this Standard including those requirements with a specified future effective date, unless the applicant specifically requests that the product be judged under the current requirements. However, if the applicant elects this option, it should be noted that compliance with all the requirements in this Standard will be required as a condition of continued Listing and Follow-Up Services after the effective date, and understanding of this should be signified in writing.

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This Standard consists of pages dated as shown in the following checklist:

Page	Date
1-2	July 3, 2002
3-4	September 27, 2002
5-6	July 3, 2002
7-34	September 27, 2002
A1-A2	September 27, 2002

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Standard for Flexible Lighting Products

First Edition

July 3, 2002

An effective date included as a note immediately following certain requirements is one established by Underwriters Laboratories Inc.

Revisions of this Standard will be made by issuing revised or additional pages bearing their date of issue. A UL Standard is current only if it incorporates the most recently adopted revisions, all of which are itemized on the transmittal notice that accompanies the latest set of revised requirements.

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FOREWORD

A. This Standard contains basic requirements for products covered by Underwriters Laboratories Inc. (UL) under its Follow-Up Service for this category within the limitations given below and in the Scope section of this Standard. These requirements are based upon sound engineering principles, research, records of tests and field experience, and an appreciation of the problems of manufacture, installation, and use derived from consultation with and information obtained from manufacturers, users, inspection authorities, and others having specialized experience. They are subject to revision as further experience and investigation may show is necessary or desirable.

B. The observance of the requirements of this Standard by a manufacturer is one of the conditions of the continued coverage of the manufacturer's product.

C. A product which complies with the text of this Standard will not necessarily be judged to comply with the Standard if, when examined and tested, it is found to have other features which impair the level of safety contemplated by these requirements.

D. A product that contains features, characteristics, components, materials, or systems new or different from those covered by the requirements in this standard, and that involves a risk of fire or of electric shock or injury to persons shall be evaluated using appropriate additional component and end-product requirements to maintain the level of safety as originally anticipated by the intent of this standard. A product whose features, characteristics, components, materials, or systems conflict with specific requirements or provisions of this standard does not comply with this standard. Revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this standard.

E. UL, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of UL represent its professional judgment given with due consideration to the necessary limitations of practical operation and state of the art at the time the Standard is processed. UL shall not be responsible to anyone for the use of or reliance upon this Standard by anyone. UL shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Standard.

F. Many tests required by the Standards of UL are inherently hazardous and adequate safeguards for personnel and property shall be employed in conducting such tests.

INTRODUCTION

1 Scope

1.1 This standard covers portable flexible lighting products with a maximum input voltage rating of 120 volts to be used in accordance with the National Electrical Code, ANSI/NFPA 70. These products are provided with a power supply cord and are intended for outline and decorative lighting use.

Effective date for 1.1 changed from July 3, 2003 to November 1, 2003

1.2 These requirements cover lighting products incorporating non-replaceable series and series/parallel connected lamps enclosed within a flexible polymeric tube or extrusion.

Effective date for 1.2 changed from July 3, 2003 to November 1, 2003

1.3 These requirements also cover flexible lighting products used in light sculptures.

Effective date for 1.3 changed from July 3, 2003 to November 1, 2003

1.4 These requirements do not cover lighting products with replaceable lamps.

Effective date for 1.4 changed from July 3, 2003 to November 1, 2003

1.5 These requirements do not cover lighting products covered by UL 588, Seasonal and Holiday Decorative Products.

Effective date for 1.5 changed from July 3, 2003 to November 1, 2003

2 Components

2.1 Except as indicated in 2.2, a component of a products covered by this standard shall comply with the requirements for that component. See Appendix A for a list of standards covering components used in the products covered by this standard.

Effective date for 2.1 changed from July 3, 2003 to November 1, 2003

2.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or
- b) Is superseded by a requirement in this standard.

Effective date for 2.2 changed from July 3, 2003 to November 1, 2003

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

Effective date for 2.3 changed from July 3, 2003 to November 1, 2003

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

Effective date for 2.4 changed from July 3, 2003 to November 1, 2003

3 Units of Measurement

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

Effective date for 3.1 changed from July 3, 2003 to November 1, 2003

4 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

Effective date for 4.1 changed from July 3, 2003 to November 1, 2003

5 Glossary

5.1 For the purpose of this standard, the following definitions apply.

Effective date for 5.1 changed from July 3, 2003 to November 1, 2003

5.2 EXTENSION SEGMENT – A flexible lighting product intended to be connected to a connector of another flexible lighting product and not provided with a means to independently connect to a 120 V supply circuit.

Effective date for 5.2 changed from July 3, 2003 to November 1, 2003

5.3 INTERNAL LAMP SHUNT – A device that provides a current path when the filament of a lamp opens so that the remaining lamps in a series-connected string remain illuminated.

Effective date for 5.3 changed from July 3, 2003 to November 1, 2003

5.4 LIGHT SCULPTURE – A polymeric or metallic rigid frame to which a flexible light is attached. The flexible light provides outline illumination of the figure or object created by the frame.

Effective date for 5.4 changed from July 3, 2003 to November 1, 2003

5.5 NON-EXTENDABLE FLEXIBLE LIGHT – A flexible light product that is not provided with any means to add an extension segment.

Effective date for 5.5 changed from July 3, 2003 to November 1, 2003

CONSTRUCTION

6 Assembly and Packaging

6.1 A flexible lighting product shall be completely wired with each electrical component mounted in place and with each splice and connection completed.

Effective date for 6.1 changed from July 3, 2003 to November 1, 2003

6.2 Detachable power-supply cords and extension segments that comply with Section 17, Interconnecting Means, need not be connected.

Effective date for 6.2 changed from July 3, 2003 to November 1, 2003