

UL 1088

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Temporary Lighting Strings



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March 30, 1995

Standard for

Temporary Lighting Strings

UL 1088, Fourth Edition

Accompanying this transmittal notice is a copy of the Fourth edition of UL 1088.

A CHANGE IS INDICATED BY A SMALL PRINT NOTE FOLLOWING THE AFFECTED ITEM.

THIS EDITION OF THE STANDARD IS NOW IN EFFECT.

As indicated on the title page, this UL Standard for Safety is an American National Standard. Attention is directed to the note on the title page of this standard outlining the procedures to be followed to retain the approved text of ANSI/UL 1088-1994.

Revised and/or additional pages may be issued from time to time.

MARCH 30, 1995



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UL 1088

Standard for

Temporary Lighting Strings

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Third Edition – January, 1987

Fourth Edition

March 30, 1995

Approval as an American National Standard (ANSI) covers the numbered paragraphs on pages dated March 30, 1995. These pages should not be discarded when revised or additional pages are issued if it is desired to retain the ANSI approved text.

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

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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 published set of revision pages.

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FOREWORD

A. This Standard contains a description of the basic test method(s) for evaluating 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. This test method(s) is 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. It is subject to revision as further experience and investigation may show is necessary or desirable.

B. The consistent and uniform production of the product so that it will perform in the manner indicated by the coverage is one of the conditions of the continued coverage of the manufacturer's product.

C. A product which performs in a specified manner will not necessarily be judged to be eligible for coverage if, when examined and tested, it is found to have other features which impair the significance associated with such performance.

D. 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.

E. 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 These requirements cover temporary lighting strings rated not more than 20 A, 125 V, intended for indoor and outdoor use to provide temporary illumination in accordance with the National Electrical Code.

1.2 These requirements cover temporary lighting strings consisting of a factory assembly of flexible cord, cable or insulated open conductors, incorporating a series of Edison-screw lampholders provided with lamp guards. The complete assembly is intended for connection to a branch circuit. A temporary lighting string employing a flexible cord may terminate in an attachment plug and may be provided with a cord connector at the opposite end.

1.3 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, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the acceptable 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 cannot be judged to comply with this Standard. Where considered appropriate, revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this Standard.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this standard shall comply with the requirements for that component.

2.2 A component need not comply with a specific requirement that:

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

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

2.4 Specific components are recognized as being 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 for which they have been recognized.

3 Units of Measurement

3.1 If a value for measurement as given in these requirements is followed by an equivalent value in other units, in parentheses, the second value may be only approximate. The first stated value is the requirement.

4 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.

CONSTRUCTION

5 General

5.1 A temporary lighting string shall employ materials throughout that are acceptable for the particular use, and shall be made and finished with the degree of uniformity and grade of workmanship practicable in a well-equipped factory.

5.2 Splices, taps, and other points of electrical termination of a temporary lighting string shall not be subject to tension or other mechanical stress when the string is supported as intended.

5.3 A temporary lighting string shall not incorporate a switch.

5.4 A temporary lighting string shall employ a minimum of two lampholders and shall have a minimum length of 25 ft (7.6 m).

5.5 Adjacent lampholders of a temporary lighting string shall be spaced a maximum of 25 ft (7.6 m) apart.

5.6 A temporary lighting string employing open conductors or cable shall not be provided with an attachment plug or a cord connector.

6 Identification

6.1 A terminal which is identified for the connection of either a grounded or a grounding conductor shall be connected to a corresponding identified conductor.

6.2 A lampholder screw shell shall be connected to the identified grounded conductor of the assembly.

7 Spacings

7.1 There shall be a spacing through air and over surface of 3/64 inch (1.2 mm) or more between an uninsulated live part and a dead metal part that is likely to be grounded or exposed to contact by persons when installed in the intended manner.

7.2 If a barrier or liner of insulating material is used to provide spacings, it shall be of a nonhygroscopic material and not be less than 0.028 inch (0.71 mm) thick. The barrier shall be so located, or of such material, that it will not be affected adversely by arcing.

8 Mechanical Assembly

8.1 A temporary lighting string shall be provided with a closed-loop hanger or other equivalent means at each lampholder that provides for temporary but positive mounting. An open hook is not acceptable.

8.2 A lamp guard shall be provided for each lampholder. The lamp guard may be constructed of metal or nonconductive material. If a lamp guard is not assembled to the lampholder, when it is shipped, all shipping containers shall be marked in accordance with 36.9.

8.3 Conductors shall be secured before soldering or secured by wire connectors, welding, bolts, clamps or other equivalent means to provide a good electrical connection. Insulation-piercing-type contact connections may only be employed in lampholders, see 24.3.

8.4 All electrical connections shall be made so that strands of any conductor cannot contact uninsulated live parts of opposite polarity or dead metal parts.

8.5 Connections in the grounding conductor path shall be secured by riveting, bolting, welding, soldering or equivalent means.

8.6 The component parts of a grounding path through a temporary lighting string, except for a metal lamp guard, shall be of a copper-base alloy.

Exception: A rivet, bolt, or clamp that is used to secure parts in the grounding path, but that is not an essential conductor in the grounding path, may be of plated steel. A copper-base-alloy rivet that is used to secure parts in the grounding path shall not contain less than 80 percent copper.

9 Corrosion Protection

9.1 All exposed metal parts shall be protected against corrosion unless the metal is inherently resistant to corrosion.

9.2 The thickness of a zinc or cadmium coating on the surface of a ferrous metal part shall be not less than 0.0005 inch (0.0127 mm). See Metallic Coating Thickness Test, Section 32.

Exception: The minimum coating thickness of a steel wire guard is not specified, except that the coating must be visible.

10 Exposure of Live Parts

10.1 A temporary lighting string shall:

- a) When in use have no uninsulated live parts normally exposed to contact by persons, and
- b) Have no uninsulated live parts, other than the contacts of the lampholders, that are accessible during relamping.

11 Fittings

11.1 An attachment plug, cord connector, lampholder, splice or tap shall be of a material resistant to moisture, sunlight, and crushing. Hygroscopic materials shall not be used.

11.2 An attachment plug, cord connector, lampholder, splice, or tap shall adhere tightly to the open conductor, cable, or flexible cord insulation at the point where it enters the fitting so as to exclude moisture.

11.3 An attachment plug or cord connector shall be one rated 15 or 20 A, 125 V. See Figure 11.1.