

UL 1104

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Marine Navigation Lights

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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 employing materials or having forms of construction which conflict with specific requirements of the Standard cannot be judged to comply with the Standard. A product employing materials or having forms of construction not addressed by this Standard may be examined and tested according to the intent of the requirements and, if found to meet the intent of this Standard, may be judged to comply with the 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 These requirements cover marine navigation light fixtures intended for use in accordance with the applicable U. S. Coast Guard (USCG) Regulations as specified in the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) and the Inland Navigation Rules, COMDTINST M16672.2A.

1.2 These requirements do not cover navigation light fixtures for use in hazardous locations as defined in the U. S. Coast Guard Electrical Engineering Regulations.

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 Units of Measurement

2.1 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement. SI units are in accordance with the American National Standard for Metric Practice, ANSI/ASTM E380.

3 Components

3.1 Except as indicated in 3.2, a component of a product covered by this Standard shall comply with the requirements for that component.

3.2 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.

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

3.4 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.

4 Glossary

4.1 For the purpose of this Standard, the following definitions apply.

4.2 ALL ROUND LIGHT – A light showing an unbroken light over an arc of the horizon of 360 degrees.

4.3 DESIGN VOLTAGE – The input voltage necessary for a lamp to operate at rated candlepower, or a rated wattage if rated candlepower is not specified.

4.4 FIXTURE (NAVIGATION LIGHT) – The completely assembled navigation light, including the lamp, lampholder, housing, lens, and other components necessary for the light to function as intended.

4.5 FLASHING LIGHT – A light flashing at regular intervals at a frequency of 120 flashes or more per minute.

4.6 LAMP – That component of a navigation light that produces light when energized.

4.7 LAMPHOLDER – That component of a navigation light that supports the lamp in the operating position and provides the electrical connections to the lamp.

4.8 MASTHEAD LIGHT – A white light placed over the fore and aft center line of the vessel, showing an unbroken light over an arc of the horizon of 225 degrees, and fixed to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel.

4.9 NOMINAL SYSTEM VOLTAGES:

a) For alternating current systems 110, 115, 120, 220, 230, and 240 volts.

b) For direct current systems – 12, 24, 32, and 120 volts.

4.10 PREFOCUS LAMP BASE – A light bulb whose filament(s) is (are) precisely positioned with respect to its lampholder.

4.11 SIDELIGHTS – A green light on the starboard side and a red light on the port side, each showing an unbroken light over an arc of the horizon of 112.5 degrees and fixed to show the light from right ahead to 22.5 degrees abaft the beam on its respective side.

4.12 STERN LIGHT – A white light placed as nearly as practicable at the stern, showing an unbroken light over an arc of the horizon of 135 degrees, and fixed to show the light 67.5 degrees from right aft on each side of the vessel.

4.13 TOWING LIGHT – A yellow light having the same characteristics as the stern light.

4.14 WATERTIGHT FIXTURE – An enclosed navigation light constructed to prevent water from entering any part of the housing that contains wiring devices, wiring, or lamps, under any condition of exposure other than submersion.