

A-16 ELECTRIC NAVIGATION LIGHTS

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Based on ABYC's assessment of the existing technology, and the problems associated with achieving the goals of this standard, ABYC recommends compliance with this standard for all boats and associated equipment manufactured and/or installed after July 31, 2006.

16.1 PURPOSE

This standard is a guide for the design, construction, performance, and installation of electric navigation lights.

NOTES: 1. *The United States Coast Guard has promulgated mandatory requirements for navigation lights in its Navigation Rules: International - Inland. Refer to these Rules for complete, current federal requirements. The USCG publication also contains the International Regulations for Prevention of Collisions at Sea, 1972 (72 COLREGS). The subsequent amendments to the 72 COLREGS are also contained in this publication.*

2. *The United States Coast Guard has promulgated mandatory requirements for the certification of navigation lights for uninspected commercial vessels and recreational vessels. This regulation requires third party certification of navigation lights installed on vessels constructed on or after November 1, 2003. See 33 CFR Parts 84 and 183, and 46 CFR Part 25.*

16.2 SCOPE

This standard applies to the electric navigation lighting of vessels under 20 meters (65 ft.) in length.

16.3 REFERENCED ORGANIZATIONS

ABYC - American Boat & Yacht Council, Inc., 3069 Solomons Island Road, Edgewater, MD 21037. Phone: 410-956-1050. Fax: 410-956-2737. Web site: www.abycinc.org

72 COLREGS - International Regulations for Preventing Collisions at Sea and/or the Navigation Rules: International - Inland - Obtain the Navigation Rules from either the Superintendent of Documents, United States Government Information, POB 371954, Pittsburgh, PA 15250-7954. Phone: 202-512-1800. Fax 202-512-2250 ; or from ABYC, Inc., 3069 Solomons Island Road, Edgewater, MD 21037-1416 Phone, 410-956-1050. Fax 410-956-2737. Web site: www.abycinc.org

CFR - Obtain the Code of Federal Regulations and other government publications from the Superintendent of Documents, United States Government Information, POB 371954, Pittsburgh, PA 15250-7954. Phone: 202-512-1800. Fax: 202-512-2250. Web site: www.access.gpo.gov. An excerpted edition of the CFR is available from ABYC, Inc., 3069 Solomons Island Road, Edgewater, MD 21037. Phone: 410-956-1050. Fax: 410-956-2737. Web site: www.abycinc.org.

SAE - Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096. Phone: 724-776-4841. Web site: www.sae.org.

UL - Underwriters Laboratories Marine Department, POB 13995, 12 Laboratory Drive, Research Triangle Park, NC 27709. Phone: 919-549-1400. Web site: www.ul.com

16.4 DEFINITIONS

Aft Sector Cutoff - The luminous intensity of the fixture must be at least the minimum required luminous intensity for the range specified in A-16 TABLE II, from "dead ahead" to 107.5°. From 107.5° to 112.5°, the luminous intensity *may* decrease up to 50 %. The intensity *shall* decrease steadily to reach 'practical cut-off' (33%) at not more than 5° outside the prescribed sector (117.5°). From 117.5° to 132.5° the intensity must be less than 33%. All points further aft of 132.5° shall be less than 10 % of the required minimum intensity.

All-round Light - A light showing through 360° horizontally.

72 COLREGS - The International Regulations for Preventing Collisions at Sea, 1972.

NOTE: *These regulations are contained in USCG Navigation Rules: International-Inland.*

Combination Sidelight (combined lantern) - A form of sidelights in a single fixture showing green to starboard and red to port from dead ahead to 22.5° abaft the beam (90° + 22.5° = 112.5°) on their respective sides.

Datum Water Line - A reference plane established for design purposes that is intended to approximate the final floating position of a vessel.

Design Voltage - The input voltage necessary for a lamp to operate at the rated candlepower or the rated wattage, if rated candlepower is not specified.

Fixture - An assembly of components forming a navigation light.