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Small craft — Electric navigation lights — Performance of LED lights

Petits navires — Feux de navigation électriques — Performance des feux à LED

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 188, *Small craft*.

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Introduction

This document was developed to provide uniform criteria for the performance, construction, and testing of LED navigation lights. Conflicting national standards might lead to confusion on the part of operators and manufacturers of craft, as well as manufacturers of LED navigation lights. These conflicts could lead to barriers to trade.

If the colour locus of navigation light is within the coordinates specified in this document, the COLREGs, CCNR[1] and CEVNI[2] requirements relating to colour loci are satisfied.

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Small craft — Electric navigation lights — Performance of LED lights

1 Scope

This International Standard applies to requirements and testing for navigation lights with permanently fixed light emitting diode (LED) assemblies for small craft up to 24 m length of the hull.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11664-1, *Colorimetry — Part 1: CIE standard colorimetric observers*

CIE 15, *Colorimetry*

CIE 69, *Methods of characterizing illuminance meters and luminance meters — Performance, characteristics and specifications*

CIE 70:1987, *Measurement of absolute luminous intensity distributions*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60945:2002, *Maritime navigation and radiocommunication equipment and systems — General requirements — Methods of testing and required test results*

IEC 60068-2-27:2008, *Environmental testing — Part 2-27: Tests — Test Ea and guidance: Shock*

COLREGs, International Regulations for Preventing Collisions at Sea, 1972

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
flashing light
light flashing at regular intervals at a frequency of 120 flashes or more per minute

3.2
navigation light
coloured source of illumination used to signal a craft's position, heading, and status

3.3
signal light
light radiated by navigation lights

3.4
range of visibility
distance up to which the light of the navigation light can be seen

3.5
rated voltage
voltage or voltage range specified by the manufacturer for the operation of the navigation light

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