VÄIKELAEVAD. ELEKTRILISED NAVIGATSIOONITULED. LED TULEDE TOIMIVUS

Small craft - Electric navigation lights - Performance of LED lights (ISO 19009:2015)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 19009:20 sisaldab Euroopa standardi EN ISO 19009:20 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 19009:2015 consists of the English text of the European standard EN ISO 19009:2015.	
Standard on jõustunud sellekohase tea avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.	
Euroopa standardimisorganisatsioonid on tein Euroopa standardi rahvuslikele liikmete kättesaadavaks 07.10.2015.	Date of Availability of the European standard is 07.10.2015.	
Standard on kättesaadav Ee Standardikeskusest.	ti The standard is available from the Estonian Centre for Standardisation.	

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

ICS 47.080

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN ISO 19009

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2015

ICS 47.080

English Version

Small craft - Electric navigation lights - Performance of LED lights (ISO 19009:2015)

Petits navires - Feux de navigation électriques - Performance des feux à LED (ISO 19009:2015)

Kleine Wasserfahrzeuge - Elektrische Positionslaternen - Leistung von LED-Leuchten (ISO 19009:2015)

This European Standard was approved by CEN on 13 June 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 19009:2015) has been prepared by Technical Committee ISO/TC 188 "Small craft".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2016, and conflicting national standards shall be withdrawn at the latest by April 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 19009:2015 has been approved by CEN as EN ISO 19009:2015 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2013/53/EC

This European standard has been prepared under a mandate given to CEN by the European Commission to provide one means of conforming to Essential Requirements of the New Approach Directive 2013/53/EC.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one member state, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements of that Directive and associated EFTA regulations.

EU L **WARNING** — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Co	ntent	S	age
Fore	word		v
Intr	oduction	n	vi
1		e	
_			
2	Norm	native references	1
3	Term	s and definitions	1
4	Abbr	eviated terms	2
5	Minir	num requirements	2
3	5.1	Luminous intensity and range of visibility	
	5.2	Luminous intensity distribution	2
		5.2.1 Horizontal luminous intensity distribution	
		5.2.2 Vertical luminous intensity distribution	3
	5.3	Colorimetric requirements	3
	5.4	Flashing light	
	5.5	Electrical safety	
	5.6	Reflectors	
	5.7	Power supply	
	5.8	General requirements 5.8.1 General	
		5.8.2 Equipment category	
		5.8.3 Vibration	
		5.8.4 Rain and spray	
		5.8.5 Solar radiation	
		5.8.6 Corrosion (salt mist)	
		5.8.7 Electromagnetic compatibility	
		5.8.8 Compass safe distance	
		5.8.9 Housing temperature	5
		5.8.10 Mechanical shock	
	5.9	Deviations caused by service life conditions	
	5.10	Influence of temperature	
		5.10.1 Influence of temperature on chromaticity coordinates and luminous intensity	5
		5.10.2 Dry heat and low temperature	
		5.10.3 Pulse frequency	
6	Testi	ng	
	6.1	General	
		6.1.1 Validity of IEC 60945:2002	
		6.1.2 Performance test and performance check	
		6.1.3 Order of the tests	
		6.1.4 Documentation	
	6.2	6.1.5 Light source Photometric and colorimetric tests	
	0.2	6.2.1 Test voltage	
		6.2.2 Photometric test	
		6.2.3 Colorimetric test	
		6.2.4 Measurement of luminous intensity and chromaticity coordinates under	>
		the influence of temperature	10
		6.2.5 Measurement of flashing lights	
	6.3	Explanations, supplements, or amendments to points in IEC 60945:2002	
		6.3.1 Corrosion (salt mist)	11
		6.3.2 Extreme power supply	
		6.3.3 Dry heat	
		6.3.4 Damp heat	
		6.3.5 Vibration	11

EVS-EN ISO 19009:2015

		6.3.6	Rain and spray		11
		6.3.7	Solar radiation		
	6.4	6.3.8 Tests	EMCoutside the scope of IEC 60945:2002		
	0.4	6.4.1	Shock		
		6.4.2	Housing temperature		
7	Marki	ng			13
Riblia					
	ogrupny				
			7.		
			0,		
			10,		
			O,		
				0	
				CV	
				`/_	
					•
iv				© ISO 2015 – All rights reser	ved
• V				© 150 2015 - All lights lesel	· cu

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 O/TC 1.

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

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 ris rade.

rigation lig.

requirements. 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 CEVN[2] requirements relating to colour loci are satisfied.