Electrical installations in ships –
Part 306: Equipment – Luminaires and lighting accessories
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS IN SHIPS –

Part 306: Equipment –
Luminaires and lighting accessories

FOREWORD

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International Standard IEC 60092-306 has been prepared by IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units.

This fourth edition cancels and replaces the third edition published in 1980. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition.

a) Title has been amended;
b) Scope has been stated more precisely;
c) Requirements on mechanical design and materials have been amended and stated more precisely;
d) Table 2 – Standard types of lampholders, has been amended;
e) Environmental tests, especially regarding shock and vibration have been added;
f) Requirements and tests concerning special chemical and physical attributes have been added;
g) Standard has been editorially revised.

The text of this standard is based on the following documents:

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<th>FDIS</th>
<th>Report on voting</th>
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<td>18/1137/FDIS</td>
<td>18/1143/RVD</td>
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Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 60092 series, published under the general title *Electrical installations in ships*, can be found on the IEC web site.

The committee has decided that the contents of this publication will remain unchanged until the maintenance date indicated on the IEC web site under “http://webstore.iec.ch” in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.
INTRODUCTION

IEC 60092 forms a series of international standards for electrical installations in sea-going ships, incorporating good practice and coordinating, as far as possible, existing rules.

These standards form a code of practical interpretation and amplification of the requirements of the International Convention for the Safety of Life at Sea, a guide for future regulations which may be prepared and a statement of practice for use by shipowners, shipbuilders and appropriate organizations.
1 Scope

This International Standard applies to luminaires and lighting accessories for use in ships. It applies primarily to luminaires for illumination purposes.

NOTE Boats, submarines (except naval submarines), watercraft and floating equipment are ships to which this standard applies.

This standard also applies to lighting accessories associated with the wiring and current consuming appliance of an installation.

This standard does not apply to portable luminaires, navigation lights, search lights, daylight signalling lamps, signal lights including the relevant control and monitoring equipment and other lights used for navigation in channels, harbours, etc.

For navigation lights, see EN 14744, for search lights, see ISO 17884, for daylight signalling lamps, see ISO 25861.

2 Normative references

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

IEC 60068-2-1, Environmental testing – Part 2-1: Tests – Test A: Cold
IEC 60068-2-2, Environmental testing – Part 2-2: Tests – Test B: Dry heat
IEC 60068-2-6, Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)
IEC 60068-2-78, Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state
IEC 60079 (all parts), Equipment for explosive atmospheres
IEC 60092-101, Electrical installations in ships – Part 101: Definitions and general requirements
IEC 60092-201:1994, Electrical installations in ships – Part 201: System design – General
IEC 60092-352, Electrical installations in ships – Part 352: Choice and installation of electrical cables
IEC 60155, Glow-starters for fluorescent lamps
IEC 60238, Edison screw lampholders
IEC 60332-1-2:2004, Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame

IEC 60400, Lampholders for tubular fluorescent lamps and starterholders

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

IEC 60533, Electrical and electronic installations in ships – Electromagnetic compatibility

IEC 60598-1, Luminaires – Part 1: General requirements and tests

IEC 60684-2, Flexible insulating sleeving – Part 2: Methods of test

IEC/TR 60721-4-6, Classification of environmental conditions – Part 4-6: Guidance for the correlation and transformation of environmental condition classes of IEC 60721-3 to the environmental tests of IEC 60068 – Ship environment

IEC 60695-2-11, Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products

IEC 60754-1, Test on gases evolved during combustion of materials from cables – Part 1: Determination of the amount of halogen acid gas

IEC 60838-1, Miscellaneous lampholders – Part 1: General requirements and tests

IEC 60945, Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results

IEC 61184, Bayonet lampholders

IEC 61347-2-1, Lamp controlgear – Part 2-1: Particular requirements for starting devices (other than glow starters)

IEC 61995-1, Devices for the connection of luminaires for household and similar purposes – Part 1: General requirements

IEC 61995-2, Devices for the connection of luminaires for household and similar purposes – Part 2: Standard sheets for DCL

ISO 2409, Paints and varnishes – Cross-cut test

ISO 3882, Metallic and other inorganic coatings – Review of methods of measurement of thickness

ISO 4892-2, Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps

ISO 4892-3, Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps

ISO 9001, Quality management systems – Requirements

ISO 17884, Ships and marine technology – Searchlights for high-speed craft

ISO 25861 Ships and marine technology – Navigation – Daylight signalling lamps

Defence Standard 02-713, Determination of the Toxicity Index of the Products of Combustion from Small Specimens of Materials

EN 12206-1, Paints and varnishes – Coating of aluminium and aluminium alloys for architectural purposes – Part 1: Coatings prepared from coating powder

EN 13032-1, Light and lighting – Measurement and presentation of photometric data of lamps and luminaires – Part 1: Measurement and file format
EN 13438, Paints and varnishes – Powder organic coatings for galvanized or sherardised steel products for construction purposes

EN 14744, Inland navigation vessels and sea-going vessels – Navigation light

IEC 62444, Cable glands for electrical installations¹

¹ To be published.