



NSAI
Standards

Irish Standard
I.S. EN 60598-2-11:2013

Luminaires -- Part 2-11: Particular requirements - Aquarium luminaires (IEC 60598-2-11:2013 (EQV))

I.S. EN 60598-2-11:2013

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i> EN 60598-2-11:2005 + corr. Aug 2005	<i>This document is based on:</i> EN 60598-2-11:2013	<i>Published:</i> 2 August, 2013
This document was published under the authority of the NSAI and comes into effect on: 12 August, 2013		ICS number: 29.140.40
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Údarás um Chaighdeáin Náisiúnta na hÉireann		

English version

**Luminaire -
Part 2-11: Particular requirements -
Aquarium luminaire
(IEC 60598-2-11:2013)**

Luminaire -
Partie 2-11: Exigences particulières -
Luminaire pour aquarium
(CEI 60598-2-11:2013)

Leuchten -
Teil 2-11: Besondere Anforderungen -
Aquarienleuchten
(IEC 60598-2-11:2013)

This European Standard was approved by CENELEC on 2013-06-20. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 34D/1046/CDV, future edition 2 of IEC 60598-2-11, prepared by SC 34D "Luminaires" of IEC/TC 34 "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60598-2-11:2013.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-03-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-06-20

This document supersedes EN 60598-2-11:2005 + corrigendum August 2005.

EN 60598-2-11:2013 includes the following significant technical changes with respect to EN 60598-2-11:2005:

- a) Subclause 11.1, change of the scope to open the standard for all kinds of electrical light sources;
- b) Subclause 11.4.2 (former 11.3.2), change of the definition in order to clarify non-permanently attached aquarium luminaire;
- c) Subclause 11.11.3 (former 11.10.3), for indoor operated aquarium luminaire, change of the size of conductors to at least 0,75 mm² instead of 1,0 mm² in the former edition.

This standard is to be read in conjunction with EN 60598-1.

NOTE In this standard, the following print types are used:

- requirements: in roman type.
- *test specifications: in italic type.*
- notes: in small roman type.

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60598-2-11:2013 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60598-1	-	Luminaires - Part 1: General requirements and tests	EN 60598-1	-

This page is intentionally left BLANK.

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
11.1 Scope.....	6
11.2 Normative references	6
11.3 General test requirements.....	6
11.4 Terms and definitions	6
11.5 Classification of luminaires	7
11.6 Marking	7
11.7 Construction	8
11.8 Creepage distances and clearances.....	9
11.9 Provisions for earthing	9
11.10 Terminals and electrical connections.....	9
11.11 External and internal wiring.....	9
11.12 Protection against electric shock.....	9
11.13 Endurance tests and thermal tests	9
11.14 Resistance to dust, solid objects and moisture	10
11.15 Insulation resistance and electric strength.....	10
11.16 Resistance to heat, fire and tracking	10
Annex A (normative) Requirements for the protective shield to be fitted to luminaires using metal halide lamps for protective measures against UV radiation.....	11
Figure 1 – Minimum distance from water level symbol.....	7
Table 1 – Markings.....	7

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LUMINAIRES –

Part 2-11: Particular requirements – Aquarium luminaires

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60598-2-11 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lamps and related equipment.

This standard is to be read in conjunction with IEC 60598-1.

This second edition cancels and replaces the first edition published in 2005. This edition constitutes a technical revision.

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

- a) Subclause 11.1, change of the scope to open the standard for all kinds of electrical light sources.
- b) Subclause 11.4.2, change of the definition in order to clarify non-permanently attached aquarium luminaire.

- c) Subclause 11.11.3, for indoor operated aquarium luminaire, change of the size of external cable to at least 0,75 mm² instead of 1,0 mm² in the former edition.

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

FDIS	Report on voting
34D/1046/FDIS	34D/1089/RVD

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 the parts in the IEC 60598 series, published under the general title *Luminaires* can be found on the IEC website.

NOTE In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in small roman type.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

INTRODUCTION

Aquarium luminaires are predominantly used on the topside of an aquarium tank to achieve an effective illumination and are, therefore, very close to the water inside the tank. Because constant refilling of water is required as a consequence of evaporation and regular servicing, e.g. feeding the fish, it is necessary to open the top cover or to remove the aquarium luminaire frequently in order to have a good and sufficient access to the water surface.

The requirements of this standard are necessary to prevent any dangerous contact between current-carrying parts of the aquarium luminaire and the water inside the tank during refilling or maintenance. Another aspect is to prevent any accidental immersion of the aquarium luminaire into the water.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-