

BSI Standards Publication

Miscellaneous lampholders

Part 1: General requirements and tests



BS EN 60838-1:2017 BRITISH STANDARD

This is a preview of "BS EN 60838-1:2017". Click here to purchase the full version from the ANSI store.

National foreword

This British Standard is the UK implementation of EN 60838-1:2017. It is identical to IEC 60838-1:2016. It supersedes BS EN 60838-1:2004+A2:2011, which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee CPL/34, Lamps and Related Equipment, to Subcommittee CPL/34/2, Lamp caps and holders.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017 Published by BSI Standards Limited 2017

ISBN 978 0 580 84574 1

ICS 29.140.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2017.

Amendments/corrigenda issued since publication

Date Text affected

ELIDODE ANI CTANDADO

EN 60939_1

This is a preview of "BS EN 60838-1:2017". Click here to purchase the full version from the ANSI store.

EUROPÄISCHE NORM

April 2017

ICS 29.140.10

Supersedes EN 60838-1:2004

English Version

Miscellaneous lampholders Part 1: General requirements and tests (IEC 60838-1:2016)

Douilles diverses pour lampes - Partie 1: Exigences générales et essais (IEC 60838-1:2016) Sonderfassungen - Teil 1: Allgemeine Anforderungen und Prüfungen (IEC 60838-1:2016)

This European Standard was approved by CENELEC on 2016-06-23. 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

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

EN 60838-1:2017

This is a preview of "BS EN 60838-1:2017". Click here to purchase the full version from the ANSI store.

The text of document 34B/1850A/FDIS, future edition 5 of IEC 60838-1, prepared by SC 34B "Lamp caps and holders" of IEC/TC 34 "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60838-1:2017.

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)	2017-10-28
•	latest date by which the national standards conflicting with the	(dow)	2020-04-28

This document supersedes EN 60838-1:2004.

document have to be withdrawn

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 document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 60838-1:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60061-1	NOTE	Harmonized as EN 60061-1.
IEC 60061-4	NOTE	Harmonized as EN 60061-4.
IEC 60068-2-20	NOTE	Harmonized as EN 60068-2-20.

(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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

Publication	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60061	Series	Lamp caps and holders together with gauges for the control of interchangeability and safety	EN 60061	Series
IEC 60061-2	-	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 2: Lampholders	EN 60061-2	-
IEC 60061-3	-	Lamp caps and holders together with gauges for the control of interchangeability and safety - Part 3: Gauges	EN 60061-3	-
IEC 60068-2-75	2014	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	2014
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
+A1	2009	Solid Insulating materials	+A1	2009
IEC 60227	Series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	l -	-
IEC 60238	-	Edison screw lampholders	EN 60238	-
IEC 60245	Series	Rubber insulated cables - Rated voltages up to and including 450/750 V	-	-
IEC 60352-1	-	Solderless connections - Part 1: Wrapped connections - General requirements, test methods and practical guidance	EN 60352-1	-
IEC 60399	-	Barrel thread for lampholders with shade holder ring	EN 60399	-
IEC 60417-DB	-	Graphical symbols for use on equipment	-	-

EN 60838-1:2017

This is a preview of "BS EN 60838-1:2017". Click here to purchase the full version from the ANSI store.

IEC 60529 +A1 +A2	1989 1999 2013	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May +A1 +A2	1991 1993 2000 2013
IEC 60598-1 (mod)	2014	Luminaires - Part 1: General requirements and tests	EN 60598-1	2015
IEC 60664-1	-	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	-
IEC 60695-2-11	-	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products (GWEPT)	EN 60695-2-11	-
IEC 60695-11-5	-	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	-
ISO 1456	-	Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium	EN ISO 1456	-
ISO 2081	-	Metallic and other inorganic coatings - Electroplated coatings of zinc with supplementary treatments on iron or steel	EN ISO 2081	-
ISO 2093	-	Electroplated coatings of tin; Specification and test methods	-	-
ISO 4046-4	2002	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-

CONTENTS

FOF	REWORD	3
1	Scope	5
2	Normative references	5
3	Terms and definitions	6
4	General requirement	9
5	General conditions for tests	9
6	Classification	10
7	Marking	11
8	Protection against electric shock	13
9	Terminals	13
10	Provision for earthing	15
11	Construction	16
12	Moisture resistance, insulation resistance and electric strength	17
13	Mechanical strength	19
14	Screws, current-carrying parts and connections	20
15	Creepage distances and clearances	20
16	Endurance	23
17	Resistance to heat and fire	24
18	Resistance to excessive residual stresses (season cracking) and to rusting	27
Ann	ex A (informative) Lampholders covered by this standard	29
Ann	ex B (normative) Suitable metals	31
Ann	ex C (normative) Season cracking/corrosion test	32
Ann	ex D (normative) Pendulum impact test apparatus	34
	ex E (informative) Schedule of amended clauses and subclauses containing more ous/ critical requirements which require products to be retested	36
Bibl	iography	37
Figu	ure 1 – Ball-pressure test apparatus	25
Figu	ure D.1 – Impact test apparatus	34
Figu	ure D.2 – Mounting fixture	35
Tab	le 1 – Minimum values of insulation resistance	18
Tab	le 2 – Height of fall	19
	le 2a – Minimum distances for AC (50 Hz/60 Hz) sinusoidal voltages – Impulse istand category II	21
	le 2b – Minimum distances for AC (50 Hz/60 Hz) sinusoidal voltages – Impulse istand category III	22
Tab	le 3 – Minimum distances for non-sinusoidal pulse voltages	22
Tab	le A.1 – Lampholders covered by this standard	29
Tab	le C.1 – Test solution	32

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MISCELLANEOUS LAMPHOLDERS -

Part 1: General requirements and tests

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 60838-1 has been prepared by subcommittee 34B: Lamp caps and holders, of IEC technical committee 34: Lamps and related equipment.

This fifth edition cancels and replaces the fourth edition published in 2004, Amendment 1:2008 and Amendment 2:2011. This edition constitutes a technical revision.

The significant technical changes in this edition with respect to the previous edition include the introduction of new or revised requirements for single and dual contact ignition voltages, steel test caps and brass test caps and an Annex E listing amended requirements/clauses which require products to be retested.

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

FDIS	Report on voting	
34B/1850A/FDIS	34B/1856/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 parts in the IEC 60838 series, published under the general title *Miscellaneous lampholders*, can be found on the IEC website.

In this standard, the following type is used:

compliance statements: in italic 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.

MISCELLANEOUS LAMPHOLDERS -

Part 1: General requirements and tests

1 Scope

This part of IEC 60838 applies to lampholders of miscellaneous types intended for building-in (to be used with general purpose light sources, projection lamps, floodlighting lamps and street-lighting lamps with caps as listed in Annex A) and the methods of test to be used in determining the safe use of lamps in lampholders.

This part of IEC 60838 also covers lampholders which are integral with a luminaire. It covers the requirements for the lampholder only.

This part of IEC 60838 also covers lampholders integrated in an outer shell and dome similar to Edison screw lampholders. Such lampholders are further tested in accordance with the relevant clauses of IEC 60238.

Requirements for lampholders for tubular fluorescent lamps, Edison screw lampholders and bayonet lampholders are covered by separate standards.

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.

IEC 60061 (all parts), Lamp caps and holders together with gauges for the control of interchangeability and safety (available at http://std.iec.ch/iec60061)

IEC 60061-2, Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 2: Lampholders

IEC 60061-3, Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 3: Gauges

IEC 60068-2-75:2014, Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests

IEC 60112:2003, Method for the determination of the proof and the comparative tracking indices of solid insulating materials IEC 60112:2003/AMD1:2009

JEO 00007 (all apple). But his habitative later habitative for the

IEC 60227 (all parts), Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V

IEC 60238, Edison screw lampholders

IEC 60245 (all parts), Rubber insulated cables – Rated voltages up to and including 450/750 V