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NATIONAL FOREWORD

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English version

**LED modules for general lighting -
Safety specifications
(IEC 62031:2008)**

Modules de DEL pour éclairage général -
Spécifications de sécurité
(CEI 62031:2008)

LED-Module für Allgemeinbeleuchtung -
Sicherheitsanforderungen
(IEC 62031:2008)

This European Standard was approved by CENELEC on 2008-07-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 34A/1237/FDIS, future edition 1 of IEC 62031, prepared by SC 34A, Lamps, of IEC TC 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62031 on 2008-07-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-07-01

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

- Requirements proper: in roman type.
- *Test specifications: in italic type.*
- Explanatory matter: in smaller roman type.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62031:2008 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 60968 | NOTE Harmonized as EN 60968:1990 (modified). |
| IEC 62384 | NOTE Harmonized as EN 62384:2006 (not modified). |

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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 (mod)	2003	Luminaire - Part 1: General requirements and tests	EN 60598-1 + corr. August	2004 2007
A1	2006		A1	2006
IEC 60838-2-2	- ¹⁾	Miscellaneous lampholders - Part 2-2: Particular requirements - Connectors for LED modules	EN 60838-2-2	2006 ²⁾
IEC 61347-1 (mod)	2007	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	2008
IEC 61347-2-13	2006	Lamp controlgear - Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules	EN 61347-2-13	2006
IEC 62471 (mod)	2006	Photobiological safety of lamps and lamp systems	EN 62471	2008
ISO 4046-4	2002	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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INTRODUCTION

The first edition of a safety standard for LED modules for general lighting applications acknowledges the need for relevant tests for this new source of electrical light, sometimes called “solid state lighting”.

The provisions in the standard represent the technical knowledge of experts from the fields of the semiconductor industry and those of the traditional electrical light sources.

Two types of LED modules are covered: with integral and external control gear.

LED MODULES FOR GENERAL LIGHTING – SAFETY SPECIFICATIONS

1 Scope

This International Standard specifies general and safety requirements for light-emitting diode (LED) modules:

- * LED modules without integral control gear for operation under constant voltage, constant current or constant power;
- * self-ballasted LED modules for use on d.c. supplies up to 250 V or a.c. supplies up to 1 000 V at 50 Hz or 60 Hz.

NOTE 1 The safety requirements for separate control gear are specified in IEC 61347-2-13. The performance requirements for separate control gear are specified in IEC 62384.

NOTE 2 Requirements for LED modules with integrated control gear and equipped with a lamp cap (self-ballasted lamp), intended for mains voltage general lighting service retrofit applications (thereby replacing existing lamps with identical lamp caps) are specified in IEC 60968 (an amendment to the present edition or a new edition with extended scope is in preparation).

Requirements for LED modules with integrated control gear and equipped with a lamp cap (self-ballasted lamp), intended for non-mains voltage general lighting service retrofit applications (thereby replacing existing lamps with identical lamp caps) are under consideration.

NOTE 3 Where in the requirements of this standard both types of LED modules, with and without integral control gear, are addressed, the word “modules” is used instead. Where only the expression “LED module(s)” is used, it is understood to refer to the type without integral control gear.

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 60598-1:2003, *Luminaires, Part 1: General requirements and tests*¹⁾
Amendment 1 (2006)

IEC 60838-2-2, *Miscellaneous lampholders – Part 2-2: Particular requirements – Connectors for LED modules*

IEC 61347-1:2007, *Lamp controlgear – Part 1: General and safety requirements*

IEC 61347-2-13:2006, *Lamp controlgear – Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules*

IEC 62471:2006, *Photobiological safety of lamps and lamp systems*

ISO 4046-4:2002, *Paper, board, pulp and related terms – Vocabulary – Part 4: Paper and board grades and converted products*

¹⁾ A consolidated 6.1 (2006) exists, that includes IEC 60598-1 (2003) and its Amendment 1 (2006).