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Standards

Irish Standard  
I.S. EN IEC 62031:2020

# LED modules for general lighting - Safety specifications

**I.S. EN IEC 62031:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN IEC 62031:2020 is the adopted Irish version of the European Document EN IEC 62031:2020, LED modules for general lighting - Safety specifications

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EUROPEAN STANDARD

**EN IEC 62031**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2020

ICS 29.140.99; 31.080.99

Supersedes EN 62031:2008 and all of its amendments  
and corrigenda (if any)

English Version

## LED modules for general lighting - Safety specifications (IEC 62031:2018)

Modules à DEL pour éclairage général - Spécifications de  
sécurité  
(IEC 62031:2018)

LED-Module für Allgemeinbeleuchtung -  
Sicherheitsanforderungen  
(IEC 62031:2018)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## **EN IEC 62031:2020 (E)**

### **European foreword**

The text of document 34A/2052/FDIS, future edition 2 of IEC 62031, prepared by SC 34A "Electric light sources" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62031:2020.

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) 2020-09-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-12-18

This document supersedes EN 62031:2008 and all of its amendments and corrigenda (if any).

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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 62031:2018 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 60838-2-2	NOTE	Harmonized as EN 60838-2-2
IEC 60947-7-4	NOTE	Harmonized as EN IEC 60947-7-4
IEC 62717	NOTE	Harmonized as EN 62717

## Annex ZA

(normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60598-1 (mod)	2014	Luminaires - Part 1: General requirements and tests	EN 60598-1	2015
+ A1	2017		+ A1	2018
IEC 61032	1997	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	1998
IEC 61347-1	2015	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	2015
+ A1	2017		-	-
IEC 62471 (mod)	2006	Photobiological safety of lamps and lamp systems	EN 62471	2008
IEC 62504	-	General lighting - Light emitting diode (LED) products and related equipment - Terms and definitions	EN 62504	-
IEC/TR 62778	2014	Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires	-	-
ISO 4046-4	2016	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-
ISO 7089	2000	Plain washers - Normal series - Product grade A	EN ISO 7089	2000

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**IEC 62031**

Edition 2.0 2018-03

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**LED modules for general lighting – Safety specifications**

**Modules à LED pour éclairage général – Spécifications de sécurité**



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**IEC 62031**

Edition 2.0 2018-03

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**LED modules for general lighting – Safety specifications**

**Modules à LED pour éclairage général – Spécifications de sécurité**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### **LED MODULES FOR GENERAL LIGHTING – SAFETY SPECIFICATIONS**

#### FOREWORD

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International Standard IEC 62031 has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

This second edition cancels and replaces the first edition published in 2008, Amendment 1:2012 and Amendment 2:2014. This edition constitutes a technical revision.

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

- a) the scope was clarified as well as the wording in several other clauses;
- b) the normative references were updated;
- c) the definitions for "replaceable LED module", "non-replaceable LED module" and "non-user replaceable LED module" were introduced while other definitions covered by IEC 62504 have been removed;
- d) the marking clause was restructured and a table added to provide an informative overview;
- e) the marking requirements for built-in LED modules were changed;

- f) the entry for the marking with the working voltage was revised;
- g) the provisions for terminals and heat management were revised;
- h) Annex B was deleted;
- i) information for luminaire design with regard to working voltage and water contact was introduced;
- j) an abnormal temperature test was introduced.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
34A/2052/FDIS	34A/2061/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

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.

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## LED MODULES FOR GENERAL LIGHTING – SAFETY SPECIFICATIONS

### 1 Scope

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

- non-integrated LED modules (LEDni modules) and semi-integrated LED modules (LEDsi modules) for operation under constant voltage, constant current or constant power;
- Integrated LED modules (LEDi modules) for use on DC supplies up to 250 V or AC supplies up to 1 000 V at 50 Hz or 60 Hz.

LED modules within the scope of this document can be integral, built-in or independent.

This document is not applicable for LED lamps.

NOTE The performance requirements for LED modules are specified in IEC 62717.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60598-1:2014, *Luminaires – Part 1: General requirements and tests*  
IEC 60598-1:2014/AMD1:2017

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61347-1:2015, *Lamp controlgear – Part 1: General and safety requirements*  
IEC 61347-1:2015/AMD1:2017

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

IEC 62504, *General lighting – Light emitting diode (LED) products and related equipment – Terms and definitions*

IEC TR 62778:2014, *Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires*

ISO 4046-4:2016, *Paper, board, pulp and related terms – Vocabulary – Part 4: Paper and board grades and converted products*

ISO 7089:2000, *Plain washers – Normal series – Product grade A*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62504 and the following apply.



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