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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 24819-2023

Replacing GB 24819-2009

LED modules for general lighting - Safety specifications

普通照明用LED模块 安全规范

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document replaces GB 24819-2009 "Safety Requirements for LED Modules for

General Lighting": Compared with GB 24819-2009, except for in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Changed the applicable limits in "Scope" (see Chapter 1, Chapter 1 of the:2009 edition);
- b) Added general test requirements for integral LED modules without independent enclosures (see 5.5);
- c) Changed the marking requirements for built-in LED modules (see Chapter 6, 7:1 of the:2009 edition);
- d) Added operating voltage mark [see k) of 6:2];
- e) Changed the requirements for terminal blocks (see Chapter 7, Chapter 8 of the:2009 edition);
- f) Added design information, thermal management and photobiological safety of lamps (see Chapter 19 ~ Chapter 21);
- g) The system diagram of the LED module and control device has been deleted (see Appendix B of the:2009 version);
- h) Added abnormal temperature test (see Appendix D):

This document is equivalent to IEC 62031:2018 "Safety Specifications for LED Modules for General Lighting":

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

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

This document applies to integral, built-in or independent light-emitting diode (LED) modules for general lighting:

---Non-integrated LED modules and semi-integrated LED modules operating at constant voltage, constant current or constant power;

---Integrated LED modules using DC power supply below 250V or 50Hz or 60Hz AC power supply below 1000V:

This document does not apply to LED lights:

Note: For LED module performance requirements, see IEC 62717:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 7000.1-2023 Luminaires Part 1: General requirements and tests (IEC 60598-1:2020, MOD) Note: There is no technical difference between the quoted content of GB/T 7000.1-2023 and the quoted content of IEC 60598-1:2017:

GB/T 16842-2016 Test tools for testing the protection of enclosures against people and equipment (IEC 61032:1997, IDT) GB/T 19510.1-2023 Light source control device Part 1: General requirements and safety requirements (IEC 61347-1:2017, MOD) Note: There is no technical difference between the quoted content of GB/T 19510.1-2023 and the quoted content of IEC 61347-1:2017:

GB/Z 39942-2021 Apply GB/T 20145 to evaluate the blue light hazards of light sources and lamps (IEC TR62778:2014, IDT) IEC 62504 General lighting LED products and related equipment terms and definitions [General lighting-Lightemittingdi-Note: GB/T 24826-2016 Terms and definitions for LED products and related equipment for general lighting (IEC 62504:2014, IDT) ISO 4046-4:2016 Paper, paperboard, pulp and their terms Glossary Part 4: Paper and paperboard grades and processed products) ISO 7089:2000 Plainwashers-Normalseries-ProductgradeA (Plainwashers-Normalseries-ProductgradeA) Note: GB/T 97.1-2002 Flat Washer Grade A (eq\ISO 7089:2000)

3 Terms and definitions

The terms and definitions defined in IEC 62504 and the following apply to this document:

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The ratio of the amount of UV damage to the corresponding amount of light: