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

GB/T 31831-2025

Replacing GB/T 31831-2015

**Technical requirements for the application of LED indoor
lighting**

LED室内照明应用技术要求

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Table of Contents

1	Scope
2	Normative references
3	Terms and Definitions
4	General Requirements
6	Performance Requirements
14	Special requirements for DC or AC electronic control devices for LED modules
18	Reference

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/T 31831-2015 "Technical Requirements for LED Indoor Lighting Applications". Compared with GB/T 31831-2015, except for the structure... Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The definition of LED light source has been changed (see 3.1, 2015 version 3.1);
- b) Added definitions for LED lights, LED luminaires, flicker index, and flicker effect visibility (see Chapter 3);
- c) Added requirements for carbon footprint accounting of LED lights and LED lighting fixtures (see 4.4);
- d) The specification classification of LED lights and LED luminaires has been changed (see Chapter 5, Chapter 5 of the 2015 edition);
- e) Added a specification classification for LED driver power supplies (see 5.3);
- f) The performance requirements for LED lights and LED luminaires have been changed (see Chapter 6, Chapter 6 of the 2015 edition);
- g) Increased requirements for flicker index and flicker effect visibility of LED lights and LED luminaires (see 6.1.4);
- h) Increased requirements for the colorimetric performance of multi-channel luminaires (see 6.1.12);
- i) Increased performance requirements for LED driver power supplies (see 6.4);

j) Increased requirements for the color performance of LED luminaires used in elderly care facilities (see A.2);

k) Increased the requirements for the light color performance of LED luminaires used for lighting fresh agricultural products (see A.4.6); Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee on Standardization of Building Energy Conservation (SAC/TC452). This document was drafted by: China Academy of Building Research Co., Ltd., China Construction Third Engineering Bureau First Construction Co., Ltd., and Jianke Environmental Energy. Technology Co., Ltd., National Energy Conservation Center, Huizhou Xidun Industrial Development Co., Ltd., Xiamen Lidaxin Digital Education Technology Co., Ltd., Zhejiang Provincial Architectural Design and Research Institute Co., Ltd., Shanghai Maiso Lighting Design Consulting Co., Ltd., Shanghai Aite Lighting Design Co., Ltd., Shanghai Modern Architectural Decoration and Environmental Design Institute Co., Ltd., Tongji University Architectural Design and Research Institute (Group) Co., Ltd., Shanghai Gree Lighting Design Co., Ltd. The company, Huizhou NVC Lighting Technology Co., Ltd., China Construction Design & Research Institute Co., Ltd., Leos Lighting (Shanghai) Co., Ltd., and Luchuan Gold. Domain Electronics Trading (Shanghai) Co., Ltd., CERFE Electronics Co., Ltd., Opple Lighting Co., Ltd., Ningbo CENEB Optoelectronic Technology Co., Ltd. The company, Hengyiming (Chongqing) Technology Co., Ltd., Shenzhen Nairui Technology Co., Ltd., and Shenzhen Xingte Energy Technology Co., Ltd. The main drafters of this document are. Luo Tao, Li Jian, Gao Yachun, Zhou Yang, Jin Zhu, Fang Fang, Yan Jinguang, Zhang Hongbin, Wang Jianping, Yang Yun, and Zhang Chenlu. Yang Xiu, Xiong Fei, Gu Wenyi, Huang Ning, Jin Xiaoming, Hu Yuanrui, Fang Junhua, Sha Yufeng, Gu Ming, Yang Jie, Li Zhijia, Zheng Ping, Hong Jian, Wang Guohua. This document was first published in.2015, and this is its first revision. Technical Requirements for LED Indoor Lighting Applications

1 Scope

GB/T 31831-2025 is the Chinese national standard covering designing with LED indoors - the illuminance and uniformity by space type, the glare, the colour temperature and rendering, the flicker that most specifications still ignore and that causes headaches and visible stroboscopic effects, and the maintained output over life. It replaces GB/T 31831-2015. It was issued on 31 December 2025 and has been in force since 1 April 2026, replacing GB/T 31831-2015. The document is under the responsibility of the Ministry of Housing and Urban-Rural Development. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the general requirements, specifications, performance requirements, and control requirements for LED indoor lighting in buildings. This document applies to LED lights and LED luminaires used for indoor lighting in buildings and their applications.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB 17625.1 Electromagnetic compatibility limits - Part

3 Terms and Definitions

The terms and definitions defined in JGJ/T 119 and the following terms and definitions apply to this document.

3.1 LED light source Electric light source based on LED technology.

3.2 LED lights LED lamp An LED light source with a lamp holder, which combines one or more LED modules and a matching driver power supply.

3.3 LED lighting fixtures A luminaire that combines one or more LED light sources and a matching driver power supply.

3.4 LED driver power supply A device placed between the power supply terminal and one or more LED modules to provide rated voltage or rated current to the LED modules.

14 Special requirements for DC or AC electronic control devices for LED modules

GB/T 19510.213 Light source control devices - Part 2-

13.Special applications of DC or AC electronic control devices for LED modules Require

GB 30255 Minimum Energy Efficiency Values and Energy Efficiency Grades for LED Products Used in Indoor Lighting

GB 38450 Minimum Energy Efficiency Values and Energy Efficiency Grades for LED Flat Panel Lights for General Lighting

GB/T 45818 Methods and Requirements for Quantifying the Carbon Footprint of Greenhouse Gas Products - Lighting Products

GB/T 50034 Standard for Lighting Design of Buildings JGJ/T 119 Architectural Lighting Terminology Standard

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