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

GB/T 2900.65-2023

Replacing GB/T 2900.65-2004

Electrotechnical terminology - Lighting

电工术语 照明

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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 is Part 65 of GB/T 2900 "Electrical Terminology": GB/T 2900 has released more than 100 parts: This document replaces GB/T 2900:65-2004 "Electrical Terminology Lighting": Compared with GB/T 2900:65-2004, except for structural adjustments and In addition to editorial changes, the main technical changes are as follows:

---Added "A-band infrared radiation", "B-band infrared radiation", "C-band infrared radiation", "circularly polarized radiation", etc: and related to LED lighting More than 500 terms and definitions related to products and lighting systems, and 845-32;

---More than 300 terms or definitions have been changed, such as: - The original priority term "optical radiation" (see 845-01-02 in the:2004 edition) was changed to "optical radiation" (see 845-21-002), and "Optical radiation" remains a permitted term; - The original term "columnar cells" (see 845-02-03 in the:2004 edition) was changed to "rod cells" (see 845-22-003); - The original term "excitation purity" (see:2004 version of 845-03-48) is changed to "excitation purity" (see 845-23-066);

---Changed technical translation errors of terms and definitions in GB/T 2900:65-2004, such as the original term "intermittent light" (see The:2004 version of 845-11-10) was changed to "Rhythm Light (see 845-31-008)";

---Deleted "The names and units of quantities using characters and symbols" (see the:2004 version of "The names and units of quantities using characters and symbols" No: representation"): This document is equivalent to IEC 60050-845:2020 "International Electrotechnical Terminology Part 845: Lighting": This document has made the following minimal editorial changes:

---The file name is changed to "Electrical Terminology Lighting";

---Corrected typographical errors (such as adding the missing negative sign in the 845-24-092 formula); IEV), added a note to explain the origin of this term;

---For defined terms in this document that appear in definitions or notes, their entry

numbers are given in subsequent parentheses;

---Note 1 was added to 845-26-079, and the original note was changed to Note 2;

---Added references: Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents: This document is proposed by China Light Industry Federation: This document is under the jurisdiction of the National Lighting Appliances Standardization Technical Committee (SAC/TC224): This document was drafted by: Beijing Electric Light Source Research Institute Co., Ltd., Guangdong Guangyan Standardization Technology Co., Ltd., Hangzhou Yuanfang Optical Telecommunications Information Co., Ltd., Zhongshan Quality Supervision and Inspection Institute of Guangdong Province, Xiamen Lidaxin Lighting Co., Ltd., Weikai Testing Technology Co., Ltd., Division, Nanjing Urban Lighting Construction and Operation Group Co., Ltd., Lierda Technology Group Co., Ltd., Xiamen University, Hangzhou Huapu Yongmingguang Electric Co., Ltd., Foshan Electrical and Lighting Co., Ltd., Greer Digital Technology Co., Ltd., Shenzhen Zhouming Technology Co., Ltd.: Co., Ltd., Hongli Zhihui Group Co., Ltd., Xiamen Tongshida Lighting Co., Ltd., Shanghai Times Lighting Electrical Testing Co., Ltd., Romney Optoelectronic System Technology (Guangdong) Co., Ltd., Zhejiang Institute of Standardization: The main drafters of this document: Zhang Junbin, Li Qian, Deng Zhihe, Zhang Wei, Chen Yuchang, Li Dong, Zang Feng, Han Licheng, An Bo, Wu Tingzhu, Huang Jianming, Xia Yu, Liu Mingzhao, Li Yuefeng, Yang Tao, Wang Dezhen, Weng Shijie, Huang Jianjie, Miao Fei, Li Chaofeng, Zhang Defeng, Lu Tiangang, Li Hongxu, Yang Bobo, Zou Jun, Li Songtao, Li Yang, Chi Wei, Cai Zhe, Wu Qiong, Jiang Lili, Ni Wei, Peng Yinshui, Yang Yuanhui, Zhou Shuhua, Lu Henan, Hong Zhen, Cheng Senji, Li Hui, Chen Guixiu, Wang Chong: This document was first published in:2004 and this is the first revision:

GB/T 2900 "Electrical Terminology" is divided into several parts: The purpose of developing standards for electrotechnical terminology is to establish standards for electrical engineering, electronics and telecommunications: It provides an accurate, concise and correct definition of the concept and names the terms that express the concept: The formulation of electrical terminology standards is "oriented to "Standardized" aims to help standard writers formulate standards and to help standard users understand and implement standards: Translators of texts (as well as more general technical ones) are also helpful: The purpose of formulating standards for electrical terminology is not to cover all electrical technologies: It refers to all terms used in technical standards, but to develop general terminology for electrical technology: This document is Part 65 of GB/T 2900: This document is normative standards, technical documents, professional manuals, teaching materials, books and periodicals, etc: It is formulated with electrical terminology in lighting and related fields, and can be used by relevant departments such as scientific research, design, production, teaching and publishing in related majors: personnel use: Electrician Terminology Lighting

1 Scope

GB/T 2900.65-2023 is the lighting part of the Chinese electrotechnical vocabulary, and at 123,500 words of translation it is one of the largest terminology documents in the system. It is the Chinese adoption of the IEC and CIE lighting vocabulary, and it defines the whole field: the radiometric and photometric quantities and their units, luminous flux, luminous intensity, illuminance, luminance and the relationships between them; colour, colour temperature, chromaticity, colour rendering and the metrics built on them; vision and the physiology behind the photometric system; lamps and their characteristics by technology, incandescent, discharge, fluorescent and LED; luminaires and their optical, electrical and thermal characteristics; control gear and control systems; lighting design terms for interior, exterior, road, emergency and sports lighting; and measurement. Every other Chinese lighting standard, product or design, uses this vocabulary. For a lamp or luminaire maker, a lighting designer, a laboratory or a translator working on Chinese lighting material, this is the reference.

This document defines the general basics of lighting and optical radiation, human visual and non-visual effects, measurements, products, optical properties of materials, and applications: (such as lighting, therapy, visual signaling and imaging technology): This document applies to lighting and related application technology fields:

2 Normative reference documents

This document has no normative references:

3 Terms and definitions

21 Radiation, quantities and units 845-21-001 See IEC 60050-845:1987: 02-07:

Note 1: This entry is numbered 845-01-01 in IEC 60050-845:1987: 02-07: 845-21-002 optical radiation optical radiation Electromagnetic radiation with a wavelength (845-21-025) located between the transition zone to X-rays ($\lambda \sim 1\text{nm}$) and the transition zone to radio waves ($\lambda \sim 1\text{mm}$) (845-21-001):

Note: This entry is numbered 845-01-02 in IEC 60050-845:1987: 845-21-003 visible radiation visible radiation Optical radiation (845-21-002) capable of directly causing visual sensation (845-22-083):

Note 1: There is no clear limit to the spectral range of visible radiation, because it depends on both the radiant flux (845-21-038) reaching the retina (845-22-001) and Depends on the responsiveness of the observer: Generally, the lower limit is between 360nm~400nm, and the upper limit is between 760nm~830nm:

Note 2: This entry is numbered 845-01-03 in IEC 60050-845:1987: 845-21-004 Infrared

radiationinfraredradiation;IRradiation;IRR Optical radiation (845-21-002) with a wavelength (845-21-025) greater than visible radiation (845-21-003):

Note 1: Infrared radiation in the wavelength range of 780nm~1nm is usually subdivided into:

---A band infrared radiation (845-21-005): 780nm~1400nm, or 0.78 μ m~1.4 μ m;

---B band infrared radiation (845-21-006): 1.4 μ m~3.0 μ m;

---C-band infrared radiation (845-21-007): 3 μ m~1mm:

Note 2: The precise boundary between "visible radiation" (845-21-003) and "infrared" cannot be defined because light with wavelengths (845-21-025) greater than 780nm can still be