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

GB/T 44473-2024

**LED lamps, LED luminaires and LED modules for horticulture
lighting - Performance specifications**

植物照明用LED灯、LED灯具和LED模块 性能规范

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by China Light Industry Federation. This document is under the jurisdiction of the National Technical Committee for Standardization of Lighting Appliances (SAC/TC 224). This document was drafted by: Beijing Electric Light Source Research Institute Co., Ltd., Foshan Electric Lighting Co., Ltd., Xiamen Topstar Lighting Co., Ltd. Company, Xiamen Puwei Optoelectronics Technology Co., Ltd., Shenzhen Shengda Optoelectronics Co., Ltd., National Electric Light Source Quality Supervision and Inspection Center (Beijing), Shanghai Times Lighting Appliance Testing Co., Ltd., China Lighting Appliance Association, Shenzhen Lianyu Optoelectronics Co., Ltd., Zhongshi Chuangke Technology (Guangdong) Co., Ltd., Zhongshan Quality Metrology Supervision and Inspection Institute of Guangdong Province, Shenzhen Facility Agriculture Industry Association, Zhongshan Mingcai Intelligent Photoelectric Ming Technology Co., Ltd., Shenzhen Zhongke Green Energy Optoelectronics Technology Co., Ltd., Shenzhen Youming Optoelectronics Co., Ltd., Zhejiang Mengtai Lighting Co., Ltd. Shangrao Zhihui Guangcai Technology Co., Ltd., Shandong Guixiang Optoelectronics Co., Ltd., Shenzhen Huodi Technology Co., Ltd., Huizhou Yuanhui Optoelectronics Co., Ltd., Zhongpusen Technology (Zhuzhou) Co., Ltd., National Energy Conservation Center, and Zhejiang Hanlan Optoelectronics Co., Ltd. The main drafters of this document are. Wang Chong, Cai Yangyang, Gao Tao, Lu Fuxing, Li Guoxin, Li Yanjie, Yang Yue, Hou Sha, Pan Nianhua, Lu

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1 Scope

GB/T 44473-2024 is the performance specification for LED lamps, luminaires and modules used in horticultural lighting. China makes most of the world's grow lights, and the sector has been characterised by claims that cannot be compared: wattage quoted instead of photon output, photosynthetic photon flux stated without the waveband it was integrated over, and lifetime figures borrowed from general lighting although these fixtures run sixteen hours a day in a hot, humid, corrosive environment. The standard sets the categories, the labelling requirements, the electrical parameter requirements, the light radiation parameters that actually matter for plants, the environmental characteristics requirements, and the size, mass and construction requirements, together with the test methods and the sample sizes for compliance testing. It takes effect on 1 June 2025.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 2423.3 Environmental testing Part

GB/T 39394 Test methods for LED lamps, LED luminaires and LED modules

GB/T 41423 Calculation of long-term luminous flux and radiant flux maintenance rate of LED packages

GB/T 44941 Terminology for Plant Lighting

3 Terms and definitions

The terms and definitions defined in GB/T 44941 apply to this document.

4 Categories

According to the application scenarios, LED products for plant lighting are divided into professional use, household use and similar use.

Note. Professional use includes plant factories and greenhouses, etc.; household and

similar use includes plant factories or planters for teaching or demonstration purposes, etc.

5 Labeling requirements

The information and parameters specified in Table 1 shall be clearly marked on the product body, packaging and/or instructions of LED products for plant lighting. The markings on the main body should be clear and firm.

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