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

GB/T 45762-2025

**Fine ceramics - Light source for testing semiconducting
photocatalytic materials used under indoor lighting
environment**

精细陶瓷 室内照明环境下半导体光催化材料测试用光源

(English Translation)

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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.

This document is modified to adopt ISO 14605:2013 "Fine ceramics (advanced ceramics, advanced technical ceramics) - Semiconductors for indoor lighting environments" Light Source for Photocatalytic Material Testing. This document has many technical differences compared to ISO 14605:2013.

A list of these technical differences and their causes is given in Appendix A. The following editorial changes have been made to this document.

--- To coordinate with the existing standard, the name of the standard will be changed to "Test Method for Semiconductor Photocatalytic Materials in Fine Ceramics Under Indoor Lighting Environments" light source";

--- In Chapter 5, the text content was converted into diagrams to make the expression clearer;

--- Deleted the vertical axis arrows in Figures 1, 2, 3 and 4;

--- In Chapter 3, Terms and Definitions, the informative reference IEC 60050-845 was deleted;

--- Added Appendix A (informative) "Technical differences between this document and ISO 14605:2013 and their causes".

1 Scope

This document specifies the light source for testing the performance of fine ceramic semiconductor photocatalytic materials under indoor lighting conditions (excluding natural light penetration). Test requirements.

This document is applicable to the electro-optical detection of different catalytic processes

and catalytic tests of fine ceramic semiconductors.

Note: Catalytic tests include photolysis of water to produce hydrogen, photodegradation of pollutants, simulated sunlight accelerated tests, etc.

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 10682 Double-capped fluorescent lamps performance requirements (GB/T 10682-2010, IEC 60081:2005, NEQ)

GB/T 15041 High-pressure short-arc xenon lamp

GB/T 24823 Performance Specification for LED Modules for General Lighting (GB/T 24823-2024, IEC 62717:2019, MOD)

GB/T 26180 Methods of Expression and Measurement of Color Rendering Properties of Light Sources (GB/T 26180-2010, CIE13.3.1995, IDT)

GB/T 30809 Ultraviolet light sources for testing photocatalytic material properties

GB/T 39388 Performance Characterization Methods for Illuminance and Luminance Meters (GB/T 392388-2020, CIES023/E.2013, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.3

The average value of the CIE1974 specific color rendering index for a specified set of 8 test color samples. [Source: GB/T 2900.65-2023, 845-22-111, modified]

3.1

An indoor artificial light lighting environment that excludes the penetration of natural light.

3.2

On the modified 1976 UCS diagram, the coordinates of the Planck locus and the test color stimulus are represented by u' .

$3v'$ It means that when the Planck radiator is The temperature at which the chromaticity of a

given spectral distribution is closest. [Source: GB/T 2900.65-2023, 845-23-068, modified]