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

GB/T 32483.3-2025

Replacing GB/T 32483.3-2016

**Energy performance of controlgear for electric light sources - Part 3:
Controlgear for halogen lamps and LED modules - Method of
measurement to determine the efficiency of the controlgear**

光源控制装置的效率要求 第3部分:卤钨灯和LED光源控制装置 控制装置效率的测量方法

(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 is Part 3 of GB/T 32483 "Efficiency Requirements for Light Source Control Devices". GB/T 32483 has been published with the following...

part.

---Part 1: Measurement methods for total input power and efficiency of fluorescent lamp control devices;

---Part 2: Methods for measuring the efficiency of discharge lamp (excluding fluorescent lamp) control devices;

---Part 3: Measurement methods for the efficiency of control devices for halogen tungsten lamps and LED light sources.

This document replaces GB/T 32483.3-2016 "Efficiency requirements for lamp control devices - Part 3: Control of halogen lamps and LED modules".

The main technical changes in the "Methods for Measuring Device Efficiency" compared to GB/T 32483.3-2016, aside from structural adjustments and editorial modifications, are as follows.

as follows.

---The scope of application has been changed (see Chapter 1, Chapter 1 of the 2016 edition);

- Some terms and definitions have been changed (see Chapter 3, Chapter 3 of the 2016 edition);
- Added general considerations for testing (see 4.1);
- Testing requirements for controllable control devices have been added (see 4.2);
- The "Power Supply" requirements have been changed (see 4.6, 4.7 in the 2016 version);
- The requirements for alternative loadouts have been changed (see 4.8, 4.9 in the 2016 version);
- The instrument accuracy requirements have been changed (see 4.10, 4.11 in the 2016 edition);
- Added power measurement with sensor and network connectivity (see 4.14);
- The methods for measuring and calculating efficiency have been changed (see Chapter 5, Chapter 5 of the 2016 edition).

This document is modified to adopt IEC 62442-3:2022 "Efficiency requirements for lamp control devices - Part 3: Control of halogen lamps and LED light sources".

Methods for measuring the efficiency of device control devices.

The technical differences between this document and IEC 62442-3:2022, and the reasons therefor, are as follows.

- The scope of application has been changed to suit my country's national conditions (see Chapter 1, Chapter 1 of IEC 62442-3:2022);
- The introductory phrase "Terms and Definitions" has been removed to better suit my country's national conditions (see Chapter 3, Chapter 3 of IEC 62442-3:2022);
- The power supply requirements have been modified to suit my country's national conditions (see 4.6, IEC 62442-3:2022 4.6);
- IEC 63103 has been replaced with the normatively referenced GB/T 39018 to facilitate inter-standard coherence (see Chapters 4 and 5).

Chapters 4 and 5 of IEC 62442-3:2022.

The following editorial changes have been made to this document.

- To align with existing standards, the standard title has been changed to "Efficiency Requirements for Light Source Control Devices Part 3: Halogen Tungsten Lamps and LED Light Sources".
- "Methods for Measuring the Efficiency of Source Control Devices";
- The note for the term and definition "controllable control device" has been deleted (see

3.14);

---Informative references in the notes have been modified (see 4.8, 4.14).

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 China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Lighting Appliances (SAC/TC224).

Introduction

GB/T 32483, "Efficiency Requirements for Light Source Control Devices," aims to standardize the measurement methods for the efficiency of light source control devices and support light source control...

The improved efficiency of the device effectively reduces unnecessary energy consumption. GB/T 32483 classifies control devices for different types of light sources.

The standard is composed of the following three parts.

---Part 1: Measurement Methods for Total Input Power and Efficiency of Fluorescent Lamp Control Device Circuits. The purpose is to...

A method for measuring the efficiency of control devices for fluorescent lamps.

---Part 2: Methods for measuring the efficiency of discharge lamp (excluding fluorescent lamp) control devices. The purpose is to standardize the measurement of the efficiency of discharge lamp control devices.

Methods for measuring the efficiency of control devices for various types of external discharge lamps.

---Part 3: Measurement Methods for the Efficiency of Halogen Tungsten Lamp and LED Light Source Control Devices. The purpose is to standardize the control device efficiency of halogen tungsten lamps and LED light sources.

Methods for measuring the efficiency of control devices for LED light sources.

Efficiency requirements of light source control devices Part 3: Halogen lamps and LED light source control devices Methods for measuring the efficiency of control devices

1 Scope

This document describes the methods for measuring and calculating the efficiency and standby power of control devices for halogen lamps and LED light sources.

Note 1: Includes electromagnetic and electronic converters for halogen lamps, and electronic

control devices for LED light sources.

Note 2: LED light sources include LED modules and LED lights.

This document applies to control devices powered by DC power below 1000V and/or AC power below 1000V at 50Hz.

For multi-purpose power supplies, only the lighting section is considered.

Note 3: This does not include the requirement to test individual control devices during the production process.

This document does not apply to.

- Integrated lamp (LED light source) control device;
- Control circuit for capacitor series connection;
- Controllable electromagnetic control device.

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/T 19510.1-2023 Light source control devices - Part 1: General and safety requirements (IEC 61347-1:2017) MOD) Note. There are no technical differences between the content referenced in GB/T 19510.1-2023 and the content referenced in IEC 61347-1:2015.

GB/T 39018 Measurement of power in non-primary function modes of intelligent lighting equipment Note. GB/T 19654-2005 Performance requirements for DC/AC electronic step-down converters for tungsten filament lamps (IEC 61047:1991, IDT) IEC Guide 115.2021 Application of Measurement Uncertainty in Conformity Assessment Activities in the Electrical Engineering Field

3 Terms and Definitions

The following terms and definitions apply to this document.

nominal value

Appropriate approximate values used to indicate or identify components, devices, or equipment.

Note: To indicate a specific number of "nominal values", the term "value" is replaced by the name of