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

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**Equipment for general lighting purposes - Flicker
characteristics - Test method applying light flicker meter**

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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 equivalent to IEC TR61547-1:2020 "Electromagnetic Compatibility Immunity Requirements for General Lighting Equipment Part 1. Objective

Test Method for Optical Scintillation Meter and Voltage Fluctuation Immunity", the file type has been adjusted from IEC technical report to the national standard of our country.

The following minimal editorial changes have been made to this document.

--- Modified the name of the standard;

---Adjusted the list of normative references in Chapter 2 according to the specific reference

method in the text;

--- TLA is added to the abbreviation;

--- P1t is added in the symbol.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes an objective light scintillation meter that can be used for the following purposes.

---Measure the inherent performance of lighting equipment without introducing voltage fluctuations related to illuminance flicker. During this measurement, provide lighting equipment

Provide a stable power supply.

--- Test the immunity of lighting equipment to (unintentional) voltage fluctuations applied to the AC power supply in terms of illuminance flicker; here

During the test, a specified set of voltage fluctuations is applied to the AC mains and the immunity of the lighting equipment to disturbances is determined.

In addition to the above two purposes, the immunity of lighting equipment can also be tested under the AC power supply with predetermined voltage fluctuations, such as from

The signal is transmitted from the power supply. However, this document does not define it in further detail.

Note 1.IEC 61000-4-13.2015[24] provides guidance on the test level and frequency of interference power transmission signals.

This document establishes a common and objective test reference to evaluate the performance of lighting equipment in terms of illuminance flicker. This test does not

Consider temporal changes in the color of light (flickering of colors).

This method applies to lighting equipment covered by IEC TC34, such as lamps and luminaires intended to be connected to the low-voltage network system. alone

Independent accessories, such as control gear, can be tested with representative light sources.

The objective optical scintillation meter and voltage fluctuation immunity method described in this document is based on the standards of IEC 61000-3-3 Voltage fluctuation limits and IEC 61000-4-15 Standard for scintillation meters.

The objective optical scintillation meter described in this document is suitable for objectively evaluating the flicker of lighting equipment powered by various power sources, such as AC mains, DC

mains, battery or via external dimming. The specific voltage fluctuation immunity test method described in this document is applicable to the rated voltage 120VAC and rated voltage 230VAC, 50Hz and 60Hz lighting equipment.

Note 2. The principle of the above method can be used for other nominal voltage and frequency values.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

IEC 61000-3-3 Electromagnetic Compatibility Part 3-3. Limits for equipment with rated current $\leq 16\text{A}$ per phase and unconditional access in public connection]

Note. GB/T 17625.2-2007 electromagnetic compatibility limit is for the equipment with rated current $\leq 16\text{A}$ per phase and unconditional access in the public low-voltage power supply system

Limits of resulting voltage changes, voltage fluctuations and flicker (IEC 61000-3-3:2005, IDT)

IEC 61000-4-15 Electromagnetic Compatibility Part 4-15. Test and Measurement Techniques Scintillation Meter Function and Design Specifications [Electro-