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

GB/T 24826-2016

Replacing GB/T 24826-2009

**General lighting -- Light emitting diode (LED) products and
related equipment -- Terms and definitions
(English Translation)**

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 24826-2009 "General lighting LED and LED module terminology and definition", and GB/T 24826-2009 compared to the main technical changes are as follows.

--- deleted 2.6,2.13,2.14,2.17,2.21 ~ 2.26,2.28 ~ 2.31,2.33,2.35 ~ 2.38,2.40,2.42,2.44 ~ 2.47, 2.49,2.50 ~ 2.56,2.58,2.60 ~ 2.62 (see 2009 edition);

--- increased by 3.1,3.6,3.8 ~ 3.11,3.14 ~ 3.18,3.19.4 ~ 3.22,3.28,3.30,3.32 ~ 3.37,3.38.2 ~ 3.38.4, 3.38.6 ~ 3.38.8,3.39,3.41,3.42 (see this edition);

--- modified the definition of "opposite angle" (see 3.2, 2009 version 2.2);

- 3.4 added "Note 2" (see 3.4, 2009 edition 2.4);

- modified the definition of "group" (see 3.5, 2009 edition 2.5);

--- modified the definition of "main wavelength" (see 3.7, 2009 edition 2.7);

--- modified the definition of "forward voltage" (see 3.13, 2009 version 2.9);

--- modified the definition of "LED module" (see 3.19, 2009 edition 2.12);

--- modified the definition of "built-in LED module" (see 3.19.1, 2009 edition 2.41);

--- modified the definition of "standalone LED module" (see 3.19.2, 2009 edition 2.43);

--- modified the definition of "light color coding" (see 3.23, 2009 edition 2.15);

--- modified the definition of "light-emitting diodes" (see 3.24, 2009 version 2.16);

- modified the definition of "live parts" (see 3.25, 2009 edition 2.63);
- "the light of the light effect" modified to "light effect" (see 3.26, 2009 version 2.18);
- modified the definition of "luminous flux" (see 3.27, 2009 edition 2.19);
- modified the definition of "luminous intensity" (see 3.29, 2009 edition 2.32);
- change the "peak emission wavelength" to "peak wavelength" (see 3.31, 2009 edition 2.27);
- modified the definition of "ambient temperature" (see 3.38.1, 2009 version 2.1);
- modified the definition of "rated maximum temperature" (see 3.38.9, 2009 edition 2.57);
- modified the definition of "storage temperature range" (see 3.38.10, 2009 edition 2.32);
- Change the "forward voltage temperature coefficient" to "the temperature coefficient of the forward voltage" (see 3.38.111, 2009 edition 2.34);
- Change the "model" to "type" (see 3.40, 2009 edition 2.59).

This standard uses the translation method equivalent to IEC 62504.:2014 "General lighting LED products and related equipment terminology and definitions".

For ease of use, this standard has been modified as follows.

- the word "international standard" is changed to "this standard";
- remove the preamble of IEC 62504;
- Increased index.

This standard is proposed by the China Light Industry Federation.

This standard by the National Lighting Standardization Technical Committee (SAC/TC224) centralized.

The drafting of the standard units. the State Electric Light Source Quality Supervision and Inspection Center (Beijing), Hangzhou Jing blue lighting Technology Co., Ltd., Shenzhen Yu Fu Lighting Co., Ltd., Hangzhou Huapu Yongming Optoelectronics Co., Ltd., Hengdian Group was state lighting Co., Ltd., the national electronic components Quality Supervision and Inspection Center (Chuzhou), Zhejiang Jingri Lighting Technology Co., Ltd., Beijing Electric Light Source Research Institute.

1 Scope

This standard will help to understand the terminology and definitions of general lighting based on LED technology. These terms have been applied to our country LED standard or producer information.

This standard gives descriptive terms (such as "LED light sources"), as well as measurable parameters revised from IEC 60050-845 (eg "Color rendering index").

Note: Appendix A gives an overview of the LED package design and the system consisting of LED light sources and control devices.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

CIE Technical Report 127..2007, LED chip measurement (Measurement of LEDs)

3 Terms and definitions

IEC 60050-845 and the following terms and definitions apply to this document.

Old age

Collect the pre-processing phase of the LED light source before the initial value.

Right angle horn subtense from the point of view of the space, the angle of the apparent light.

Note 1: The object angle is expressed in radians (rad).

Note 2: The angular expansion depends on the viewing distance, but at any distance is not less than the minimum distance of the eye's adaptive adjustment.

Note 3: The position and orientation of the apparent light source depends on the viewing position in the beam.

Note 4: The apparent angle of the apparent light source is only suitable for the wavelength range of 380nm ~ 1400nm.

Note 5: IEC TR62778 gives additional information on beam divergence.

Note 6: rewrite IEC 60825-1, definition 3.7; IEC 62471, definition 3.2.

Apparent light source apparent source for a given retinal hazard assessment position, the actual luminous body or virtual emitter that forms the smallest image on the retina (taking into account the adjustment range of the human eye).

Note 1: The adjustment range of the eye is assumed to vary from 100mm to infinity. For a given position in the beam, look at the position of the apparent light source. Placed within the range of adaptive adjustment of the eye in the case of radiation that produces maximum retinal damage.

Note 2: The definition of the apparent light source is used to determine the apparent original position of the laser radiation in the wavelength range of 380 nm to 1400 nm for a given evaluation

position,