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

GB/T 29295-2012

**Test methods of performance of self-ballasted LED reflector
lamps**

反射型自镇流LED灯性能测试方法

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Foreword

This standard rule according to GB/T1.1-2009 given draft. The standard proposed by China National Light Industry Council. This standard by the National Standardization Technical Committee of electrical lighting (SAC/TC224) centralized. This standard was drafted. Beijing Semiconductor Lighting Technology Promotion Center (National Semiconductor Lighting Industry Alliance), the National Electric Light Source Quality Supervision and Inspection Center (Beijing), Hangzhou heyday Technology Instrument Co., Ltd., Suzhou Bao Lai Thai Union Optical Co., Ltd., Shanghai Semiconductor Lighting Project technology Research Center, Hangzhou distance optoelectronic information Co., Ltd., Shenzhen Bang Beier Electronics Co., Ltd., Dongguan, Shangchong Guang technology Co., Ltd. Hangzhou for Optoelectronic Technology Co., Ltd., Dongguan Kingsun Optoelectronic Co., Ltd., Ningbo Crystal Branch Photoelectric Co., Ltd., Zhejiang depth Optoelectronics Technology Co., Ltd., Hangzhou Chong-Import & Export Co., Ltd., Jiangsu comfort Lighting Co., Ltd., Hangzhou Solid State Lighting Co., Ltd., Beijing Institute of electric light. Drafters of this standard. Ruan Jun, Zhao Lu Bing, Hua Shuming, Zhang Wei, HOU Min Yin, Zhang Yingchun, Yang Jiexiang, PAN Jian roots, He Lin, Ma Guoming Zhang 5296 Li Xuliang, Ya-Su, Zhang Zhen, Chen Hongmei, Zhang Haicheng, ZHENG, Yang Xiaoping, section Yan Fang, Jiang Shan, Zhao Xiurong. Test methods of performance of self-ballasted LED reflector lamps

1 Scope

China's national test method for self-ballasted LED reflector lamps - the retrofit spotlights and downlight lamps sold to replace the halogen PAR and MR types, where the whole product claim is about the beam: how much light goes where, at what colour, and how both hold up as the lamp warms. The standard specifies the test methods for the performance of self-ballasted LED reflector lamps, and it is the measurement half of the pair completed by GB/T 29296-2012, which sets the performance requirements the results are judged against. The quantities it covers are the ones a reflector lamp is bought on: the electrical characteristics, the luminous flux and the luminous efficacy, the centre beam intensity and the beam angle measured in accordance with GB/T 19658, the chromaticity coordinates,

the correlated colour temperature and the colour rendering index determined in accordance with GB/T 7922 and GB/T 5702 on the colorimetric basis of CIE 15, the beam uniformity, and the behaviour of all of them as the lamp reaches thermal equilibrium. The last point is what distinguishes an LED measurement from an incandescent one: an LED lamp is at its brightest the moment it is switched on and then loses output as the junction heats, so the standard sets the stabilisation and the ambient conditions before any reading is taken, and how long the lamp must run. The photometric distribution follows the general requirements of GB/T 9468 and the flux measurement GB/T 26178-2010, with GB/T 24824-2009 applying to the LED modules themselves. Issued on 31 December 2012 and in force since 1 September 2013, it is held by SAC/TC 224.

This standard specifies the test method for reflective self-ballasted LED lamp performance parameters, including working conditions applicable test, optical parametric testing, Aging and life testing testing methods related indicators. This standard applies to similar shape reflective tungsten halogen lamps, in domestic, commercial and similar applications as general lighting, local lighting or positioning the lighting, the stable ignition components integrated as one of the LED lights. Scope is as follows:

- Rated voltage AC220V Frequency 50Hz;
- In line with GU10, B22, E14 or E27 lamp requirements;
- PAR16, PAR20, PAR30, PAR38 LED light.

Note 1. PAR xx (PAR xx behalf of PAR16, PAR20, PAR30, PAR38) series of light corresponding to the diameter of xx/8in1).

Note 2. appearing in this standard "light" stands for "reflective self-ballasted LED lights," unless otherwise specifically stated by other types of lamps.

2 Normative references

The following documents for the application of this document is essential. For cited documents with dates, only the dated edition applies to this document. For undated references, the latest edition (including any amendments) applies to this document.

GB/T5702 light color evaluation method

GB/T7922 Measurement lighting color General requirements

GB/T9468 luminaire photometric distribution

GB/T19658 reflector lamp center light intensity and beam angle measurement method

GB/T24824-2009 general lighting LED module testing method Methods of measurement
GB/T26178-2010 flux

GB/T29293-2012 LED downlight performance measurement

GB/T29296-2012 reflective self-ballasted LED lamp performance requirements CIE15 colorimetry (Colorimetry)

3 Terms and Definitions

GB/T29296-2012 defined terms and definitions apply to this document.

4 General requirements for tests

Unless otherwise specified, test or tested under the conditions of the present provisions will be. 1) 1in = 25.4mm.

4.1 Environmental conditions Optical parameters measured ambient temperature shall be $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, the maximum relative humidity of 65% of draft-free environment for the conduct.