

ICS 77.120.99

CCS H65



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

GB/T 14633-2010

Replacing GB/T 14633-2002

Rare earth three-band phosphors for fluorescent lamps

灯用稀土三基色荧光粉

Issued on: August 9, 2010

Implemented on: May 1, 2011

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard replaces GB/T 14633-2002 "light rare earth trichromatic phosphors." This standard compared with GB/T 14633-2002, the main changes are as follows:

--- Normative references added reference standard GB/T 5838 "phosphor terminology" and GB/T 20170.1 "rare earth metal General and rare earth compound particle size distribution measuring physical properties of the compound testing methods";

--- Delete "particle size distribution," "correlated color temperature" is defined; increase the "thermal quenching" of the definition; "heat stability" in the relative brightness and color Symbol coordinates expressed adjusted;

--- The central value of the red phosphor chromaticity coordinates (x_m , y_m), the central value of a blue phosphor chromaticity coordinates (y_m) and the original table 1, Table 2, Table 3, Table 4, particle properties (including center particle size, specific surface area) of the assessment by the assessment center value and deviation value adjustment Only deviation assessment for the whole, the center value is determined by supply and demand sides negotiated;

--- Delete 1, Table 2 and Table 3, the assessment of the particle size distribution of the original table;

--- Delete the original Tables 1 and 2 in the examination of thermal stability, thermal stability of the original table 3 of the assessment by the temperature adjusted to 550 °C 600 °C;

--- Merge former Table 1, Table 2 and Table 3.

--- All grades increase the thermal quenching properties, pH, conductivity and assessment indicators;

--- Delete the original table relative brightness, correlated color temperature assessment four pairs; deviation indicators and chromaticity coordinates of CRI has been adjusted.

Appendix A of this standard is an informative annex. This standard by the National Standardization Technical Committee rare and centralized. This standard is drafted by: Jiangmen City Branch Hang Industrial Co., Ltd.. Participated in the drafting of this standard. Shanghai Yuelong New Materials Co., Ltd., Xiamen Topstar New Materials Co., Ltd.,

Guangzhou Nonferrous Metals Research Institute, Hangzhou Daming Fluorescent Material Co., Ltd. Changshu Asia fluorescent material. The main drafters of this standard. IWC Jiang, Huang Rui sweet, Luger mountain, Chen Rao. This standard replaces the standards previously issued as follows:

--- GB/T 14633-1993, GB/T 14633-2002. Light rare earth trichromatic phosphors

1 Scope

GB/T 14633-2010 is the Chinese national standard on rare earth three-band phosphors for fluorescent lamps, in the field of metallurgy. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 9 August 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2011. Classification: ICS 77.120.99, CCS H65. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the light rare earth trichromatic phosphor requirements, test methods, inspection rules and signs, packaging, transportation and storage. This standard applies to the high temperature reaction of the europium-activated yttrium oxide to terbium, cerium-activated magnesium aluminate, europium at low (or low-cost europium, Manganese) barium magnesium aluminate activated at 253.7nm UV excitation emit red, green and blue fluorescent phosphors, and by the Three kinds of phosphors are mixed by a certain percentage of light rare earth trichromatic phosphors. The main body used for low pressure mercury vapor fluorescent lamps.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 5838 phosphor terminology

GB/T 8170 repair value expressed about the rules and limit values \u200b\u200band judgment Rare earth trichromatic phosphors Test methods

GB/T 14634 (all parts) lamp

GB/T 17262 Single-capped fluorescent lamps - Performance requirements Determination of

GB/T 20170.1 physical properties of rare earth metals and rare earth compounds tested compound particle size distribution Determination of pH.

GB/T 23595.5 white LED light rare earth yellow phosphor Test methods - Part 5

GB/T 23595.6 of rare earth yellow phosphor white LED Test methods - Part 6.
Determination of conductivity

3 Terms

GB/T 5838 and established the following terms and definitions apply to this standard.

3.1 Standard phosphor standard phosphors And certain requirements specified grades obtained, and after the performance calibrated for measuring the relative performance of the phosphor.

Note. This standard uses the corresponding light rare earth trichromatic phosphors national standard sample as a standard phosphor.

3.2 Emission peak emission dominant peak Emission spectrum intensity of the largest peak. Unit nm.

3.3 The specific surface area specific surface area Particle surface area to its mass (or volume) ratio. Units of square centimeters per gram (cm²/g) or square centimeters per cubic centimeter (Cm²/cm³).

3.4 Thermal stability thermostability Device fabrication process, the phosphor is heat-treated for stability.

Note. This standard contains the relative brightness of thermal stability (ΔB_h) and chromaticity coordinates of the thermal stability (Δx_h , Δy_h).

3.5 Thermal quenching (temperature quenching) temperature quenching Luminescent properties caused by the temperature rise becomes weak/of the phenomenon when the temperature returns luminescent properties along with recovery.

Note. This standard contains the relative brightness of thermal quenching (ΔB_q) and chromaticity coordinates of the thermal quenching (Δx_q , Δy_q).