

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

JJG 213-2003

Replacing JJG 213-1990

Verification Regulation of Standard Lamps for Distribution (Colour) Temperature (English Translation)

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3 Terms (1)

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Distribution (color) temperature standard lamp verification procedure

1 Scope of application this procedure applies to the first verification, subsequent verification and inspection in use of distributed (color) temperature standard lamps.

2 Citations

GB 5702-1985 "Light source color evaluation method" at the time of citation, attention should be paid to the use of the currently valid version of the above documents.

3 terms

3.1 [Spectral] distribution temperature of the light source in a certain wavelength range $[\lambda_1, \lambda_2]$, if the radiation emitted by the light source and the radiation of the black body at a certain temperature have the closest spectral power distribution, then the absolute temperature of the black body is defined as the source in the wavelength range $[\lambda_1, \lambda_2]$, referred to as the distribution temperature. See Appendix C for calculation steps and formulas.

3.2 Color temperature of the light source If the chromaticity of a light source emitting light is the same (match) as the chromaticity of a black body at a certain temperature, then the black body at this time the absolute temperature is called the color temperature of the light source, referred to as the color temperature.

4 Overview

Distribution (color) temperature standard lamp is used to save and reproduce the distributed temperature value, and then reproduce the visible wavelength range A measuring instrument for the internal light source relative to the spectral power distribution standard. It is specially made according to certain technical conditions, luminous performance Stable, incandescent tungsten filament lamp with colorless bulb and quartz bulb bromine tungsten lamp (hereinafter referred to as standard lamp). After igniting, it emits a continuous spectrum from the ultraviolet to the infrared wavelength range, with

relative wavelengths in the visible wavelength range (380 to 780) nm.

The spectral power distribution is very similar to the distribution of blackbody at a certain temperature.

According to their definition, the distribution temperature and color temperature of the light source are conceptually very different, and numerically not necessarily the same. However, for a light source whose relative spectral power distribution is the same as that of a black body, its color temperature value is numerically equal.

a distribution temperature value in the visible wavelength range; a light source with a spectral power distribution similar to that of a black body, such as an incandescent tungsten lamp, the color temperature value is very small from the distribution temperature value in the visible wavelength range. It is considered to be within the range of the usual measurement error.

identical.

On the other hand, for general incandescent light sources, the distribution temperature values in different wavelength ranges are also different.

Unless otherwise stated, it refers to the distribution temperature in the visible wavelength range.

Since the temperature of each part of the filament is not exactly the same when the standard lamp is illuminated, the distribution temperature described in this specification is Refers to the distribution temperature of the radiation of each part of the filament that is uniformly mixed in the metering direction.

In the normal operating temperature range, the relationship between the standard lamp lamp current i_T and the corresponding distributed temperature value T_d is available.

The following formula indicates.