

JIS

JAPANESE INDUSTRIAL STANDARD

**Total luminous flux measurements on
discharge lamps used for
photometric standards**

JIS C 7607^{—1991}

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by

Japanese Standards Association

In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

1. Scope

This Japanese Industrial Standard specifies methods for obtaining total luminous fluxes of discharge lamps used for photometric standards (hereafter referred to as the "lamps to be measured") using an integrating sphere, from the total luminous flux of the standard photometric discharge lamp (hereafter referred to as the "standard lamp") of the same kind, by means of relative measurement.

This Standard shall be appropriately used for total luminous flux tests of general lighting fluorescent lamps and high intensity discharge lamps (hereafter referred to as the "HID lamps"), if nothing interferes.

Remarks: The following Standards are cited in this Standard:

JIS R 6001-Abrasive Grain Sizes

JIS Z 8103-Glossary of Terms Used in Instrumentation

JIS Z 8113-Glossary of Lighting Terms

JIS Z 8120-Glossary of Optical Terms

2. Definitions

For the purpose of this Standard, in addition to the definitions specified in JIS Z 8103, Z 8113, and Z 8120, the following principal definitions shall apply:

- (1) discharge lamp used for photometric standard A discharge lamp the electrical and optical characteristics of which are verified as stable, and which is subjected to determination of rating (calibration) of the total luminous flux for use as total luminous flux tests of general lighting discharge lamps.

There are fluorescent lamps used for photometric standards and HID lamps used for photometric standards.

- (2) standard photometric discharge lamp A discharge lamps which is used as the standard for comparison, the total luminous flux of which is rated (calibrated) and the rated value is considered as constant for a certain period.

There are standard photometric fluorescent lamps and standard photometric HID lamps.

- (3) light receiver The light receiving part of a photometer consisting of combination of a photoelectric device, diffuse transmitting plate (s) (including diffuse transmitting plate of photometric window of integrating sphere) and optical filter (s). It sometimes includes an amplifier.
- (4) screen (in an integrating sphere) A white diffuse reflecting plate painted same as the inner wall of the integrating sphere which screens the direct light radiated from the light emitting part and the scattered light from the glass bulb of the standard lamp or the lamp to be measured so that such light does not reach the photometric window directly.
- (5) photometric window A window structured in such a way, that a diffuse transmitting plate with a possible flat spectral transmitting characteristic in visual region is set in a small hole perforated on the wall of an integrating sphere, so that no unevenness appears in the inside wall of the sphere.
- (6) specified lamp wattage A specific wattage to be fed to the lamp for measurements of standard lamps or lamps to be measured.