
**Fine ceramics (advanced ceramics,
advanced technical ceramics) — Light
source for testing semiconducting
photocatalytic materials used under
indoor lighting environment**

*Céramiques techniques — Sources lumineuses destinées aux
essais des matériaux photocatalytiques semi-conducteurs dans un
environnement d'éclairage intérieur*

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The committee responsible for this document is ISO/TC 206, *Fine ceramics*.

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Fine ceramics (advanced ceramics, advanced technical ceramics) — Light source for testing semiconducting photocatalytic materials used under indoor lighting environment

1 Scope

This International Standard specifies the light source and radiometer used in the performance evaluation of semiconducting photocatalytic materials used under an indoor lighting environment in a laboratory. A light source of an indoor lighting environment does not include the sunlight passing through the window glass.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10677, *Fine ceramics (advanced ceramics, advanced technical ceramics) — Ultraviolet light source for testing semiconducting photocatalytic materials*

IEC 60081, *Double-capped fluorescent lamps — Performance specification*

CIE 13.3:1995, *Method of measuring and specifying colour rendering properties of light sources*

IEC 60050-845: 1987, *International electrotechnical vocabulary, Lighting*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

photocatalyst

substance that carries out many functions based on oxidization and reduction reactions under optical irradiation, including decomposition and removal of air and water contaminants, deodorization, and antibacterial, antifungal, self-cleaning and antifogging actions

3.2

indoor light-active photocatalyst

substance that carries out many functions based on oxidization and reduction reactions produced by artificial light sources for general lighting service, including decomposition and removal of air and water contaminants, deodorization, and antibacterial, antifungal, self-cleaning and antifogging actions

3.3

indoor lighting environment

indoor lighting environment with artificial light sources for general lighting service that does not include sunlight

3.4

correlated colour temperature

the temperature of the Planckian radiator whose perceived colour most closely resembles that of a given stimulus at the same brightness and under specified viewing conditions

Note 1 to entry: The correlated colour temperature is expressed in kelvins (K).

Note 2 to entry: The recommended method of calculating the correlated colour temperature of a stimulus is to determine on a chromaticity diagram the temperature corresponding to the point on the Planckian locus that is intersected by the agreed isotherm line containing the point representing the stimulus.

Note 3 to entry: Reciprocal correlated colour temperature is used rather than reciprocal colour temperature whenever correlated colour temperature is appropriate.

[SOURCE: IEC 60050-845: 1987, definition 845-03-50]

3.5

colour rendering index

measure of the degree to which the psychophysical colour of an object illuminated by the test illuminant conforms to that of the same object illuminated by the reference illuminant, suitable allowance having been made for the state of chromatic adaptation

[SOURCE: IEC 60050-845: 1987, definition 845-02-61]

3.6

CIE 1974 general colour rendering index

Ra

mean of the CIE 1974 special colour rendering indices for a specified set of eight test colour samples

[SOURCE: IEC 60050-845: 1987, definition 845-02-63]

3.7

high transmission region

HTR

wavelength region for which transmittance of a UV sharp cut-off filter is larger than 72 %; it is one of the performance descriptions for UV sharp cut-off filters

Note 1 to entry: See Key A in [Figure 1](#).

3.8

threshold limit wavelength of high transmission

TLH

wavelength for which transmittance of a UV sharp cut-off filter is 72 %; it is one of the performance descriptions for UV sharp cut-off filters

Note 1 to entry: See Key B in [Figure 1](#).

3.9

absorption region

AR

wavelength region for which transmittance of a UV sharp cut-off filter is less than 5 %; it is one of the performance descriptions for UV sharp cut-off filters

Note 1 to entry: See Key C in [Figure 1](#).

3.10

threshold limit wavelength of absorption

TLA

wavelength for which transmittance of a UV sharp cut-off filter is 5 %; it is one of the performance descriptions for UV sharp cut-off filters

Note 1 to entry: See Key D in [Figure 1](#).