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TECHNICAL SPECIFICATION

Lighting systems and related equipment – Vocabulary

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FOREWORD

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IEC TS 63105 has been prepared by IEC technical committee 34: Lighting.

The text of this Technical Specification is based on the following documents:

Draft	Report on voting
34/710/DTS	34/787A/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This document was developed by TC 34 in close cooperation with

- IEC/TC 23 "Electrical accessories"
- ISO/TC 274 "Light and lighting"
- CIE International Commission on Illumination

LIGHTING SYSTEMS AND RELATED EQUIPMENT – VOCABULARY

1 Scope

This document establishes terms and definitions in the field of lighting systems and related equipment.

Terminological literature for other fields of lighting is listed in the bibliography.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1 Lighting

3.1.1
lighting
illumination
application of light to a scene, objects, or their surroundings

[SOURCE: IEC 60050-845:2020, 845-29-001, modified – The note has been deleted.]

3.1.2
adaptive lighting
lighting responding to circumstances or according to predefined conditions, while maintaining the lighting quality within the specified requirements for these circumstances or conditions

Note 1 to entry: The requirements can focus on different aspects such as energy efficiency, dynamic user needs, visual tasks or ambience.

Note 2 to entry: The terms "smart lighting" and "intelligent lighting" are sometimes used with a similar meaning.

[SOURCE: IEC 60050-845:2020, 845-29-027]

3.1.3
integrative lighting
lighting integrating both visual and non-visual effects, and producing physiological and/or psychological benefits upon humans

Note 1 to entry: The term "integrative lighting" applies only to humans.

Note 2 to entry: Lighting primarily for therapeutic purposes (light therapy) is not included.

Note 3 to entry: The term "human-centric lighting" is used with a similar meaning.

[SOURCE: IEC 60050-845:2020, 845-29-028]

3.2 Lighting systems

3.2.1
system
set of interrelated items that collectively fulfil a requirement

Note 1 to entry: A system is considered to have a defined real or abstract boundary.

Note 2 to entry: External resources (from outside the system boundary) can be required for the systems to operate.

Note 3 to entry: A system structure can be hierarchical, e. g. system, subsystem, component, etc.

Note 4 to entry: Conditions of use and maintenance can be expressed or implied within the requirement.

[SOURCE: IEC 60050-192:2015, 192-01-03, modified – The verbal forms "may" and "should" in the notes have been replaced with "can". The domain of application has been removed.]

3.2.2
lighting system
system (IEV 192-01-03) designed to provide lighting (IEV 845-29-001)

Note 1 to entry: A lighting system can be dedicated to

a) the support of one or more specified visual tasks under specified conditions considering other requirements such as human comfort, safety, the appearance of the surrounding environment and energy consumption;

b) the support of other than human tasks.

Note 2 to entry: A lighting system can include a set of light sources, other physical components, communication protocols, user interfaces, software and networks to provide central control and monitoring functions.

Note 3 to entry: The light source(s) and the related equipment can be integrated in a single item, e.g. an LED module, a lamp or a luminaire.

Note 4 to entry: A lighting system can be networked to provide central or remote control and monitoring functions.

Note 5 to entry: A lighting system can be connected to or integrated with other systems or devices.

[SOURCE: IEC 60050-845:2020, 845-27-010]

3.2.3
adaptive lighting system
lighting system designed for adaptive lighting

3.2.4
integrative lighting system

lighting system designed for integrative lighting

3.2.5
lighting system network
interconnection (wired or wireless) between lighting system devices used for internal or external communication

Note 1 to entry: A lighting system network can carry digital data as well as analogue signals.

3.2.6
energy performance
<of a lighting system> calculated or measured amount of weighted net energy actually used or estimated to meet different needs associated with a standardized operation of a lighting system (IEV 845-27-010)

[SOURCE: IEC 60050-845:2020, 845-27-121]

3.2.7
lighting quality
degree of excellence to which the totality of lighting characteristics fulfils user needs and expectations or other applicable requirements

Note 1 to entry: The degree of excellence is not a quantitative measure but depends on the application area and covers individual end-user well-being, safety and public security, architecture and lit environment.

[SOURCE: IEC 60050-845:2020, 845-29-029]

3.2.8
networked device
<of a lighting system> device capable of communication with or within a lighting system

3.2.9
sensor
electric sensor
device which, when excited by a physical phenomenon, produces an electric signal characterizing the physical phenomenon

[SOURCE: IEC 60050-151:2001, 151-13-48]

3.2.10
compatibility
ability of a system or system components to have coexistence, interoperability, and/or interchangeability with other systems or systems components, depending on the context

Note 1 to entry: Because the terms "compatible" and "compatibility" are ambiguous, their use is not recommended when other terms are more specific. See definitions of coexistence (3.2.11), interoperability (3.2.12), and interchangeability (3.2.13) to determine which are most appropriate.

3.2.11
coexistence
ability of systems or system components to operate together without having harmful or undesirable effects on each other

3.2.12
interoperability
ability of systems or systems components to transmit, receive, interpret, and/or react to data and/or power and function in a specified manner

3.2.13
interchangeability
ability of a system component to replace the form and fit of another system component and perform in an equivalent way

3.2.14
physical interchangeability
ability of a system component to replace the form and fit of another system component

Note 1 to entry: System components need not be physically interchangeable.