

# **Nomenclature and Definitions for Illuminating Engineering**

# **ANSI/IES RP-16-10**

(Supersedes ANSI/IESNA RP-16-05)

Includes ANSI/IES Addenda listed in Annex B

## **Nomenclature and Definitions for Illuminating Engineering**

Publication of this Recommended Practice has been approved by the IES. Suggestions for revisions should be directed to the IES.

**Prepared by:  
The IES Nomenclature Committee**

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**6.8.3 Power source** - A transformer, power supply, battery, or other device capable of providing current, voltage, or power within its design limits. This device contains no additional control capabilities.

**6.8.3.1 Power supply** - An electronic device capable of providing and controlling current, voltage, or power within design limits.

**6.8.4 LED control circuitry** - Electronic components designed to control a power source by adjusting output voltage, current or duty cycle to switch or otherwise control the amount and characteristics of the electrical energy delivered to a LED package (component) or an LED array (module). LED control circuitry does not include a power source.

**6.8.4.1 LED driver** - A device comprised of a power source and LED control circuitry designed to operate a LED package (component), or an LED array (module) or an LED lamp.

**6.8.4.2 LED driver, Class II** - An LED driver that operates within Class II limits as defined by the latest version of the National Electrical Code (NEC) and the Canadian Electrical Code (CEC).

**6.8.5 LED luminaire** - A complete lighting unit consisting of LED-based light emitting elements and a matched driver together with parts to distribute light, to position and protect the light emitting elements, and to connect the unit to a branch circuit. The LED-based light emitting elements may take the form of LED packages (components), LED arrays (modules), LED Light Engine, or LED lamps. The LED luminaire is intended to connect directly to a branch circuit.

**6.8.5.1 LED package** -An assembly of one or more LED dies that includes wire bond or other type of electrical connections, possibly with an optical element and thermal, mechanical, and electrical interfaces. Power source and ANSI standardized base are not incorporated into the device. The device cannot be connected directly to the branch circuit.

**6.8.5.2 LED array or module** - An assembly of LED packages (components), or dies on a printed circuit board or substrate, possibly with optical elements and additional thermal, mechanical, and electrical interfaces that are intended to connect to the load side of a LED driver. Power source and ANSI standard base are not incorporated into the device. The device cannot be connected directly to the branch circuit.

**6.8.5.3 LED lamp, non-integrated** -An assembly comprised of an LED array (module) or LED packages (components) and ANSI standard base. The device is intended to connect to the LED driver of an LED luminaire through an ANSI standard lamp-holder (socket). The device cannot be connected directly to the branch circuit.

**6.8.5.4 LED lamp, integrated** - An integrated assembly comprised of LED packages (components) or LED arrays (modules), LED driver, ANSI standard base and other optical, thermal, mechanical and electrical components. The device is intended to connect directly to the branch circuit through a corresponding ANSI standard lamp-holder (socket).

**6.8.5.5 LED light engine** - An integrated assembly comprised of LED packages (components) or LED arrays (modules), LED driver, and other optical, thermal, mechanical and electrical components. The device is intended to connect directly to the branch circuit through a custom connector compatible with the LED luminaire for which it was designed and does not use an ANSI standard base.

**6.8.5.6 Hybrid LED luminaire** - A luminaire which incorporates LED-based light emitting elements and another type of light source such as incandescent or fluorescent lamps

## 6.9 Rated Lamp Life

The life value assigned to a particular type lamp. This is commonly a statistically determined estimate of median operational life.

## 6.10 Median Life

The total operating time at which, under normal operating conditions, 50 percent of any large group of initially installed lamps is expected to still be operating.

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## 7.0 SURFACES AND MEDIA FOR LIGHT CONTROL

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### 7.1 Diffusing Surfaces and Media

Those surfaces and media that redistribute at least some of the incident flux by scattering.

**7.1.1 Perfect diffusion** - That in which flux is uniformly scattered in accord with Lambert's cosine law (see **Section 7.1.1.1**).