

Glossary of Lighting and Electrical Terminology

ANSI – American National Standards Institute; The organization that develops voluntary performance standards for industries, including the electrical industry.

Average Rated Life – A rating (in hours) for traditional lamps that indicates when 50% of a large group of lamps have failed during operation at nominal lamp voltage and current. Every lamp has a mortality curve depicting its average rated life. Since LEDs don't "burn out", rated life is an indicator of when an LED lamp has

Ballast – A device used with an electric discharge lamp to obtain necessary circuit conditions for starting and operating sink for the ballast enclosure in order to prolong ballast life.

Base – The part of a lamp that mechanically holds it in place in the application. The base conducts electricity from the circuit to the lamp and can also be designed to dissipate heat.

Beam Angle – The angle between the two directions that the light intensity is 50% of the maximum intensity as measured in a plane through the nominal beam centerline.

Directional Lighting – Illumination on the work plane or object that is predominantly from a single direction.

Efficacy – A measurement used to compare light output to energy consumption measured in lumens per watt. If a 100-watt source produces 9,000 lumens, the efficacy is 90 lumens per watt.

CCT – Correlated Color Temperature; A specification of the color appearance of a light source measured by the thermal unit Kelvin. The measurement can be described as the warmth or coolness of a light source. Sources below 3200K are warm; those above 4000K are cool.

CFL – Compact Fluorescent Light; a fluorescent light similar in size to a traditional incandescent light bulb used for general lighting. Ultraviolet light excites phosphors in the lamp causing them to radiate visible light. CFLs contain mercury, so they must be disposed of carefully as outlined by the EPA, especially if broken.

CRI – Color Rendering Index; a measure of how a light source renders colors of objects compared to a reference light source. The CRI scale is from 0 to 100 with 100 being identical to the reference source.

Floodlight – A reflector lamp with a wide beam pattern or a luminaire consisting of lamp and reflectors at a fixed distance providing a wide field of illumination.

Fluorescent Lamp – A light consisting of a tube filled with argon and other inert gas. When electrical current is applied, the arc emits ultraviolet radiation that excites the phosphors inside the lamp wall causing them to radiate visible light.

HID – High Intensity Discharge; This is the general category term for mercury vapor, metal halide, and high-pressure sodium lamps.

High Bay – Refers to the type of lighting for industrial applications where the ceiling height is twenty feet or greater.

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High Pressure Sodium Lamp – An HID lamp that produces light by radiation from sodium vapor and mercury.

Incandescent – The process of creating light from heat, as in a traditional light bulb, where a filament is heated by electricity

Lamp – Refers to incandescent, fluorescent, high-intensity discharge, and LED manufactured light sources.

LED – Light Emitting Diode; a semi-conductor device used in solid-state LED lighting.

Lens – Transparent or translucent medium that alters the directional characteristics of light passing through it.

Low Voltage Lamp – A lamp that operates at 12V and requires the use of a transformer.

LPW Performance – The number of lumens produced by a light for each watt of electrical power supplied to the light. (Lumens Per Watt).

Lumen – Unit of luminous flux; a measure of the perceived power of light.

Lumen Depreciation – The decrease in the output of a light source over time. Each lamp type has a lumen depreciation curve (or lumen maintenance curve) showing the pattern of decreasing light output.

LUX – A metric unit of measure for luminance of a surface. One LUX is equal to one lumen per square meter

Mercury Vapor Lamp – A type of HID lamp that has a long life but is not as energy efficient as metal halide, producing 35 – 58 lumens per watt. Mercury vapor lamps also have a lower color-rendering index than metal halide lamps.

Metal Halide Lamp – Similar in construction to a mercury vapor lamp in which most of the light is produced by radiation from mercury vapor. Metal halides offer excellent color rendering and generate 65 – 115 lumens per watt.

PAR Lamp – Parabolic Aluminized Reflector; a lamp used to redirect light from the source using a parabolic reflector. PAR lamps are available with flood or spotlight distribution.

Photocell – A light sensing device used to control luminaires and dimmers based on the amount of light detected.

Power Factor – Power factor is a calculation of real power divided by total apparent power and measured on a scale from 0 to 1. A high power factor is an indication that more of the available power is being transferred for useful purpose, such as lighting a lamp. The higher the power factor is to 1, the closer the power consumption will be to the output power of the device. In other words, if a 3-watt lamp could consume exactly 3 watts of power, the power factor would be 1.

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Reflector – The part of a fixture that that shrouds a lamp and redirects a portion of the light being emitted.

Retrofit – In lighting, it refers to the upgrading of fixtures or lamps.

Spotlight – A lamp that produces a narrow beam angle designed to illuminate a specifically defined area.

SSL – Solid-State Lighting; Lighting that converts electricity into light using semiconductors. LEDs are solid-state lighting devices.

Troffer – A recessed office lighting fixture, traditionally housing fluorescent tubes.

Usable Light Hours – Refers to the life of an LED before the light output is reduced to half of its original intensity.

UV – Ultraviolet; Invisible radiation that is shorter in wavelength and higher in frequency than visible violet light.

