

Common Lighting Terms



A Lamp: The most common incandescent household lamp

Accent Lighting: Localized and directional lighting used to highlight, focus attention, and dramatize. Accent fixtures include track, recessed and specialty products

Ambient Lighting: Lighting that provides background brightness so you can move around a space and that reduces the contrast between sources of local brightness

Ampere (Amp): Unit of electrical current. The rate of electricity flow and circuit capacity are stated in amperes.

Aperture: Opening of a fixture through which light exits.

Architectural Lighting: Generally refers to built in lighting, such as recessed downlights, coves and valences.

Ballast: Electrical or electronic component required for fluorescent (and HID) lamps. Ballasts provide enough voltage to start the lamp and then limit the current for continuing operation.

Beamspread: The width of the beam of light in degrees. Defined as the point where intensity falls to 50% of maximum candlepower.

Candlepower: The intensity of light in a specific direction. Manufacturers publish candlepower data for directional light sources.

Canopy: Fixture part that covers and outlet box or attachment point; escutcheon.



Color Rendering Index (CRI): A measure of how light sources render colors. The reference (CRI of 100) is a full spectrum source of the same color temperature of the lamp. Use fluorescent lamps with a CRI of at least 80 for most residential applications.

Color Temperature: The appearance of white light, in terms of warmth or coolness. Color temperature is shown in degrees Kelvin. Warm color corresponds to lower color temperatures and cool colors to higher temperatures.

Compact Fluorescent: Small single-ended fluorescent lamp (CFL). They are available in many configurations; twin tube, quad tube, spiral etc. Many CFLs are designed to replace an incandescent lamp and can fit into most existing light fixtures formerly used for incandescents.



Damp Location: UL listing for fixtures used in a moist but unexposed area, such as a bathroom or under an eave.

Diffuser: Light control device that spreads light by scattering it. Opal glass and plastic, etched glass, fabric and paper act as diffusers.



Dimmer: Control that varies the output of the light source by reducing the voltage or current to the lamp.



Direct Lighting: Lighting that casts all (or at least 90%) of the light downward. The term can refer to the distribution of light or the fixtures that produce it.

Directional Lighting: Lighting that strikes an object or surface predominantly from a single direction. Directional lighting is usually used to highlight a specific object or work surface.

Downlight: Fixture that directs all light down.

Driver: Term for the power supply that operates an LED lighting system. It provides constant current or constant voltage to the light engine in order to maintain a constant luminous output.

Efficacy: Lamp efficacy is total lumen output divided by total watts consumed and is expressed as *lumens per watt* or *LPW*. Lamp efficacy measures the energy effectiveness of a light source.

Fluorescent Lamps: Operate by creating an electric arc inside a gas-filled tube. The arc excites the gas, producing ultra-violet energy, which in turn causes the phosphor coating inside the lamp to glow. The color of the light is determined by the phosphors. Fluorescent lamps require ballasts for proper operation.



Footcandle (FC): Unit of illuminance (light falling on a surface or object). One lumen falling on one square foot equals one footcandle.

G Lamp: Globe shaped incandescent lamp, generally for exposed use.



Halogen Lamp: Incandescent lamp with halogen gas fill, usually under high pressure, and a quartz glass capsule. Halogen lamps operate at higher internal temperatures, producing more lumens per watt and brighter light than ordinary incandescent.



HID Lamp: High Intensity Discharge Lamp. Most common are high-pressure sodium and metal halide.



IC-Rated: *Insulated Ceiling Rated.* This term refers to recessed lighting housings. With these fixtures, insulation may be placed against and on top of the housings.

Incandescent Lamp: Produces light with a wire filament, which incandesces to create light as it is heated by the electric current.



Indirect Lighting: Lighting that directs all or most light upward for ambient or general illumination.

IR Lamp: Infrared-Reflecting Halogen Lamp. A special interior coating redirects infrared energy onto the filament, which increases output without added power. They are about 33% more efficient than conventional halogen types.

Intensity: Luminous intensity, or candlepower, is the strength of the light in a particular direction, measured in candelas.

Junction Box: Enclosure that protects spliced wires and supports surface fixtures.



LED (Light Emitting Diode): A small solid state device that emits light by running small amounts of current through specially formulated semiconductors. They are used in exit signs, traffic lights, and to indicate dimmer status. LEDs are also emerging in residential application, I.E. under cabinet lighting, recessed lighting and pendants.



Low Voltage Lamps: Incandescent lamps that operate at 6, 12, or 24 volts, most commonly 12 volts. Low voltage lamps require a transformer to reduce the voltage from the normal household 120V.

Lumen: Unit of light output

Metal Halide Lamp: A commercially popular HID lamp with a generally cool, white color. Ceramic metal halide lamps enjoy high CRI and are available in a warm color. These lamps are most commonly seen in warehouses or in street lamps.

MR Lamp: *Multi-faceted Reflector Lamp*, the most popular of which is MR-16. MR lamps surround a halogen capsule with a designed glass or metal reflector with many surfaces or facets. Most MR lamps incorporate dichroic reflectors, which pass heat out the back of the lamp and reflect visible light forward in a cooler beam.



Occupancy Sensor: Control that uses Passive Infrared or Ultrasonic detection to sense whether someone is present or not and to turn lights on or off appropriately. Automatic on sensors turn lights on when presence is sensed; manual on sensors require you to press a switch. Both types turn lights off automatically when they no longer sense you.

PAR Lamp: *Parabolic Aluminized Reflector Lamp*. Generally constructed of hard glass, with a separate back reflector and front lens that are fused together.



Pendant: Fixture suspended from the ceiling on cable, chain, or stem.



Photocell: Light-sensitive device used to operate fixtures according to available daylight. Most often used to turn on outdoor, security, or landscape lights at dusk and to turn them off at dawn.

R Lamp: *Reflector Lamp.* Soft-glass reflectorized lamp with a generally smooth distribution. Many older R lamp types have been replaced by BR lamps.



Recessed Fixture: Fixture mounted above the ceiling. Recessed fixtures provide direct downlighting. Also called can lighting. There are three main types of recessed fixtures: New Construction, New Construction IC-rated and Remodel.



Scene: Specific setting for a group of dimmers, channels, or zones. A multi-scene control allows you to select the different settings by pushing a button.

Sconce: Also called a wall bracket. These light fixtures are designed to be mounted on a vertical surface.



T Lamp: *Tubular Lamp.* May be incandescent, halogen, or fluorescent.



Task Lighting: Localized light for specific visual activities.

Three-Way Switch: Operates a fixture from two locations.

Torchiere: Indirect floor lamp that sends all, or most, light upward.



Vanity Light: Also called *Bath Light*. Fixture used at a mirror or over a vanity for grooming.



Volt: Unit of electrical force or pressure. Household voltage in the United States, nominally 120 volts, varies between 110-125 volts.

Voltage Drop: Difference in voltage along a circuit. Voltage drop becomes a problem with low voltage wiring and small cable, reducing the intensity of lights at the far end of the cable.

Wall Washing: Lighting a wall smoothly to reduce texture or specular reflection.

Watt: Unit of electrical power.

Zone: In dimming, lights that are operated together.