

100% wattage capacity

Lutron dimmers can be loaded to their full wattage capacity. For example, a 600 W dimmer, with the side section attached (not derated), can handle 600 watts of load.

2-wire

Only 2 wires are required for the dimmer – one for the power input, the other to the output. No neutral wire is required.

3-way dimmer with switches

3-way dimmers adjust the light level from one location. When used with 3-way switches, the lights can be switched on to the dimmer level from a second location.

3-wire

Refers to when 3-wires are required for dimming, using a dimming ballast or driver. One wire is for the power input (HOT) to the 3-wire control, the second wire is for providing power to ballast/driver, the third wire is for providing a dimming signal to the ballast/driver. A neutral wire may also be required, actually adding a 4th wire.

Accent lighting

Directional (spot / focused) lighting to emphasize an object or draw attention to specific features, areas, displays, speakers. Since brightness has a strong influence on visual perception, accent lighting should be at least 3 times the ambient light level (theater/TV references this as “key light”).

Accessory controls

Controls that enhance the operation of the primary control. Multi-location switches, 3-way dimmers, and keypads allow dimming, switching, and scene-based control from multiple locations.

Accessory dimming

Allows for dimming from 1 or more additional wall locations in a room when used with a compatible multi-location dimmer. See also Companion dimmer.”

Air gap switch

A mechanical switch or relay that disconnects power to a lighting load through the physical separation of 2 contacts, resulting in an air gap between the contacts. The switch is a visible and front accessible mechanism on Lutron dimmers – styles will vary for each dimmer family.

Alternating current (AC)

Electrical current that reverses direction at regularly recurring intervals - or frequency. The frequency is measured in cycles per second called Hertz. Alternating Current is the primary type of electrical power used in commercial and residential buildings. Globally there are two AC frequencies: 60 Hertz is the standard AC frequency in the USA and countries that follow American standards; 50 Hertz is the standard AC frequency in Europe and countries that follow European standards.

Ambient lighting

Lighting throughout an area, which provides non-focused, general, uniform illumination – used for circulation and casual viewing of tasks. It establishes the basic mood or “ambiance” of a space (theater/TV references this as “fill light”).

Amp

A measure of current

Architectural lighting

The general/ambient lighting that illuminates the interior ceiling, walls and architectural features.

Astronomical timeclock

A timeclock that is programmed to a geographic location to provide automatic control of lights and/or shades relative to sunrise and sunset for every day of the year.

Back and side lighting

Directional lighting from behind or to the side of an object or person, intended to create a contrast around the contour.

Backbox

A metal or plastic enclosure housing one or more electrical devices. Standard USA 1 gang size is used for Lutron domestic controls (3” high x 2.5” deep). Also known as switchbox or wallbox.

Ballast

An electrical device required in fluorescent and high intensity discharge (HID) fixtures that furnish the necessary voltage, current, and waveform for starting and operating the lamp(s). In the United Kingdom, it is sometimes referred to as a choke or control gear.”

Bulb

A self contained light source, that screws into a light socket in a light fixture. Typically a glass or plastic dome covers the light source itself (filament or LEDs). This is different than a fixture, the bulb screws into the fixture.

Cable lighting

Flexible cables carrying low voltage power (from a remote transformer) to fixtures mounted on the cables – designed to be aesthetic, as well as functional.

Capacitive loads

Capacitive components (electronic fluorescent dimming ballasts, electronic low voltage (ELV) transformers, or capacitors) store energy using an electric field. The electric field is created by more electrons on one side of a capacitor versus the other; capacitors, by their nature, oppose a change in voltage. If the voltage is zero, then it will resist an increase in voltage. If a voltage is present, then it will resist either an increase or a decrease in voltage. This is the reason the voltage lags or falls behind the current.

Chandelier lighting

Suspended/pendant decorative lighting fixtures(s) that function as ambient lighting, as well as a decorative and/or formal role.

Circuit

An electrical term that refers to one closed loop of subsystem of the building electrical system – individually protected and dedicated to a specific use: lighting, data processing, power, etc. It usually refers to a 20 A circuit, which offers different wattage capacity at 120 V, 220 V or 277 V operation.

Circuit breaker

A switch in an electrical service panel that opens (breaks) the circuit when the current exceeds a predetermined safe amount (can be re-set). See Fuse.

Cold cathode

A tubular shaped lamp that is filled primarily with argon gas and has rugged posts on each end of the tube. A large voltage is put across the posts, which creates an arc across the tube. This arc collides with mercury atoms and creates ultraviolet light. The phosphor coating on the tube then changes the ultraviolet light to visible light. Similar to neon lighting, it is popular in cove applications. See Neon/Cold cathode.

Color rendering

A measure of color accuracy. A lamp’s light spectrum may change the color appearance of objects.

Commercial grade

See Specification grade

Compact Fluorescent Lamp (CFL)

A high efficiency lamp type that can be dimmed using a matching dimming ballast and dimmer. Standard types are Twin Tube, Quad Tube and Triple Tube. They are available in 2-pin and 4-pin versions that require an external ballast located in the fixture to operate. 2-pin versions are not dimmable and 4-pin versions are dimmable when used with a dimming ballast.

Companion dimmer

Allows for dimming from 1 or more additional wall locations in a room when used with a compatible multi-location dimmer. See also Accessory dimmer.

Conduit

Metal or plastic tube used to enclose insulated electrical conductors (i.e. copper wire through which electricity flows). It is sized, by code, for the quantity and size of wires.

Continuous daylight dimming

A method of automatic lighting control using daylight photosensors where lights are dimmed continuously or use at least 4 preset levels with at least 5 second fade between levels and where the control turns off light when sufficient daylight is available.

Control zone/control channel

A light or group of lights that can be controlled, i.e. dimmed or switched, together (electrical contractors will refer to this as a “switch leg”).

Current

The electrical rate of flow expressed in amperes – similar to the water flow rate in a pipe (gal/min).

Daylight dimming system

A daylight dimming system automatically lowers or raises the electric lighting to compensate for daylight that is present in a space. Rebates can be per system, fixture, sensor, or ballast; see individual rebates for complete details.

Daylighting

Lighting strategies that use the sun and sky as a diffuse light source, while shielding direct sunlight. Modern “sustainable/green” designs use daylighting photosensors that control dimmers/dimming ballasts to reduce electric lighting loads.

Decorative lighting

Lighting whose function is to attract the eye in order to reinforce the architectural design. It is usually ornamental or provides sparkle, glow or glitter.

Diffuse lighting

Non-directional lighting that creates uniform illumination. See Ambient lighting.

Diffuser

A device used to redirect or scatter the light from a lighting source. Diffusers scatter the light from a luminaire in all directions. Most diffusers are made of plastic (acrylic or polycarbonate) or glass, but it could be made of other materials, i.e. alabaster.

Digital fade dimmers

A style of Lutron dimmer that has a gradual fade-to-off/fade-to-on feature when pressed, as compared to the more traditional slide-to-off dimmers with a knob. The LED light level indicates the light level in the room. Only available in certain styles.

Dimmer

An electronic device and/or system used to vary the intensity of light output from a lamp source. It provides energy savings almost proportional to the amount dimmed for any lamp type and can offer preset lighting “scenes” to create ambiance and mood. It also provides longer lamp life for incandescent, halogen, or low voltage sources; e.g. 10% dimming doubles the expected lamp life.

Dimming ballast

An alternate device used to obtain the conditions (voltage, current and waveform) for starting and operating the lamp(s) while providing variable light output, i.e. dimming fluorescent lamp source(s). It must be matched to the lamp type, voltage and quantity. It is also available, with less capability, for HID sources.

Direct lighting

Directional lighting, usually from recessed or ceiling mounted fixtures. See Down lighting.

Down lighting

Typically produced by a recessed “high hat” or ceiling/surface mounted luminaire, which distributes all of its light downward.

Driver

Auxiliary device(s) needed to operate and vary the intensity of light output from LED lamp source(s) by regulating the voltage and current powering the source.

Dual device

A combination dimmer, switch/timer, and/or fan control that offers control for more than one group of lights, fans, or shades.

Electronic low-voltage (ELV)

A lighting source that uses a solid-state electronic transformer to step down the incoming line voltage to the voltage required by the lamp (typically 12 V). Some ELV loads are not dimmable, some are dimmable using forward phase control, and some are dimmable using reverse phase control. Track lights are usually electronic low-voltage. Control electronic low-voltage lamps with an electronic low-voltage dimmer ONLY.

Electronic Switch

These products are listed typically under UL1472 or UL508. Electronic switches use semiconductor device(s) to stop or start current flow into the load, and also include a mechanical disconnect or air-gap (FASS) switch to disconnect power for safety when replacing lamps. These switches typically need to be derated when ganged. With electronic switches it is important to pay attention to the type of loads that they are approved to operate.

Electrostatic Discharge Protection

Lutron products are designed to withstand static discharges (static shocks) common in dry climates, up to 16kV, without damage or loss of memory.

Emergency lighting

When the normal power supply fails, emergency lighting is the illumination that automatically lights the path towards the exit location(s). It may also serve to satisfy life safety and security lighting requirements.

Fade delay

The time interval between the selection of a new light intensity for a particular lighting zone and the beginning of that zone's change to the new level.

Fade override

The ability to temporarily or permanently disable fade times or delays.

Fade time

The total time it takes a dimmer to change lighting from one level to another.

Fading

The slow transition from one lighting level to another, i.e. from the lighting set for "lunch" to the lighting for "dinner" in a restaurant.

Filament

A tungsten or other metallic conductor that is heated inside a light source to produce heat and/or light.

Fill lighting

A diffuse, supplementary source of light intended to soften shadows or contrasts created by the key lighting/accent lighting. See Ambient lighting.

Fin

The raised vertical metal dividers or side sections on the yoke of certain Lutron dimmers.

Fins broken (FB)

When ganging dimmers, a portion of the fins (heat sink) must be removed to gang dimmers together in standard backbox configuration, using standard size wallplates. The dimmers must be derated. See also Ganging & derating.

Fixture

Common term for a luminaire.

Flood lighting

A) Any directional lighting source that "floods" a wide area/wall surface with light.

B) Lighting technique mainly used for outdoor, advertising and/or sports applications (usually with weatherproof/water tight luminaires).

Fluorescent Lamp

A low intensity "discharge" lamp that produces light by passing electric current from one socket (anode) to another socket (cathode) through low-pressure mercury gas. The resulting arc produces ultraviolet energy, which causes the phosphor coating on the inside of the glass envelope to "fluoresce" and produce light. Each lamp requires a matching ballast (integral or remote) to start and maintain the light output. A fluorescent dimming ballast allows many fluorescent sources to be dimmed down to 1%, 5% or 10% of maximum, measured light output. To achieve dimming, use a Lutron fluorescent dimmer and Lutron dimming ballast.

Focal lighting

Another name for accent/key lighting.

Foot-candle levels (ft-C)

Quantity of light arriving on a surface, as recommended for different environments and applications (as measured by a standard industry meter). A foot-candle is the quantity of light on 1 ft² of surface area 1 ft away from a light source of 1 candela (measured in USA as lumens per square foot (lm/ft²). Metric measure for lumens per square meter is lux. To convert foot-candles to lux, multiply by 10.76.

Fully variable fan speed control

A fully variable fan speed control offers full control of the fan speed as compared to a 3-speed or 7-speed fan control. It can be used for controlling 1 or more ceiling paddle fan(s) or exhaust fan(s). See also Quiet 3-speed fan control or Quiet 7-speed fan control.

Fuse

Safety device that interrupts a circuit when the current exceeds a predetermined safe level for a specific time period.

Gang

The act of mounting one or more controls side-by-side in a series of connected (ganged) wallboxes.

Ganging and derating

A typical dimmer is wider than a switch. This increased size helps the dimmer dissipate the internal heat normal to operation (see above). Dimmers can be ganged together so the space between them is the same as for switches. To do this, a portion of the side sections must be removed. The side sections are grooved to make the removal easy using a pair of pliers. The removal of these side sections reduces the capacity (load) the dimmer can control.

General lighting

Non-directional lighting that creates uniform illumination. See Ambient lighting.

Grazing light

Directional light located at a sharp angle/nearly parallel to a wall or ceiling, which tends to emphasize the texture of the surface by enhancing any variations in surface depth/texture. This can create shadows by design – or by accident, if the surface has not been installed and finished correctly.

Ground Fault Circuit Interrupter (GFCI)

A circuit protection device that monitors current flow and quickly de-energizes a circuit when the current returning on the neutral wire is less than what is going out on the hot wire (difference ≥ 6 mA). It is intended to provide protection from potentially dangerous ground-fault currents. Lutron GFCIs are also tamper resistant.

Halogen lamp

A type of incandescent lamp in which halogen is added to the filling gas. This addition allows evaporated tungsten from the filament to be reallocated (preventing the accumulation of deposits on the bulb wall), and increases lamp life.

Heat dissipation

During normal operation, dimmers do get warm to the touch. Wallbox dimmer efficiency is typically around 99%. The other 1% is dissipated in the dimmer as heat. So a dimmer on a 600 W load would produce around 6 watts of heat. This is on the order of a small night-light. Operating on its rated load, Lutron dimmers will stay below the UL limits of 140° F (60° C).

Heatsink

A metal plate used to remove/dissipate heat from the dimmer via conduction. The larger the heat sink, the cooler the components run, and the longer they last. Lutron uses a larger, sturdier heat sink to ensure that the dimmer will run cooler and last longer.

High intensity discharge (HID)

Electric discharge lamps, such as mercury, metal halide, low-pressure sodium, and high-pressure sodium. Light is produced when an electric arc is discharged in an arc tube and vaporizes metal gases such as mercury or sodium, resulting in visible light and ultraviolet energy. The UV, similar to fluorescent, strikes a phosphor coating on the inside glass envelope, fluoresces and produces light.

Lower wattage metal halide is a popular choice for interior applications, since it has more of a “white” full spectrum with better color rendering capabilities and color stability. High pressure sodium is more popular for exterior applications since it has the highest lumen/watt ratio. Each lamp requires a matching ballast (integral to the fixture or remote) to start and maintain the light output.

Highlighting

Another term for accent/directional lighting intended to create shape and texture in objects.

Illuminance

The “lighting level” measured in foot-candles, which indicates the density of light on a surface per unit area, i.e. how much light is falling on a given area (ft-C = lm/ft² or lux = lm/m²).

Incandescent lamp

An electric lamp in which a filament gives off light when heated by an electric current. Standard light bulbs are incandescent line voltage (120 V). They offer excellent color rendering and are simple to replace. Newer types of incandescent bulbs include halogen and tungsten-halogen (quartz).

Indirect lighting

Lighting levels achieved by reflection from ceiling (or wall) surfaces. An example would be an office space with a high-reflectance (greater than 90% reflectance white paint) ceiling illuminated by up lighting from fluorescent/HID lamps integrated into furniture partitions.

Inductive loads

Inductive components (magnetic transformers, motors and Lutron “Lamp Debuzzing Coils” (LDC) store energy using a magnetic field. The magnetic field is created by current flow; inductors, by their nature, oppose a change in current. If the current is zero then inductors will resist an increase in current; if current is flowing, then it will resist either an increase or a decrease in current. This is the reason the current lags or falls behind the applied voltage.

Infrared Receiver (IR Receiver)

A component that receives signals from an IR transmitter. Requires line of sight for functionality. Lutron products with IR receivers include dimmers, control units and shading products.

Infrared Transmitter (IR Transmitter)

A component that transmits signals to an IR receiver. Requires line of sight for functionality. Often referred to as a “hand-held” remote control device.

Intensity

The quantity of light, in candelas, emitted by a source in specific directions. Using these values, a diagram can be compiled that provides a direct impression of the light distribution from a lamp /luminaire combination

IR (infrared)

Electromagnetic waves in the frequency range just below visible light corresponding to radiated heat. IR waves are often used for remote controls for televisions. Lutron controls offer IR control for handheld remote control of lighting and/or shades.

Joule

A measure of energy, not typically mentioned when discussing lighting control.

Junction box

Metal or plastic box in which several conductors (wires) are spliced (joined) together. Used in connecting conduits together and as an outlet box – an integral part of lighting fixtures/luminaires. Junction boxes feature knockouts, which are circular die-cuts that are not completely severed, but removed to allow wiring.

Key lighting

The apparent primary source of light falling on a subject or area (from stage/TV). Generally used for art, displays and retail merchandising; it provides highlights and casts shadows to establish the character of the illuminated object and create visual interest.

Lamp life

Average rated period of the operation of the components of a lamp before it fails to produce light. Typically, lamp manufacturers define this as the point in time when 50% of the lamps have burned out.

Lamp/lamp source

An industry term for a man-made light source – any device that transforms electricity into light. It has all the parts necessary to connect it to a power supply. It is more commonly called a bulb or tube.

LED (light emitting diode)

A solid-state light source that uses multiple arrays of “white” or RGB “red/blue/green” light emitting diodes as a low wattage, low temperature source. LED arrays cannot operate without a driver, a fixture, and a control. These components must all be compatible in order to ensure that their integrity is maintained. It is an extremely long-lived light source, which also produces very little heat on the object being illuminated.

LED driver

Converts high voltage to usable LED voltage and current. See also Driver.

LED lamp

A collection of LEDs in a single housing, which is used as an alternative to an incandescent lamp.

Light output

An expression of the total amount of light that a source emits – measured in Lumens.

Line voltage

The standard 120 V power provided by receptacles and for lighting fixtures in commercial spaces, it might refer to 277 V power feed for fluorescent fixtures.

Linear slide dimmer

A Lutron dimmer that controls the light level by sliding a knob up or down to control the selected light level. Only available in certain styles.

Load type

An industrial term for a category of lighting used in the selection of dimming devices that must “match” the load type.

Load type optimization

Each dimmer is designed for the specific load type it is meant to control. This optimizes performance and reliability in the most demanding applications.

Locator light

A small LED light on some styles of dimmers and accessories that remains illuminated to help a user locate the control in a dark space.

Low voltage (LV)

Lighting fixtures that require a transformer for operation to step voltage down from line supply (120, 220 or 277 V) to 6, 12 or 24 V. The bulbs contain a smaller filament than incandescent bulbs for higher efficiency and more precise beam control. These bulbs have a long life expectancy and bright white light. Low-voltage lighting may use magnetic or electronic transformers.

Lumen (lm)

A unit of measurement of light energy. Specifically, lumens measure the amount of light an electric source (lamp) produces in all (360 degrees) directions (e.g. a candle gives off ~12 lumens, while a 100 W A19 incandescent lamp gives off ~1,650 lumens and a 4 ft 32 W T8 fluorescent lamp gives off ~3,100 lumens). The higher the number, the more light is emitted. "Lumens per watt (lm/W)" measures the efficiency of a light source.

Luminaire

A complete lighting unit or fixture capable of generating light. It consists of a lamp socket, housing and parts designed to position and protect the lamp, direct light, and connect the lamp to a power supply. Luminaire components may include the following:

- Baffle: Opaque or translucent element used to shield a light source from sight at normal viewing angles.
- Diffuser: A glass or plastic panel, which softens and spreads light rays in a random way.
- Filter: A glass or plastic color media used to change the color of the light source. Lens: A clear glass or plastic solid prismatic panel used to change the direction and control the distribution of light rays. The prisms are shaped to bend light rays in a specific direction. Special lenses can be used to change light color or to filter some of the light out of the beam pattern.
- Louver: An open metal or plastic panel of parallel and/or perpendicular blades or baffles used to shield light source from view at common viewing angles. The baffles may be used to absorb unwanted light or to control light distribution with different blade shapes such as straight, angled, or parabolic.
- Reflector: Used to direct light from a lamp in a specific way. The light distribution pattern is dependent on the shape and the reflectivity of the reflector material.
- Shielding: A general term to include all devices used to block, diffuse, or redirect light rays, including baffles, louvers, shades, diffusers, and lenses."

Magnetic Low-Voltage (MLV)

A low-voltage incandescent lighting source that uses a magnetic transformer to step down the incoming line voltage to that required by the lamp (typically 12 V). Track and recessed lights can be magnetic low-voltage. Magnetic low-voltage transformers tend to be larger and heavier than electronic low-voltage, and their power consumption must be counted towards dimmer load.

Motor

Typically an exhaust fan.

Multi-location dimming

A technology that allows full-range dimming from all locations in 3-way and 4-way circuits. Multi-location dimmers can be used with companion dimmers for full dimming control of the lights from 4 or more locations.

National electric code (NEC)

A set of rules sponsored by the National Fire Protection Assn & ANSI (American National Standards Institute) to protect against electrical hazards.

Neon/Cold Cathode (NCC)

A tubular shaped lamp that is filled primarily with neon or argon gas. A large voltage is put across the lamp, which creates an arc across the tube. This arc creates ultraviolet light. The phosphor coating on the tube then changes the ultraviolet light to visible light. Dimming controls must be matched to transformer type.

No fins broken (NFB)

Controls with no fins broken require wider-than-standard backboxes and wallplates. Able to utilize the full capacity of dimmers. See also Fins broken.

Non-dimmed load (switched load)

A load that can only be turned on/off and not set at any intermediate lighting level. This term usually refers to a lighting load.

Occupancy sensor

A sensor that works with certain Lutron lighting systems to save energy and increase convenience by automatically turning lights on when space is occupied, and off when space is vacant.

Multi-level – An occupancy sensor having an automatic off function for all lights, and either an automatic or manually controlled on function capable of activating between 30 – 70% of lighting power. After that event occurs the device will be capable of all the following actions (through manual control):

- Activate alternate sets of lights\
- Activate 100% of lighting power
- Deactivate all lights

Wallbox occupancy sensor – A wall-box occupancy sensor sits in an electrical wall box. They should not have an exterior switch pack or relay.

Wall or ceiling mounted occupancy sensor – Also known as remote mounted fixtures, these must be hardwired and use passive infrared, ultrasonic, or a hybrid of the two.

Fixture mounted occupancy sensor – Fixtures that have an occupancy sensor integrated into the product."

Paddle switch with dimmer

A style of Lutron dimmer that coordinates with a standard paddle switch for lighting. The paddle switch is designed to turn the lights on and off while the dimming function enables the user to select a desired light level. Only available in certain styles.

Pendant lighting

Lighting fixtures suspended from the ceiling surface via pipe, chain or cable. Requires power wires to be considered in selection/design of fixture.

Photocell

A control agent for fixtures that can automate light levels. Some photocells qualify controls for certain rebates and incentives.

Pier/post lighting

Practical terminology derived from the location where the luminaire is seated/mounted.

Polarized lighting

Lighting in which the direction and magnitude of the vibrating electric field are related in a specified way. Unpolarized light consists of waves moving in the same direction with their electric vectors pointing in random orientations about the axis of propagation. Plane-polarized light consists only of waves that vibrate in one direction. Light may be polarized by reflection or by passing it through polarizing filters. Polarized light has useful applications in crystallography, liquid-crystal displays, optical filters, and the identification of optically active chemical compounds.

Potentiometer

Slider or rotary mechanism that lets the user adjust the light level. The mechanical components of Lutron's potentiometers are enclosed to ensure that dust and dirt do not clog the mechanism, causing poor performance.

Power – expressed in unit watt (UW)

The time rate of flow of energy in a circuit. Product of the voltage and current, also expressed in volt-amps (VA).

Power density

The lighting load measured in watts per square foot – limited in many states by law or code.

Power-failure memory

A feature that ensures that lights will always return to previous state when power is restored.

Preset

Predetermined light intensity for one or more lights that can be recalled by pressing a single button.

Primary controls

The main control device required for any Lutron wallbox, mini, midi, maxi, or scalable systems to function properly. The primary control(s) can be used in conjunction with sub-controls, but sub-controls are not required for the device or group of devices to function properly.

Quiet 3-speed fan control

A 3-speed fan control offers 3 preset speeds plus off, and can only be used for controlling one ceiling paddle fan. Lutron's fan controls won't cause the motor to hum.

Quiet 7-speed fan control

A 7-speed fan control offers 7 preset speeds plus off, and can be used for controlling up to 4 ceiling paddle fans with one canopy module for each fan. Lutron's fan controls won't cause the motor to hum.

Radio frequency (RF)

A frequency or rate of oscillation (within the range of about 3 Hz to 300 GHz) that corresponds to the frequency of alternating current electrical signals use to produce and detect radio waves. Lutron utilizes its own radio frequency technology designed to be the most reliable in the industry. Lutron's use of low power frequencies correlates to less interference from other devices and penetrates construction material more easily.

Radio Frequency Interference (RFI)

RFI can create buzzing noise, in some audio and radio equipment. The RFI is generated by solid-state dimmers that are used nearby. Although every Lutron dimmer contains a filter to suppress RFI, additional filtering may be required in some applications. It is recommended to keep dimmers 8 feet away from audio video equipment to minimize interference.

Rebates

Custom rebates – are dependent upon the actual energy savings designed and implemented by the lighting energy savings experienced over the entire project. Supporting energy calculations, prequalification, and measurement and verification are generally required.

Prescriptive rebates – apply to specific types of products and the energy savings have been predetermined by the utility.”

Relay

An electrically controlled device that opens/closes contacts to control other devices in the circuit. It can be line voltage and/or low voltage.

Residential grade

Products designed for less demanding applications and lighting loads.

Resistive loads

Resistive components (an incandescent light bulb or a heater) oppose current flow. They do not store energy, but rather, dissipate it in other forms of energy such as light or heat. Because resistive elements do not store energy, the current and voltage are in phase.

Scene

The lighting effect achieved by adjusting 1 or more zones of lighting to the desired intensity.

Sconce lighting

Lighting fixtures mounted on the wall surface – can be decorative and/or functional.

Self-ballasted lamps

Fluorescent or discharge lamps that have an integral ballast.

Silhouette lighting

Lighting fixtures mounted behind objects reveal the outline and creates separation between the background and the objects.

Single-pole switch/dimmer

A switch or dimmer that controls a lighting circuit from one location only.

Slide-to-off

Style of dimming control in which the lowest travel position is off.

Specification grade

A class of products specifically designed to meet or exceed the rigorous demands of heavy-use, commercial applications.

Specification series

Dimmer(s) that meet this specification are comprised of heavy-duty components for surge protection and long product life, electrostatic discharge protection, voltage compensation, power failure memory, square law dimming, superior RFI suppression, and are UL and CSA listed. Lutron controls are rated at 120 VAC, 60 Hz unless otherwise noted.

Spill light

Light that falls outside the intended main profile of a beam spread of light.

Spot lighting

See Accent lighting.

Sub-control

These controls are designed to work in conjunction with one or more primary controls; sub-controls communicate to the primary controls, and the primary controls then give the command to operate a light or groups of lights. Sub-controls provide flexibility and allow the user to control lighting from more than 1 location. See also Primary controls.

Surface mounted lighting

Lighting fixtures mounted on the ceiling surface.

Switched load

See Non-dimmed load.

Switching system

A switching system is designed for a facility to turn lighting zones on and off on a schedule or by responding to multiple control devices or input locations.

Tap switch

A style of Lutron dimmer with a flat button that, when pressed on, allows the lights to return to a desired preset level. In addition, a small slider allows the user to adjust the lights to suit any activity. Only available in certain styles.

Task lighting (focused/supplementary lighting)

Lighting used to provide added (local) illumination that supplements the general lighting level. This focuses on the principal visual task/activity requirements (e.g. reading or working). It can be adjustable and/or from a preferred direction.

Themed lighting

Luminaires used to emphasize the design theme of a restaurant, hotel or casino.

Timeclocks

Must control lighting equipment and have a battery back-up for at least 3 hours. Timeclocks can be part of a whole building system such as Quantum® or EcoSystem® or can be part of a smaller solution such as the Lutron GRAFIK Eye® QS.

Track lighting

Practical terminology based on the physical track where the luminaires are mounted and powered. Track is usually surface mounted in 4 or 8 ft long sections, but it is available as recessed, and can be 1, 2, or 3 circuit. New versions include cable lighting and monorails.

Transformer

An auxiliary device that changes voltage supply from line voltage (120 or 277 V) to 24, 12, or 6 V needed for “low voltage” sources. It can be integral to the lighting fixture and it steps down line voltage, e.g. 120 V > 12 V for low voltage lamps. Larger, stand-alone transformers can supply an entire circuit with many lamps or luminaires, e.g. for a low voltage lighting strip in a ceiling cove.

Electronic transformer: Constructed using electronic circuitry, usually small and lightweight.

Magnetic transformer (toroidal): Older, but reliable, technology, constructed using iron core and wire winding.

Step-up transformer: Can be electronic or magnetic – required for neon and or cold cathode lighting.

Triac

The triac is the heart of a Lutron dimmer; the component responsible for the dimming function. This component actually turns a light on/off very rapidly (120 times-per-second). Lutron chooses more durable triacs that are tested to last over 10 years.

Tungsten-halogen lamp

A special type of incandescent lamp in which a halogen element is added to the filling gas.

UL Listed

A product adhering to the standards of Underwriters Laboratories, a company nationally recognized for product safety testing (the product is not “approved” nor tested for performance). Underwriters Laboratories was initially created by insurance companies to reduce fire risks. In Canada, CSA is the listing required.

Up lighting

Directional lighting below an object, sitting on or recessed in the floor or ground, which creates dramatic effect.

Vacancy sensor

A device that detects the absence of people in a space and provides automatic switching or dimming of lighting.

The primary purpose is to automatically turn lighting Off when an area is not occupied to ensure energy savings.

A vacancy sensor relies on a person operating a manual switch to turn lighting On (Manual On/Auto Off). See also Occupancy Sensor.

Voltage

The electrical power, in volts, of force/pressure supplied by an electrical circuit to a lighting source. Standard US power supply is 120 V 60 cycle (277 V 60 cycles in commercial spaces). Standard power internationally is 220/240 V 50 cycles. It is conceptually the “pressure” of the power supply similar to the psi pressure in a pipe.

Voltage compensation

Special circuitry that maintains the power delivered to the lamp in the event of line-voltage variations.

Wall wash

Uniform, wide angle lighting on a surface. Sources are generally located 2–4 feet from wall plane to create a smooth wash of light on the wall.

Watt (W)

The unit of power consumed by any electrical device or lamp (bulb).

Zone

A lighting fixture or group of fixtures that are controlled simultaneously. An example would be 2 wall sconces wired together with one dimmer. Lutron window shades can also be grouped together as zones.