

Designing With Light
Chapter 7

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Arc Tube

Ballast

Beam Angle

Compact Fluorescent

Driver

Fluorescent Lamp

Heat Sink

A tube made of glass, clear quartz or ceramic that contains the arc stream in a fluorescent or HID lamp.

The angle through the center of the beam where the light level has fallen to 50% of the beam's maximum brightness (typically at the center of the beam)

The electronic device regulating electricity to LEDs. Also known as a power supply.

A component, usually aluminum, used to draw heat away from an LED and dissipate

A device used to operate fluorescent and HID lamps. The ballast provides the necessary starting voltage and regulates the current during operation.

A small fluorescent lamp that is often used as an alternative to incandescent lighting. Also called PL, Twin-Tube, CFL, or BIAX lamps.

A light source consisting of a tube filled with argon, along with krypton or other inert gas along with mercury. When electrical current is applied, the resulting arc causes the mercury to emit ultraviolet radiation that excites the phosphors inside the lamp wall, causing them to radiate visible light.

High Intensity Discharge

Hot Restart or Hot Restrike

Initial Lumens

Instant Start

Lamp

Lamp Life

Light Emitting Diode

Low-Voltage Lamp

<p>Restoring the arc in an HID light source after a momentary power loss. Hot restart occurs when the arc tube has cooled a sufficient amount.</p>	<p>Lamp An electric discharge lamp in which an electric arc through a gas filled chamber produces light without intermediate steps. Generic term describing mercury vapor, metal halide, high-pressure sodium, and low-pressure sodium light sources and luminaires.</p>
<p>A fluorescent circuit that ignites the lamp instantly with a very high starting voltage from the ballast. Instant start lamps have single-pin bases.</p>	<p>The light output of a lamp when installed.</p>
<p>The average life of a lamp, in hours, based on an operation cycle of three hours on, then off.</p>	<p>Light Bulb</p>
<p>A lamp (typically compact halogen) that operates at lower than 120V, typically 12V, and requires the use of a transformer.</p>	<p>A solid-state lighting device that emits a directional beam of colored light. White LEDs combine blue LEDs and phosphors.</p>

Metal Halide

Parabolic Aluminized Reflector

Preheat

Rapid Start

Reflector Lamp

Halogen Lamp

A sealed lamp unit having a parabolic shaped reflector, light source (typically incandescent or metal halide) and a lens. PAR lamps are available in a variety of beam angles.

A type of high intensity discharge lamp in which light is produced by passing an electric arc through a combination of metal halide and mercury vapors.

The most popular fluorescent lamp/ballast combination used today. This ballast quickly and efficiently preheats lamp cathodes to start the lamp. Uses a "bi-pin" base.

A type of ballast/lamp circuit that uses a separate starter to heat up a fluorescent lamp before high voltage is applied to start the lamp

An incandescent lamp with a lamp envelope made of quartz and a fill gas of one or more halogens (namely iodine, chlorine, bromine, and fluorine), which slow the evaporation of the tungsten. Also, commonly called a quartz lamp or halogen lamp.

A lamp in which the outer glass envelope is coated with a reflecting material. Also referred to as an R-lamp. Variations include the ER and BR. Generically, this may also include other shapes that have reflectors such as MR and PAR.