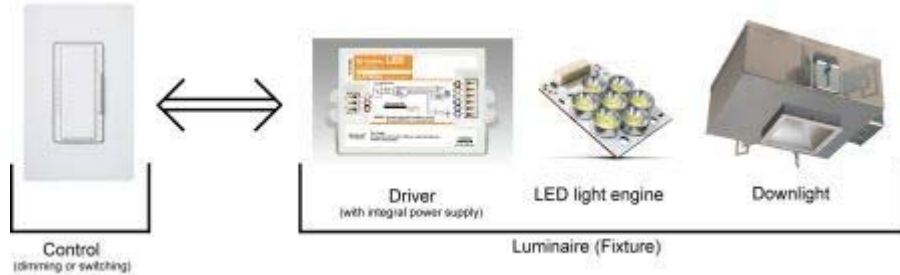


- Components of an LED lighting system
- LED arrays cannot operate without a driver, a fixture, and a control. These components must all be compatible in order to ensure that their integrity is maintained. The fixture, also called a luminaire, is composed of a driver, lamp module, and optical assembly.

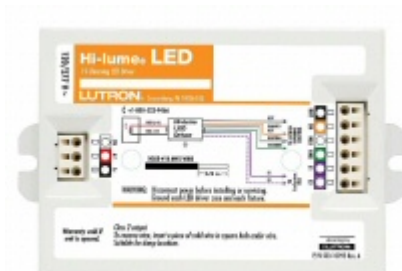


- **Control**
- LED's can be controlled either by switching (on and off) or by dimming (100% to 1% range), which can provide an increased level of control. The control types are:
- **Line Voltage Control** (typically used to control LEDi lamps, shown below)
 - Leading Edge/Forward Phase Control: Incandescent and MLV Transformers
 - Trailing Edge/Reverse Phase Control: ELV Transformers
- **3-Wire Control** (separates control and power feed to allow for more precise control)
- **Low Voltage Control**
 - Analog
 - 0-10V
 - Digital
 - DALI (Digital Addressable Lighting Interface)
 - EcoSystem® (Lutron proprietary digital control system)
 - DMX-512 (Theatrical lighting control, usually for RGB LEDs)

Compatibility must be determined before a control option is used within a luminaire. To view products which have undergone Lutron compatibility testing [click here](#).

Luminaire (Fixture)

Driver: The driver is what powers the light engine, and in dimming drivers it is what allows the LED array to dim.



LED lamp module: The LED lamp module consists of an LED array, as pictured at right, and a heat sink.



Down light: The down light consists of the sheet metal housing and the optical assembly (reflectors, lenses and diffusers) that are necessary for a fixture to be installed in a ceiling.

