

LED Diode

LED stands for Light Emitting Diode. They are used in almost each electronic device. We can find them in digital clocks, they are used as indicators on electronic circuits and they can transmit information on optical fibers or on remote controls. They are used for backlighting of LCD displays on jumbo displays and they are used as basic building blocks. They are more and more popular in lighting in all kinds of lighting systems.

Practically the LED diodes are small lamps which can be very easily installed in electronic circuits. Unlike the other traditional lighting, like incandescent light bulb and CFLs, the LED diodes basic material is not burning out to produce light. This is the reason that the LED diodes life span is much longer than other lighting system and they don't heat so much than other light system. On the market we can find set of various types of LED diodes. We can chose from high, middle and low power LED diodes. There can be arrays of LED diodes in one chip or single LED diodes. We can get them in different colors, color temperatures and even multi color RGB LED diodes.

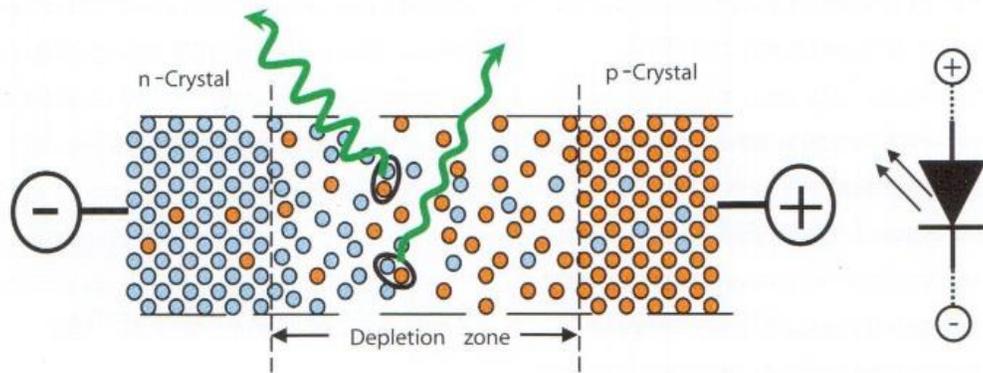
THD LED Diode



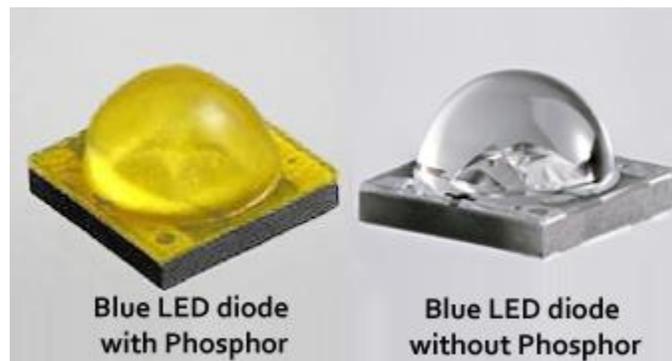
SMD Power LED Diode

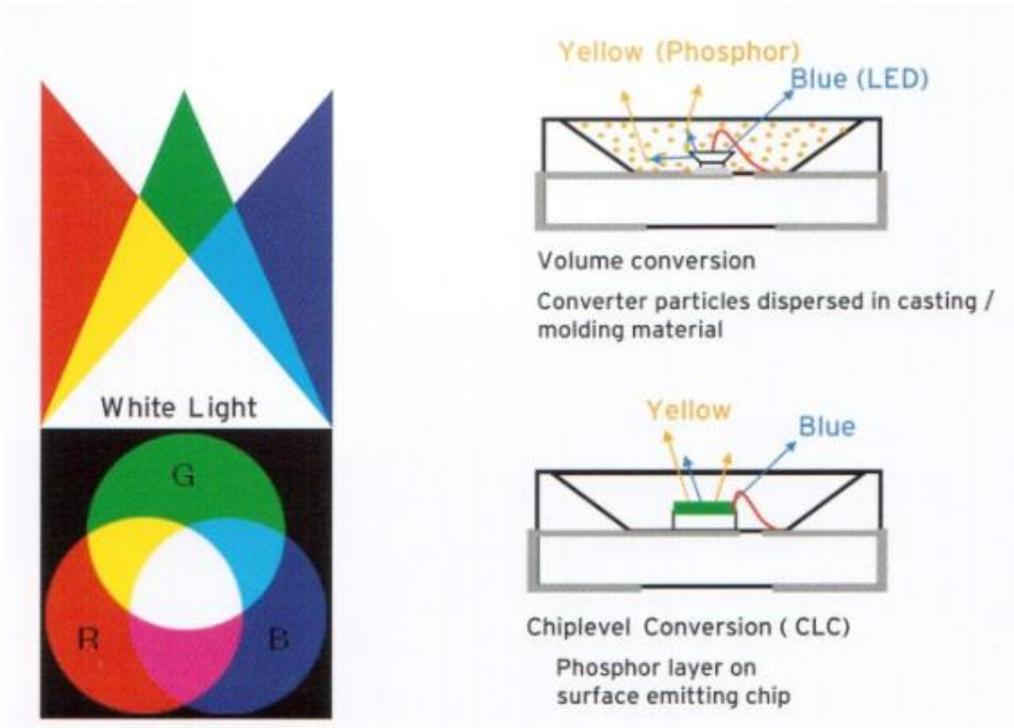


In physical terms the LED diode is a basic diode which conducts electrical current only in one direction. When the LED diode is conducting electrical current, which is flow of electric charge in matter, the matter itself is emitting the photons. The photons are relished when electron jumps from one electronic orbit of atom to the other orbit. This electron jump occurs because the electric voltage is connected to the diode. The bigger the electron jump the larger the energy of emitted photon. Different energies and frequencies of photons result in different colors and power of lights.



The LED diode white light was discovered only a few years ago. We can get it from LED diodes which are emitting red, green and blue light together. Or with more efficient technology where the blue LED diode is covered with a phosphor layer which converts the blue light to white light. With the thickness of the phosphor layer we can adjust the color temperature of the light. The thicker the phosphor layer is the warmer the color temperature.





Small power consumptions, high illumination, long life span and other multiple positive properties are the reasons why the LED technology will eventually conquer the lighting industry.

