

A light-emitting diode (LED) is a semiconductor light source that emits light when current flows through it. Electrons in the semiconductor recombine with electron holes, releasing

energy in the form of photons. The color of the light (corresponding to the energy of the photons) is determined by the energy required for electrons to cross the band gap of the semiconductor. White light is obtained by using multiple semiconductors of a layer of light-emitting phosphor on the semiconductor device.

Working principle - Electroluminescence

Invented

He J Round (1907)

Oleg Losev (1927)

James R. Biard (1961)

Nick Holonyak (1962)


First production

October 1962

Pin configuration

Anode and cathode

Electronic Symbol

Anode  Cathode

A bulb-shaped modern retrofit LED lamp with aluminum heat sink a light diffusing dome, and E27 screw base using a built in power supply working on mains voltage.