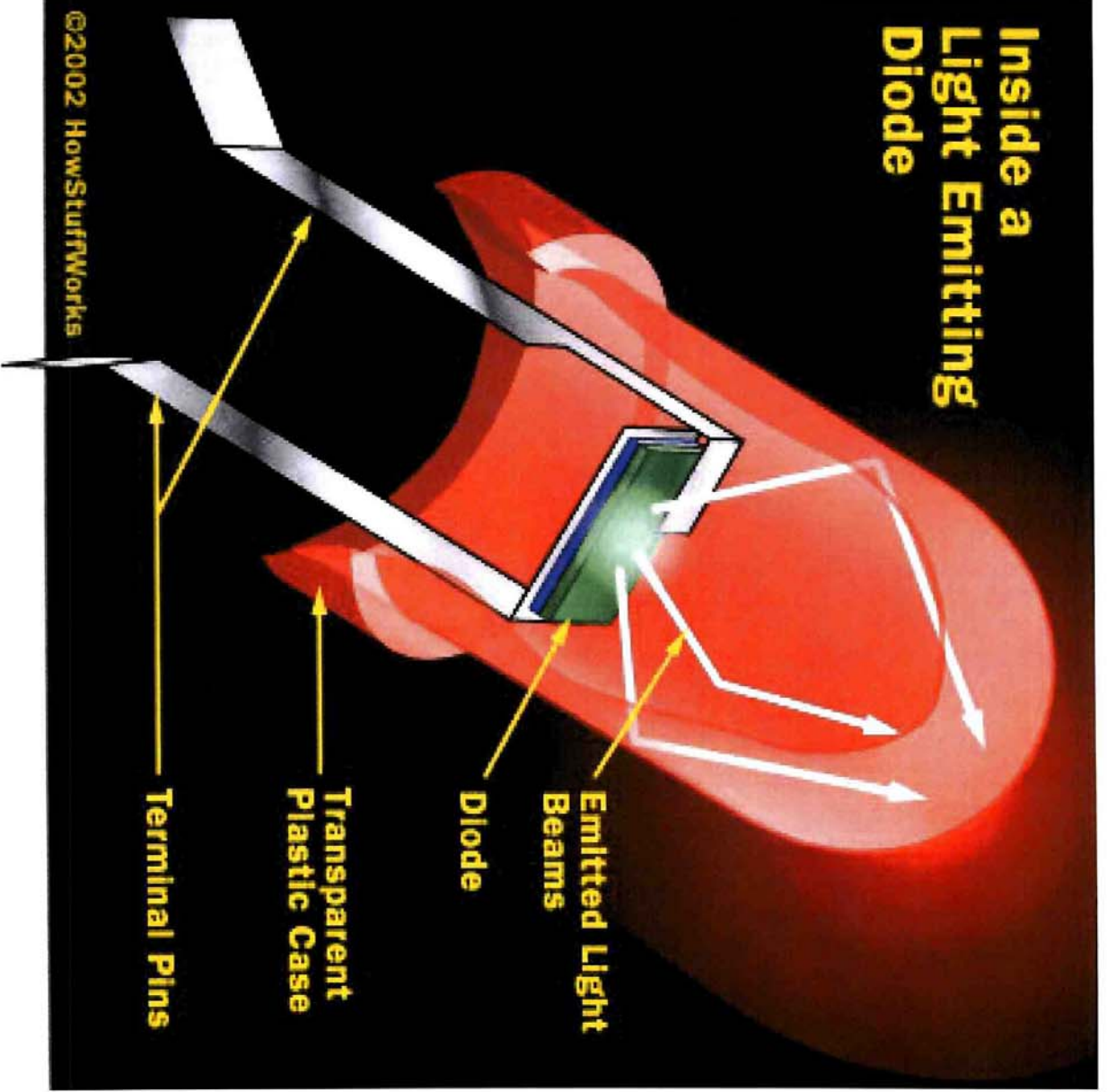


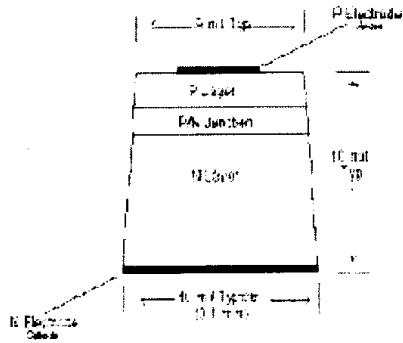
# Inside a Light Emitting Diode



©2002 HowStuffWorks

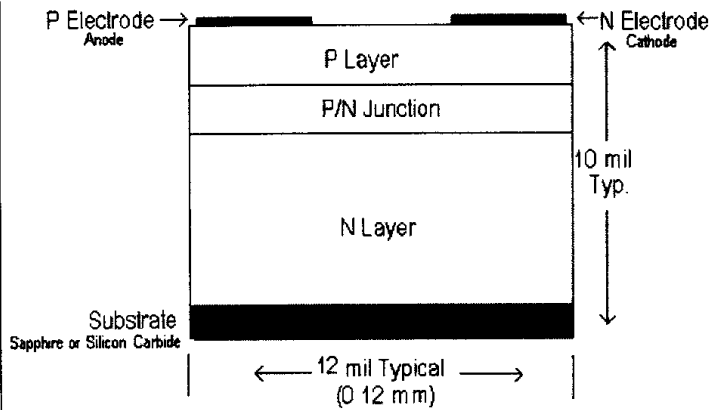
## Anatomy of an L.E.D

### Standard AlInGaP Chip (Aluminum Indium Gallium Nitride)



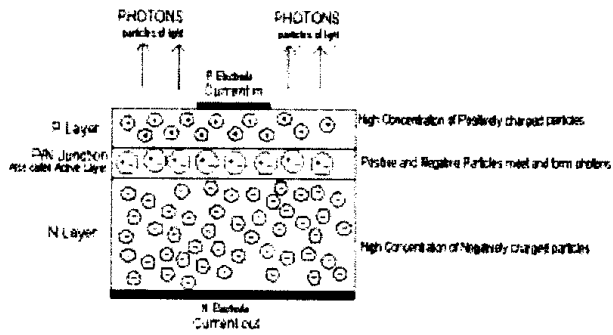
**P and N Electrodes are gold alloy material**  
**These are typical chips used for Red, Orange, Yellow, Amber, and Yellow-green LED Lamps**

### Standard InGaN Chip (Indium Gallium Nitride)



**These are typical chips to make Pure Green, Blue, and White LED Lamps**

## HOW THEY WORK



LED die, or chips are manufactured in layers. The uppermost layer is known as the P, or Positive layer. This layer has an overabundance of particles carrying a positive charge.

The bottom layer is commonly called the N, or Negative layer. This layer has mostly particles carrying a negative charge.

When current is applied to the "P" (positive) electrode, particles from the positive layer are forced into the middle, or Active layer (also called the P/N junction). Negatively charged particles from the negative layer are drawn into the active layer at the same time.

When the positive and negative particles meet, photons, or particles of light are formed.