



How HID Technology Works

The technology in high intensity discharge lighting is in some ways similar to fluorescent technology: an arc is established between two electrodes in a gas-filled tube which causes a metallic vapor to produce radiant energy. In this case, however, a combination of factors shifts the wavelength of much of this energy to within the visible range, so light is produced without any phosphors. In addition, the electrodes are only a few inches apart (at opposite ends of a sealed "arc tube") and the gases in the tube are highly pressurized. This allows the arc to generate extremely high temperatures, causing metallic elements within the gas atmosphere to vaporize and release large amounts of visible radiant energy. There are three main types of HID lamps: mercury vapor, metal halide and sodium. The names refer to the elements that are added to the gases in the arc stream which cause each type to have somewhat different color characteristics and overall lamp efficiency.

HID