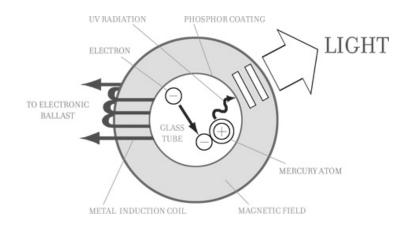


How It Works

The basic technology used in induction lighting is not something new. Essentially, an induction lamp is a fluorescent without electrodes. With the absence of electrodes, the lamp relies on the fundamental principles of gas discharge and electromagnetic induction to produce light. The result of this is a lamp with an unmatched life span. Lasting up to 100,000 hours or 10 years/24 hours per day, this system can last longer than 100 incandescent, 5 HID, or 5 typical fluorescent lamp changes.



Based on these well known principles light can be generated using gas discharge through magnetism. Rings with magnetic coils called electromagnetic transformers create an electromagnetic field using a high frequency that is generated by an electronic ballast. This field goes around a glass tube which contains a gas. A closed loop is formed by the discharge path induced by the coils which causes the acceleration of free electrons that collide with mercury atoms and excite the electrons. As the electrons begin to reach a lower more stable level they give off ultraviolet radiation. The conversion of ultraviolet radiation to visible light occurs when it passes through a phosphor coating on the surface of the tube. The fields generated during this process are maximized by the lamps unique shape.

Although the science behind induction lighting has been around for some time, it has not been commercially viable until now. Previous barriers of cost and technological setbacks such as EMC interference, lumen depreciation, inability to dim, and a useful range of wattages have been overcome with new developments. The many benefits offered with the use of induction lighting make it the obvious choice over traditional light sources.