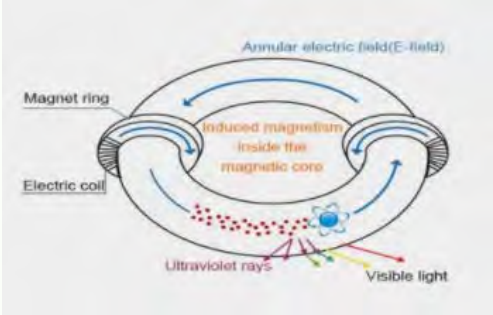
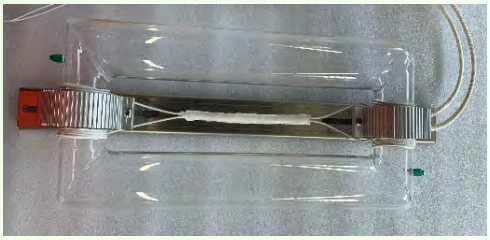
EP Lighting, Inc.

Induction Technology for UV generation

Induction lighting also called the Electrodeless Fluorescent bulb was invented by Nikola Tesla in 1890. With its long life of 100,000 hours along with enhanced durability, induction lamps were proven successful in the lighting industry.

An induction lamp is a fluorescent lamp with two external inductors wrapped around it. The lamp is ignited by a ballast, a high-frequency current generator at 250kHz. The high-frequency current generates an electric field when passed through the lamp's inductors, which is used to excite the mercury. The gaseous mercury then emits UV radiation at the specific wavelength based on the frequency of operation and the mercury.





The UV light generated by the induction lamp can be tuned for UV-A, UV-B, UV-C, far UV, and vacuum UV.

UV-Kleen™ Solutions tuned our lamps to generate UV-C at 253.7nm that is proven to have germicidal effects up t0 99.99%. The UV is generally blocked by the majority of the materials except for the glass. UV-Kleen™ uses top quality quartz material that has very minimal impurities so that the UV output from the lamp is efficient.

The major advantage of induction technology over the other technologies in the market is the lifespan and the power. The induction technology does not use an electrode in them, resulting in low thermal stress, enhancing the life of the bulb for 100,000 hours (11years)- the largest in the industry. With their energy-efficient characteristics, the induction lamps are highly efficient resulting in powerful UV output.

UV-Kleen™ uses the patented induction ballast technology to efficiently operate its induction bulbs, resulting in low power consumption at high UV outpı
in less than 10 seconds.

Image courtesy: http://www.paksolarservices.com/lvd-induction-lights.html