

RF Ballast For Induction Lamps



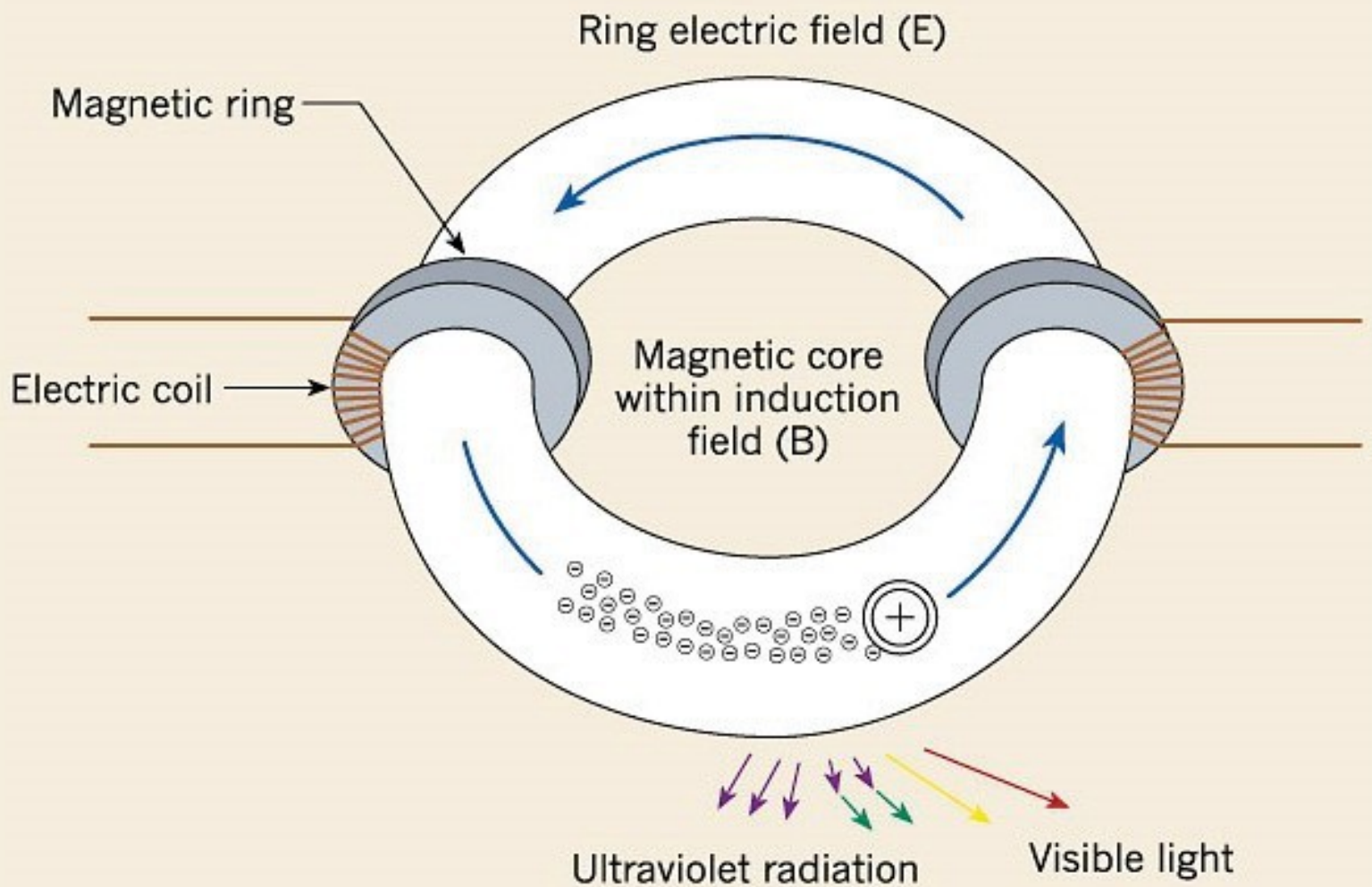
Lighting solution for | Industrial | Commercial | Home & Indoor Farming needs.

INTRODUCTION

The induction lamp is the technology for you if good efficiency and long life is of your prime concern. The induction lamps have the longest life of any light source commercially available nowadays.

The product is a Radio Frequency Ballast for driving Electrode-less Induction Lamps of power rating up to 400W based on microcontroller and high efficiency RF conversion technology.

Electrode-less Induction lamps are known for their long life (>100,000 Hours), High Efficiency comparable to LED lighting and Cool light emission close to Day-light



Product Description

The ballast is made of four parts. First is an EMI filter to reduce harmonics from the input supply of alternating current. The next part is a bridge rectifier; this converts AC to DC power. After that is the PFC circuit which boosts the DC voltage to a constant 400 V value and increases the power factor to 0.95+. The final part of the ballast is an inverter which converts the DC power to high frequency AC.

The MOSFETs used in the H-bridge are of high frequency / low loss type and transfer RF energy to the lamp via a Ferrite transformer. This ferrite transformer, with its unique construction, offers total shielding against RF radiation - while maintaining high efficiency and smaller form-factor. Any heat generated while handling high RF power is transferred to the aluminum case efficiently with a special arrangement.

The unit offers the features of Remote On-Off (via switch / RS-485 / Bluetooth / Wi-Fi), Automatic Brightness Control and Safety Monitoring. This product is ideally suitable for lighting applications in Industrial, Commercial, Home and Farming applications.

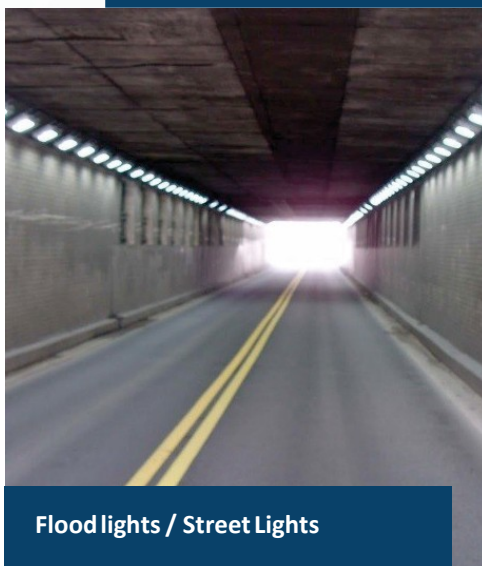
Advantages

- Long life, as there are no electrodes in an induction lamp. Electrodes fail in normal fluorescent lamps as tungsten thins and breaks, thus shortening its life.
- By not having electrodes, the tube can be perfectly sealed. When seals go badly in regular fluorescent lamps, gas escapes through the weakness and the lamp fails.
- Energy efficient, over 80+ lumens per watt
- No flickering
- Dimmable range is 30 -100%.
- Can light both small and large areas depending on which type of induction lamp one uses

End Usage



Domestic, Commercial & Industrial lighting



Flood lights / Street Lights



As light source for Vertical / Indoor farming

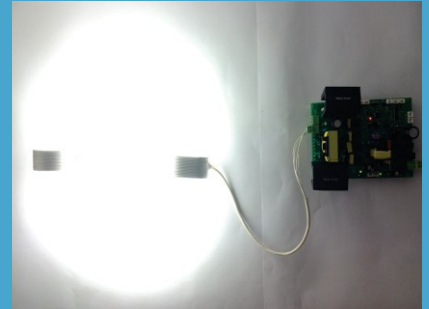
System Features

High lumen output
High system efficacy – up to 76 LPW
100,000+ hour life
Instant on / instant restrike
Fast warm-up time
White light – minimal color shift over life
3500K, 4100K and 5000K color temperatures
Excellent color rendering – 80 CRI (Near to sun light)
Starting temperatures as low as -40°F
Amalgam technology for wide operating temperature range
65% lumen maintenance at 60,000 hours of life
Low EMI – Complies with FCC non-consumer limits (intended)
Low inrush current at start-in

Models



1. CBB1 : 200 W
2. CBB2 : 400 W



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