

ABSTRACT

An electronic ballast for operating at least one discharge lamp includes a chopper providing a constant DC voltage, and an inverter converting the DC voltage from the chopper into a high frequency AC voltage, and a resonant circuit configured to resonate the high frequency AC voltage to generate a resonated AC voltage applied to at least one discharge lamp for operating the same. The electronic ballast further includes a power adjustor configured to designate a target power in match with a power requirement determined by the at least one discharge lamp, and an inverter controller that vary a switching frequency of the inverter based upon a resonant current flowing through the resonant circuit in order to keep an output voltage to the discharge lamp at the target power.