

## Circuit Description

This ballast were assemblyed with six parts: a: Input circuits, b, Increase Voltage circuit; c, OSC; d, Over-current protection circuits; e, Half-bridge inverter circuits; f, Lamp circuit.

- 1、Input circuit: This circuit are assmbled with fuse & EMI circuits. Fuse circuit to prevent short circuits occur when too much current, so it will not be damaged other electrical. EMC circuit: the common mode inductors and capacitors composed of EMC line, the circuit's primary role is to filter out interference conducted from the power cord & the ballast self when it was work, or interfence from other electrical equipment.
- 2、Increase Voltage circuit: Ballast as a result of the operating voltage is 120V,, using voltage rectification to achieve the required voltage.
- 3、Oscillation circuit: triggered by the oscillation circuit and components of transformers. How it works: access to power, resistance to the capacitor for charging, in the process of charging voltage when the trigger DB3 diode voltage, the circuit began to work, the free oscillation which assembled by half-bridge oscillation transformer and transistor will be worked at the same time .
- 4、Over-current protection: When the half-bridge inverter circuit current is too large, over-current protection circuit through the thyristor oscillation circuit stop vibration, so that the circuit to stop working to avoid damage to other components.
- 5、Half-bridge inverter circuits: components by the two high-power transistor. How it works:, up and down a tube would be on & off by the role of the oscillation transformer, and the lamp will have a fixed freqeudny which supplied by the output inductor & output capacitor , so the lamp would be worked properly..
- 6、Lamp circuit: which assembled by coil inductors, capacitors lamp, series resonant circuit, so the lamp worked well.