

# **SHENZHEN JIADIANBAO ELECTRICAL PRODUCTS CO., LTD.**

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## **Description of circuitry used**

### **For G987F with EB-18**

This fluorescent lamp G987F was equipped with electronic ballast EB-18.

120V / 60Hz power supply firstly pass an over-load protection fuse (3.15A/125V) then enter a ballast filter composed by 2 capacitors (104/275Vac) and 2 chokes (30mHx 2 and 36mH) for preventing interference noise feed back to the supply net.

Then, enter the rectifier which consisting of 2 parts. One is a bridge-rectifier which composed by 4 diodes (1N4007) for rectify the electricity from 120V AC to 160V DC. One is a rectifier filter, which is a capacitor (104/400V) for smoothing the wave shape.

Now, full-wave rectified 160V DC passing through power factor raising circuitry composed by 4 diodes (1N4007) and 2 capacitors (22μF/200V). Then 160V DC passing a transistor protection circuitry composed by 2 diodes (IN4007) for preventing the reverse peak voltage exceeding the rated value of 2 transistors. Then, 160V DC enter the frequency converter composed mainly by 2 transistors (PHE13005) and 1 pulse-transformer (TK= 4T: 7T: 4T). The frequency converter is a multi-harmonic oscillator used to converting said 160V DC to 160V AC with a frequency of 36 KHz for light a fluorescent tube (18W). There in series of the start capacitor (103/1KV) is a poly-switch (TF) used for protecting the fluorescent tube from big current during starting.

Radio frequency noise produced on fluorescent tube is prevented to feed back by a choke (650uH) and 2 capacitors (104/400V)

NO. A3288 ISO 9002



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