

# DESCRIPTION OF CIRCUIT FUNCTION

NAME OF APPLICANT : JUNG WOO INTERNATIONAL INC.

NAME OF PRODUCT : SELF-BALLASTED LAMP

|                       |            |         |
|-----------------------|------------|---------|
| MODEL NO : EQUR1213/T | EQUR1220P3 | ESL1215 |
| EQUR1215/T            | EQUR1220R4 | ESL1220 |
| EQUR1220/T            | EQUR1225   | ESL1225 |
| EQUR1220R3/T          | EQUR1225R4 |         |

1. AC POWER SUPPLIED THROUGH E26 BASE OF DEVICE IS RECTIFIED AND BOOSTED TO DC BY PASSING BOTH OF THE RECTIFYING CIRCUIT (D1, D2) AND THE ELECTROLYTIC CONDENSER (C7, C8)  
AT THIS TIME, ALL OF THE HARMFUL NOISE INCLUDING HIGH FREQUENCY NOISE OCCURRED IN SWITCHING CIRCUIT IS ELEMINATED WHEN THIS RECTIFIED DC IS PASSED THROUGH LINE FILTER (LF1)
2. THE TRANSISTOR HALF BRIDGE INVERTER GENERATES THE 40KHz-50KHz HIGH FREQUENCY VOLTAGE POWER BY SWITCHING OPERATION OF THE TRANSISTORS (Q1, Q2) WITH THE RECTIFIED DC POWER IN RECTIFYING CIRCUIT, AND THIS GENERATED HIGH FREQUENCY VOLTAGE POWER LIGHTS THE FLUORESCENT LAMP.
3. AT THIS TIME, LAMP IS LIGHTED AS TWO STEPS WHICH IS MAIN POWER IS PASSED TO FILAMENT AFTER PREHEATING OF PTC IN ORDER TO EXTEND LAMP LIFE BY AVOIDING THE RAPIDLY SCATTERING OF EMISSION MATERIAL ON FILAMENT.
4. WHEN SWITCHING OPERATION OF ELECTRONIC BALLAST IS MADE UP, ACTION OF THE DIAC (Q3) STOPS AS DISCHARGING THE CONDENSATED POWER IN CONDENSOR (C6) BY BOTH OF THE DIODE (D3) AND THE TRANSISTOR (Q2).