

## Circuit Description

This circuit description is fixed to LR1A15/F/RGB/RP, LR1A/F/RGB/RP, and LR1B10/F/RGB/RP.

The circuit of this product is consisted of AC/DC transfer circuit, switching circuit, buck-boost circuit, color control circuit and LEDs.

**AC/DC transfer circuit:** It comprises D1, D2, L1 and C3, C4. Inductor L1 could reduce high frequency noise and interference which were from power supplier and this ballast. In the AC/DC transfer circuit, the 120VAC input is rectified by the diodes D1, D2 and the capacitors C3, C4 into DC voltage.

**Switching circuit:** It comprises some circuit within IC4, its' frequency is about 20 kHz

**Buck-boost circuit:** It comprises IC4, L2, R4, R5, D3, D7, C1, C2, C5 and L2. This unit transfers the DC voltage into one other DC voltage that is suitable for driving LED.

**Color control circuit:** It comprises IC5, IC1~IC3, R2~R3, R6~R10, C6~C7. This circuit unit changes the current of different branch (Red, green, blue) of LED at a cycle period of 140s, so the color of lamp could be changed automatically.

**LEDs:** The LEDs will consume the power that has been supplied by ballast and make light.