

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.