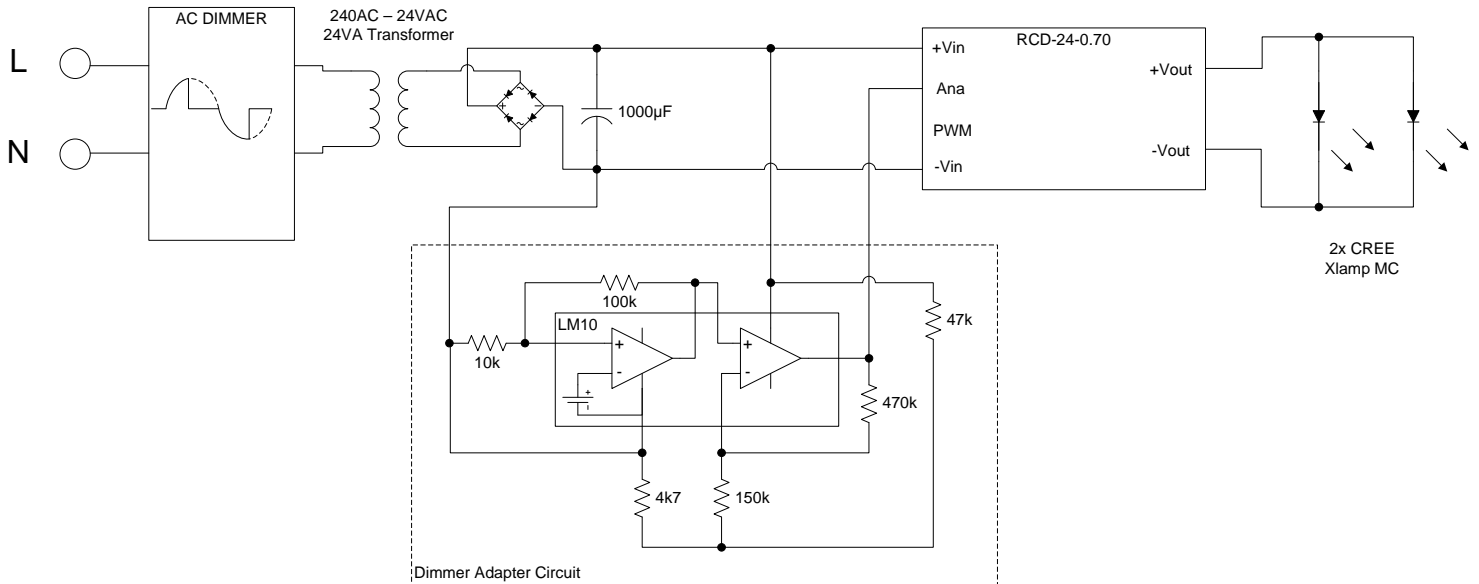


Phase Angle Dimmable AC/DC LED Driver



Description

The transformer drops the mains input voltage down to low AC voltage and provides safety isolation. The 24VAC output is then rectified and smoothed to generate a DC voltage. With the dimmer turned full on, the DC voltage is about 33V. The LED driver in turn generates a constant 700mA output current from this supply and the LEDs are full on. As the dimmer control is turned down, the DC voltage starts to decrease. The dimmer adapter circuit measures this voltage and generates a 0-4V control voltage to dim the LEDs proportionally to the AC dimming. As the LED power decreases as the AC power is dimmed down, the circuit continues to function even at very low dimming levels. The electronic dimmer used for this test only goes down to 18% minimum dimming level, but as this is a commercially available part, this is not an unrealistic value.

