

3169 – QUASAR LED Flasher Power Requirements

With out Versatile PIC Controlled LED Flasher up to 176 LEDs can be arranged in 8 'strings' of LEDs. Each 'string' consists of 22 LEDs in series, with each string connected between the V+ supply and a PIC output.

The forward voltage drop across an LED is 1.8V. For 22 LEDs in series that equals 39.6 volts. Allowing a bit more for the dropping resistor means that you need a 45V supply approx.

A normal LED needs about 10mA-20mA of current through it for normal brightness. Since any 'string' the LEDs are in series then this 20mA of current flows through each of the LEDs. So total current required is 160mA (20mA x 8).

So, to use ALL 176 LEDs, arranged in an 8 x 22 array, you need a 45V supply with a current capability of at least 200mA (allowing 20mA for the rest of the circuit). We would use a 200-300mA supply to allow for a bit of headroom.

Please refer to our power supplies page at:

www.quasarelectronics.com/power-supplies-index.htm