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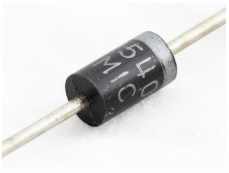
Data Sheet
RGB led Bulb using 555 timer

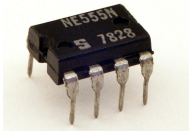
Components :

Daiode



specialized electronic component with two electrodes called the anode and the cathode. Most diodes are made with semiconductor materials such as silicon, germanium, or selenium. Some diodes are comprised of metal electrodes in a chamber evacuated or filled with a pure elemental gas at low pressure. Diodes can be used as rectifiers, signal limiters, voltage regulators, switches, signal modulators, signal mixers, signal demodulators, and oscillators.

555 Timer



one type of chip used in different applications like an oscillator, pulse generation, timer. The designing of IC 555 timers can be done by using various electrical and electronic components like transistors, resistors, diodes and a flip flop. The operating range of this IC ranges from 4.5V -15V DC supply. The functional parts of the 555 timer IC include flip-flop, voltage divider and a comparator. The main function of this IC is to generate an accurate timing pulse. In the monostable mode, the delay of this IC is controlled by the external components like a resistor and capacitor. In the astable mode, both the duty cycle & frequency are controlled by two external resistors and one capacitor.

RGB

RGB LED means red, blue and green LEDs. RGB LED products combine these three colors to produce over 16 million hues of light. Note that not all colors are possible. Some colors are "outside" the triangle formed by the RGB LEDs. Also, pigment colors such as brown or pink are difficult, or impossible, to achieve.

Capacitor

Capacitor is an electronic component that stores **electric charge.** The capacitor is made of 2 close conductors (usually plates) that are separated by a dielectric material. The plates accumulate electric charge when connected to power source. One plate accumulates positive charge and the other plate accumulates negative charge.

The capacitance is the amount of electric charge that is stored in the capacitor at voltage of 1 Volt.

The capacitance is measured in units of **Farad** (F).

The capacitor disconnects current in direct current (DC) circuits and short circuit in alternating current (AC) circuits.

Rheostat

Rheostat is an adjustable or variable resistor. It is used to control the electrical resistance of a circuit without interrupting the flow of current. Rheostat has 3 terminals and usually consist of a resistive wire wrapped to form a toroid coil with a wiper that slides along the surface of the coil. It is most often designed with a ceramic core. Rheostats are used in applications that require **high voltage and current**.