THE EFFECT OF LIGHT EMISSION INTENSITY BY VARYING THE VOLTAGE, CURRENT AND DISTANCE

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ABSTACT

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When current passes through a light-emitting diode (LED), the LED emits an incoherent narrow spectrum of light. The relationship between the voltage,current,distance and the light intensity of an LED is studied in this research. Voltage ranging from 3.68 to 16.44 Volts was applied to a blue, red and green LED. The voltage across the LED, current through the LED and intensity of the light emitted by the LED were measured. For voltages ranging from 10.68 to 16.44 V, light intensity was found to be linearly related to both the current and the voltage. The distance of detector and circuit LED was found to be directly proportional to the square of light intensity. The distance For voltages above 16.44 V, the emission intensity remained constant, independent of the applied voltage.