

## ABSTRAK

Dilakukan pengukuran karakteristik LED, intensitas penerangan LED dalam rangkaian seri, paralel, kombinasi seri-paralel dan pola intensitas penerangan LED. Pengukuran dilakukan dengan sensor cahaya yang terhubung pada interface Lab Pro dari Vernier dan spektrometer. Berdasarkan hasil penelitian diperoleh tegangan ambang LED ( $V_{\gamma}$ ) sebesar 2.5 volt, hambatan LED ( $R_{LED}$ ) = 16.4  $\Omega$  dan arus saturasi LED ( $I_s$ ) = 4.6 mA. Intensitas cahaya LED dalam rangkaian seri, paralel dan kombinasi seri-paralel memiliki kuat intensitas yang berbeda-beda dalam rentang (0 – 708.5) lux. Pola intensitas cahaya LED dalam rangkaian seri, paralel dan kombinasi seri-paralel menunjukkan bahwa semakin besar sudut sensor terhadap bidang LED, semakin besar kuat intensitas cahaya LED.

## ABSTRACT

An experiment to measure the LED characteristic, intensity of light of LEDs from series, parallel and combination of series-parallel and its patterns has been performed using Light Sensor connected Lab Pro interface by Vernier and spectrometer. The result are LED knee voltage ( $V_\gamma$ ) is 2.5 volt, LED resistance ( $R_{LED}$ ) is  $16.4 \Omega$  and determine the currents ( $I_s$ ) is 4.6 mA. LED with series, parallel and series parallel connection have different intensity in a range of 0 lux – 708.6 lux. LED light intensity in series, parallel, and series-parallel show that increasing the angle in LED will increase LED light intensity.