

ABSTRACT

The lighting of the surgery/surgical site depends on the quality of the lighting from the overhead light source and the reflection from the curtains. Light measurement on the operating table is very necessary because it produces light that is shone into the cut without dazzling the cutting surface so that pathological conditions can be recognized and must provide depth contrast and anatomical relationships. Therefore, the author makes a tool to measure the intensity of light which is equipped with a distance meter. This tool uses an ultrasonic sensor HC-SR04 to measure the distance between the light source and the sensor module and the MAX44009 sensor to measure the light intensity of the operating lamp displayed on the TFT screen. Based on the distance setting of the module to the roll meter, the error value of the distance measurement of the Surabaya electromedical engineering workshop lamp at the 75 cm roll meter distance setting is 0.0127% for the 100 cm roll meter distance setting is 0.0045%. The design of a luxmeter equipped with a proximity sensor can measure the intensity of light and the distance between the tool and the light source and can assist in the learning process with a more effective luxmeter design that will help electromedics in testing operating lights in hospitals to be more efficient.

Kata Kunci : Luxmeter, HC-SR04, MAX44009