

ABSTRACT

Technological developments have shown a significant increase, especially for the communication sector. This is proven by the many communication media both wireless and wired. However, the use of radio frequency as a data transmission medium can adversely affect human health, especially the health of newborns which are very vulnerable to the adverse effects of the use of these radio frequency waves. But newborns need intensive supervision of body temperature, due to the prevalence of cases of deceased babies caused by hypothermia or a condition where the body's mechanism for temperature regulation has difficulty overcoming cold temperature pressure. Therefore the creation of Visible Light Communication (VLC) was created to overcome this problem. In this study only focused on the transmitter system for VLC lighting products.

The focus of this final project is to design a transmitter system that functions to send output results that come from body temperature and room temperature sensors. Data transmission uses two methods, namely infrared communication and VLC communication. Communication with infrared is called uplink communication and communication using VLC is called downlink communication.

In the realization of data transmission using both communications can send data at 2.5 meters in the scenario of the room. The output from the room temperature sensor and body temperature can be sent using infrared communication which will then be sent using VLC communication in the monitoring room.

Keywords: Visible Light Communication, Infrared, Transmitter