

ABSTRACT

LED (Light Emitting Diode) is currently the most use only as an indicator or as a room illuminator. In the development of this technology many innovations are created, one of which is LED-based home lighting which will not only be used as lighting but also for communication media. LED light is used by using Visible Light Communication.

Research in this thesis is, audio streaming using the Visible Light Communication system. The system allows sending data through the Superbright White LED that emits visible light. There is a VLC-based sending device that can send voice data from audio streaming and is received by the speaker. The sending device consists of a series of electronics with an array of White Superbright LEDs that will send voice and photovoltaic data as a receiving device. In this final project, a design for sending streaming audio from cellphones to speakers using the Visible Light Communication system has been designed and executed.

from the test results, Audio streaming can be sent using the Visible Light Communication system at a maximum distance of 45 cm and a 30⁰ angle, and the farther the distance and the bigger the angle, the less current the photovoltaic can accept.

Keywords: visible light communication, light emitting diode, solar panel (photovoltaic), audio streaming.