

# Li-Fi Based Wireless Data Transfer

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**Abstract:** *Li-Fi (Light Fidelity) is an advanced technology that allows transferring data using optical communication such as visible light. Li-Fi data can travel through the light and then interpreted on the receiver side using any light-sensitive device like LDR or photodiode. Li-Fi communication can be 100 times faster than Wi-Fi. Here in this project; we will be demonstrating Li-Fi communication using two Arduino. Here the text data is transmitted using LED and 4x4 keypad. And it is decoded on the receiver side using LDR. This paper introduced the concept of Li-Fi which is used for data transfer. Li-Fi is an LED based alternative that uses visible light instead of radio frequency spectrum. Simply, Li-Fi is nothing but Wi-Fi using light. In Li-Fi system we analyses its performance with respect to existing technology. With the help of light data can transmit. This is latest technology in which LED can transmit data faster as compare to Wi-Fi technology. Here we developed hardware of Li-Fi technology using Arduino in which data can be transmitted through light and received by using photodiode or photo detector.*

**Keywords:** Arduino IDE, Li-Fi data transmission, Wireless Communication, Light Fidelity

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