

## *Abstract*

*In finding clinical signs of disease, medical experts have to measured a body temperature using a thermometer. The measurements can be divided several assessment standards, such as: normal, hyperthermi, hypothermi. Thermometers are often used are mercury and digital thermometers, which means its use in direct contact with the patient's skin that can lead to the possibility of transmission of viral diseases or which still stick to the thermometer even after sterilization. Based on the importance of monitoring changes in the patient's temperature, especially dangerous and contagious disease, it is necessary to minimize remote thermometer infectious diseases. This thermometer utilizes infrared energy released by the body temperature of the patient to read. And to make it easier to know the temperature of assessment standards, required diagnostics display the measurement results of temperature on the thermometer.*

*To overcome these problems, this research made "Forehead thermometer equipped diagnostic display measurement results in body temperature with distance measuring 8 cm" using MLX90614 sensor as passive infrared sensors are enabled to receive infrared energy from the forehead. In the research and manufacture of the modules using the experimental method with pre - draft After Only Design is the tool that makes the measurement results compared with the forehead thermometer that has been traceable to obtain a high degree of accuracy in a tool made.*

*Based on data retrieval in body temperature compared to the "Digital Infrared Forehead Thermometer" obtained average error value of 0,31% at a distance of 8cm. After the tests the system as a whole tool can be used in accordance with the function and purpose.*

---

*Keywords : Temperature , Passive Infrared Sensor*