



## DESIGN OF A NON-CONTACT INFRARED THERMOMETER

Guangli Long

School of Physics and Telecommunication Engineering

Shaanxi University of Technology, Postcode 723001

Hanzhong, China

Emails: [lgl20088@163.com](mailto:lgl20088@163.com)

---

*Submitted: Jan. 15, 2016*

*Accepted: Mar. 20, 2016*

*Published: June 1, 2016*

---

*Abstract- In order to realize the human body temperature fast and non-contact measurement, an infrared thermometer is designed. The infrared human body temperature sensor is mainly used to convert the human body's infrared into voltage signal, an operational amplifier to amplify the signal, filter circuit to filter the signal, the analog signal into digital signal by the A/D conversion circuit, data processing by the MCU, LCD display and voice reporting body temperature and time, so the human body non-contact measurement is realized. The experimental results show that: the device can realize the temperature and time of acquisition, the measurement error is not more than 0.5°C voice broadcast and liquid crystal display the temperature and time, overrun alarm and other functions.*

**Index terms:** infrared temperature sensor, MCU, LCD, voice broadcast.