

**FORM 2****THE PATENTS ACT, 1970**

(39 of 1970)

**&****THE PATENTS RULES, 2003 PROVISIONAL/COMPLETE  
SPECIFICATION**

(See section 10 and rule 13)

**1. TITLE OF THE INVENTION: CONTACTLESS TEMPERATURE DETECTOR****2. APPLICANT(S)**

- a) Name: 1) Gauri Vinod Kardekar  
2) Gargi Atul Gundawar  
3) Sakshi Kailas Deshmukh  
4) Shrawani Dipak Chaudhari
- b) Nationality: Indian
- c) Address: Alandi, Pune, Pincode: 412105, Maharashtra, India

**PREAMBLE TO THE DESCRIPTION****PROVISIONAL**

The following specification describes the invention of a contactless temperature detector. This provisional specification is being provided to establish priority in accordance with patent laws and regulations. It presents an initial description of the invention and its intended functionality.

In this provisional specification, the focus is on providing an overview of the contactless temperature detector invention. While the description may not delve into exhaustive details, it aims to outline the key features and principles of the invention. The provisional specification serves as a basis for establishing priority in patent applications and serves as a foundation for subsequent development and refinement of the invention.

**COMPLETE**

The following specification particularly describes the invention of a contactless temperature detector and the manner in which it is to be performed. This complete specification provides a comprehensive and detailed explanation of the invention's features, components, and operational principles. It aims to enable a skilled person in the field to construct and utilize the contactless temperature detector based on the disclosed information.

In this complete specification, the focus is on providing an in-depth and thorough description of the contactless temperature detector invention. It includes detailed explanations of the various components, their functionalities, and their interactions. The complete specification goes beyond a preliminary overview and provides the necessary information for someone skilled in the field to implement, replicate, and understand the invention.

Overall, the complete specification serves as a comprehensive guide for understanding, reproducing, and utilizing the contactless temperature detector invention, providing the necessary information to enable skilled individuals to construct and deploy the technology successfully.

#### **4.DESCRPTION** (Description shall start from next page.)

The contactless temperature detector is a device designed to measure the temperature of an object or individual without the need for physical contact. It utilizes advanced infrared (IR) technology to capture the thermal radiation emitted by the target and convert it into temperature readings. In this embodiment, the contactless temperature detector is implemented using an Arduino microcontroller board.

The main components of the contactless temperature detector include an infrared sensor, processing unit, display, buzzer and power supply. The infrared sensor is a high-precision component capable of accurately detecting and measuring the thermal radiation emitted by the target.

The processing unit consists of an Arduino microcontroller board, which receives the thermal data from the infrared sensor. The Arduino board is equipped with a powerful microcontroller that can process the incoming data and perform temperature calculation algorithms with efficiency and accuracy. The Arduino board also provides a platform for programming and customization, allowing developers to implement additional features or integrate the contactless temperature detector into larger systems.

The temperature readings obtained by the Arduino-based contactless temperature detector are displayed on an output interface, which can be an LCD (Liquid Crystal Display), LED (Light Emitting Diode) panel, or any other suitable visual output. The display provides a user-friendly interface for reading the measured temperatures conveniently.

The contactless temperature detector is powered by a suitable power source, such as batteries or a direct power connection. The Arduino board incorporates power management features to optimize energy consumption and ensure extended operation.

The Arduino platform offers several advantages for the implementation of the contactless temperature detector. It provides a flexible and programmable environment, allowing for easy customization and integration with other systems. The Arduino board's wide range of inputs and outputs enables the connection of additional sensors or devices to enhance the functionality of the contactless temperature detector. Moreover, the extensive Arduino community and available libraries provide resources for support, development, and expansion of the contactless temperature detector's capabilities.

In summary, the contactless temperature detector, implemented using an Arduino microcontroller board, offers a non-contact and accurate method for measuring temperatures. The Arduino platform enhances the device's flexibility, programmability, and potential for customization and integration with other systems.

**5. CLAIMS** (not applicable for provisional specification. Claims should start with the preamble— “I/ We claim” on separate page)

I/We claim:

A contactless temperature detector inbuilt in a gate comprising:

- a. An infrared sensor configured to detect thermal radiation emitted by a target;
- b. A buzzer for quick indication
- c. A processing unit comprising an Arduino microcontroller board, the processing unit receiving thermal data from the infrared sensor and performing temperature calculation algorithms; and
- d. A display interface configured to present temperature readings based on the calculated temperatures.

The contactless temperature detector of claim 1, further comprising a power supply to provide the necessary power for the operation of the device.

The contactless temperature detector of claim 1, wherein the buzzer enables quick indication

The contactless temperature detector of claim 1, wherein the Arduino microcontroller board enables customization and integration with other systems.

The contactless temperature detector of claim 1, further comprising a housing to enclose the components and provide a user-friendly form factor.

The contactless temperature detector of claim 1, wherein the display interface comprises an LCD or LED panel to visually present the temperature readings to a user.

We also claim that all this will be inbuilt in a gate like structure wherein as soon as the person passes through it this will detect its temperature accordingly.

**6. DATE AND SIGNATURE** (to be given at the end of last page of specification)

Date

Signature

**7. ABSTRACT OF THE INVENTION** (to be given along with complete specification on separate page)

The contactless temperature detector gate is an innovative system designed to accurately measure the body temperature of individuals passing through a designated checkpoint. It utilizes advanced infrared technology to capture thermal radiation emitted by the human body and converts it into real-time temperature readings. This contactless solution offers a hygienic and efficient method for temperature screening in high-traffic areas such as airports, hospitals, schools, and public venues.

Upon detection, the collected thermal data is processed by a dedicated software algorithm, which rapidly calculates and analyzes the temperature readings. If an individual's temperature exceeds a predetermined threshold, an alert system is triggered, providing instant notifications to designated personnel.

Additionally, the gate system can be integrated with existing security infrastructure, allowing for seamless integration and data sharing.

In conclusion, the contactless temperature detector gate offers an efficient, reliable, and non-invasive solution for temperature screening in high-traffic areas. Its advanced infrared technology, real-time processing, and integration capabilities make it an invaluable tool in maintaining public health and safety.

**Note.-**

\*Repeat boxes in case of more than one entry.

\*To be signed by the applicant(s) or by authorized registered patent agent.

\* Name of the applicant should be given in full, family name in the beginning.

\*Complete address of the applicant should be given stating the postal index no./code, state and country.

\*Strike out the column which is/are not applicable.