

USES OF INFRARED TECHNOLOGY IN CONTROLLING

COVID 19 SPREAD

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The numbers of COVID-19 cases are increasing day by day. Nations across the globe are taking various steps to stop the spread. One of the measures suggested by authorities is to look for symptoms associated with COVID-19, like fever. Non-Contacting equipment such as infrared thermometers and scanners are being used as tools for this analysis.

In India, as lockdown eases, this technology is being used in all sorts of public places to assess the state of people's health.

We at Liberty General Insurance Limited understand the importance of business continuity taking all precautions and practicing safety control measures suggested by authorities. In this LivSafe edition, we intent to provide an insight over infrared science and its possible uses in containing the COVID-19 spread.

What do thermal imaging cameras do?

Using infrared technology, thermal cameras detect radiating heat from a body, usually from the forehead and then estimate core body temperature. These cameras are an extremely powerful tool, often deployed by fire fighters to track smoldering embers and police to search for out-of-sight suspects.



Why temperature is being measured

The normal human body temperature remains around **36.5°C to 37°C**, regardless of the external temperature or weather. **A temperature over 38°C** most often means a person has a fever caused by an infection or illness.

Fever is one of the prominent factors' indicating possibility of corona contamination. Further temperature monitoring is the most efficient measure available to analyze large populations without coming into direct contact with the subjects.

Ways to use an Infrared Thermometer

• Manual testing

In this process thermometer is aimed towards forehead of person to be tested and results are noted manually.



• Infrared Mass Fever Screening

1

This measure is preferred for areas which are subjected to large crowds such as Airports, Railway Stations, Malls, Government Buildings, Hospitals, etc.

2

The apparatus for mass infrared screening consists of high-resolution infrared based cameras synchronized with Artificial Intelligence (AI) to compute the temperature and images of people suspected to have higher body temperature and a digital display depicting the analysis done by AI.

3

It gives image of detected person which helps authorities to track and impose proper isolation.

4

It gives ability to detect temperature while people are in motion, hence does not cause major effects on normal course of work.



Advantages of using infrared Thermometers



Ability to monitor the temperature without touching a probable contagious person



Lightweight, compact, and easy to use



Rapid scanning for large crowds



Works even in low light scenarios

Safety Measures while using Infrared thermal cameras

1. A physical distance of about 1 foot should always be maintained while using the camera to avoid accidental contamination of device.
2. The device should be sanitized after each shift.
3. These devices should be used by personnel trained for handling and understanding the device and its parameters.
4. The readings can be taken at the entrance of Malls, Theaters, Airports, Offices etc. Caution should be taken to avoid errors due to air curtains installed at certain locations.
5. Awareness should be raised among the people visiting public places about the pandemic and the technologies used to avoid spread.

Trivia

Infrared radiation was discovered in 1800 by astronomer Sir William Herschel. It has been a boon for scientific explorations and discoveries. IR observation can detect objects that are too cool to emit visible light. It has aided in discovery of previously unknown objects such as comets, asteroids, and wispy interstellar dust clouds.