



THERMAL IMAGING TO SCREEN FOR ELEVATED SKIN TEMPERATURE

Understanding how to screen for people in an efficient and accurate manner

SUMMARY

A thermal imaging camera can be an effective screening device for detecting individuals with an elevated skin temperature. This type of monitoring can provide useful information when used as a screening tool in high-traffic areas to help identify people with an elevated temperature compared to the general population. That individual can then be further screened using other body temperature measuring tools.

Although thermal imaging cameras are primarily designed for industrial and night vision uses, public health organizations have used FLIR cameras around the world at airports, seaports, office buildings and other mass gathering areas to provide rapid, efficient screening in high-traffic areas. FLIR thermal cameras are particularly well suited to this because they can provide a temperature reading of a person's face in a matter of seconds.

HOW THERMAL IMAGING WORKS

A thermal imaging camera produces infrared images or heat pictures that display small temperature differences. This allows thermal cameras to create and continually update a visual heat map of skin temperatures. In addition, FLIR thermal imaging cameras are sensitive devices capable of measuring small temperature differences.

Many of the FLIR thermal cameras that are appropriate for measuring skin temperatures also offer built-in functions like visual and sound alarms that can be set to go off when a certain temperature threshold is exceeded. The operator can then instantly decide whether the subject needs to be referred for further screening with additional temperature measurement tools.

As the thermal imaging camera produces images in near-realtime, the total evaluation process takes mere moments, making thermal imaging technology very useful for rapidly screening large numbers of people.

MEASURING THE TEMPERATURE OF THE HUMAN BODY

It's true that a person's general skin temperature is typically not equal to the person's core temperature. That doesn't detract from the use of thermal cameras to detect elevated skin temperatures, however. Thermal cameras are useful in this role because the goal is not to measure absolute skin temperature, but to differentiate people who have an elevated skin temperature compared to others while also considering the environmental conditions of the location.

1 Deploy At Checkpoints

For best results, screen **one person at a time**, at a distance of **1-2 meters** from the camera.



2 Set Alarm

Cameras with screening mode can be set to **alarm** when detecting **elevated temperature**.



3 Measure Skin Temperature

Allow the camera to focus on and **measure temperature on the face** in key areas, especially around the tear duct.



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The thermal imaging camera automatically detects the hottest temperature within an area, set by the operator. A color alarm makes it easy to decide whether a person needs further screening.



The FLIR Systems product line-up includes a wide variety of thermal imaging cameras that can be used for detecting people with elevated skin temperature. FLIR A320 Tempscreen, however, was especially developed for thermal screening in high-traffic applications.



Some FLIR camera models offer an elevated skin temperature screening mode that is helpful in comparing the person being screened against the temperature of other people previously screened. When in Screening mode, the operator can save ten thermal images of faces that the camera automatically averages as a reference.

SOUND AND COLOR ALARMS

All areas on the subject's face that are hotter than a predefined temperature value can be displayed as a designated color on the thermal image. This built-in alarm allows users to make an immediate decision regarding whether the subject may need further screening with additional screening tools. In addition, some FLIR cameras are equipped with an audible alarm that can be activated to sound if the detected temperature exceeds a predefined value.

A SMALL INVESTMENT TO ENABLE HIGH-TRAFFIC SCREENING

Airports all over the world are using FLIR cameras and have applied this methodology to screen people entering and leaving the country. It is a quick, non-contact method that is safe for both the camera operator and the people being screened.

To Learn More visit: www.flir.com/ebt

Specifications are subject to change without notice, check our website: www.flir.com.

Although thermal imaging cameras are generally accurate temperature measurement devices, they have not been tested or qualified as diagnostics medical equipment and should not be used to diagnose any medical conditions. The images displayed are for illustrative purposes only.

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FLIR A320 Tempscreen can be used in high-traffic areas, such as an airport, as part of screening procedures.



The thermal image shows the hot spots in the corner of the eyes.

