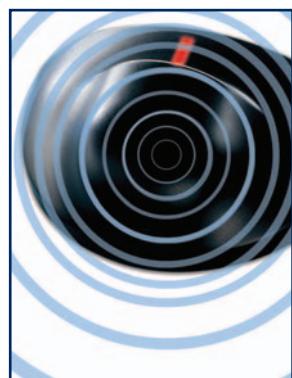


## INFRARED TECHNOLOGY



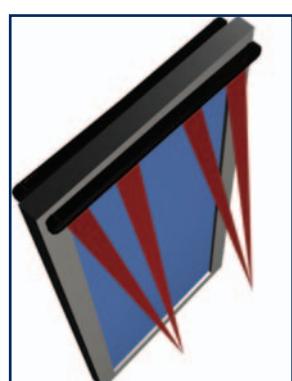
Infrared detectors operate on an emitter, made up of several LEDS, that emit light, into the detection zone. A receiver made up of several photodiodes "catch" the light reflected by the surroundings or by the target to be detected. Then, a comparison between the amplitude (amount of infrared energy) of the signal received and a threshold related to the background triggers the detection. The sending and receiving of infrared signals form a 'curtain' of protection that saturates the entire detection area. The infrared, like that of a flashlight beam, emits precise beams that check each other for reliability, providing a very accurate and adaptive pattern of coverage.

## DOPPLER RADAR, K-BAND MICROWAVE TECHNOLOGY



Movement is detected through a shift of microwaves. If a signal is sent back to the sensor the same way as sent out (no change in frequency), the sensor will not detect. When radar detects a moving object, a signal is sent back different from the signal sent (a change in frequency), the sensor will then detect. Microwave motion detection is based upon the Doppler Effect Principle. Doppler Radar detects motion only and is the most effective technology for the activation of an automatic door. The use of K-Band avoids interference from cell phones, radar detectors, CB radios, etc. K-Band technology will detect motion as slow as 2.2. inches per second, where X-band detects at 6 inches per second. Last, K-band provides a more defined pattern that offers more stability and control in its detection functions and is unchanging with ambient conditions, including temperature changes.

## DISTANCE MEASURING



Distance measuring utilizes the principle of triangulation. A focused active infrared (AIR) beam is sent to the target and is reflected back to the sensor with a tilt angle depending on its depth. Within the receiver, a special optical component is able to determine the angle of the reflected rays.

Once the angle is set through the depth adjustment, it will not detect anything beyond that adjustment. As a result, this type of AIR technology will be insensitive to variations in ground color, making it an exceptional sensor for mounting on moving doors.

## MOTION TRACKING FEATURE



Uni-directional motion detector permits an automatic door to close much sooner after a person has walked through it, thus reducing heating and cooling costs. Motion Tracking Feature (Uni-MTF) is uni-directional mode with a motion-tracking feature, offering the best of both worlds. Motion towards the door is tracked inside of the field of detection. When object is outside of the field of detection, the sensor is automatically converted to uni-directional mode. This feature combines optimal energy conservation with safety in a single sensor.