

HOTLens FOR THE CLEAREST VIEW



The *HOTALens*^{TM†} from Texecom is the greatest breakthrough in PIR optics in the last 25 years. Using state-of-the-art Holographic Optical Technology[†], Texecom have developed a series of detectors with optics so advanced that they dramatically improve both false alarm immunity and "catch performance".

Critical advantages of the *HOTALens* include:

- ✓ STATE-OF-THE-ART HOLOGRAPHIC OPTICAL TECHNOLOGY
- ✓ LASER TUNED IR FILTERING
- ✓ SUB-MICRON TECHNOLOGY
- ✓ ELIMINATE OFF-CENTRE ABERRATIONS
- ✓ FASTER PICK-UP
- ✓ REDUCE FALSE ALARMS
- ✓ OPTIMUM FOCUSSING
- ✓ ACTIVE WHITE LIGHT REJECTION

[†]Worldwide patents pending.
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Texecom

P I R O P T I C S

All PIR detectors rely on an optical system to transmit the small amount of infrared radiation emitted by an intruder onto a pyroelectric detector. This is typically achieved using either grooved Fresnel lenses or segmented mirrors. In spite of the fact that this is probably the most crucial part of any detector these technologies have remained largely unchanged since their conception.

The HOTLens from Texecom is the greatest breakthrough in PIR optics in the past 25 years.

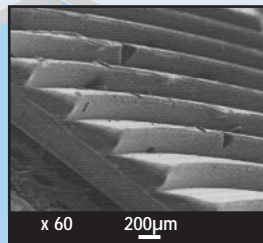
Using state-of-the-art Holographic Optical Technology, Texecom have developed a series of detectors with the unique *HOTLens*, - a laser tuned diffractive lens that has enormous improvements in its optical properties compared with Fresnel lenses or segmented mirrors.

HOLOGRAPHIC OPTICAL TECHNOLOGY

Examine a *HOTLens* under an electron microscope and you will see thousands of microscopic features precisely etched into the surface. These are actually precisely tuned diffraction gratings set in the infrared wave band.

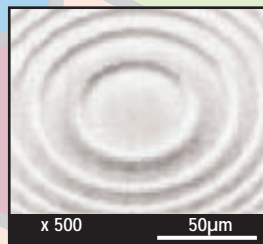
Standard Lens

Note the imperfections in the zone facets, these compromise pickup.



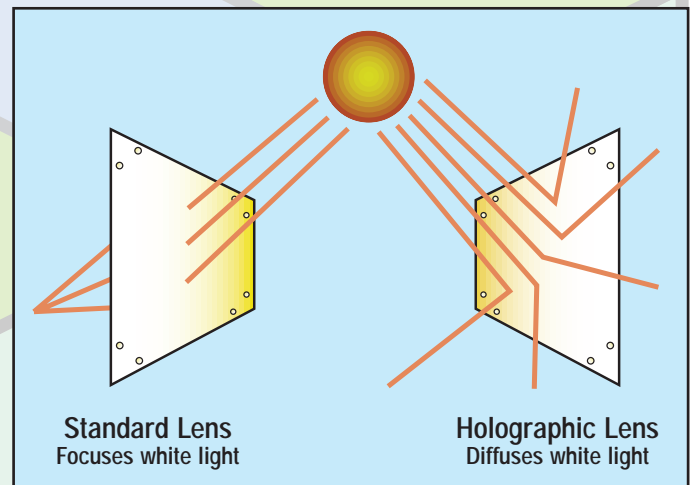
Holographic Lens

Laser etching ensures accuracy and repeatability even at sub micron levels.



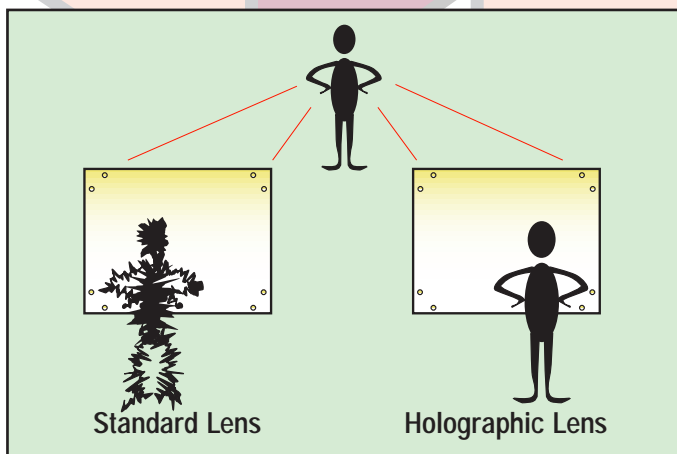
WHITE LIGHT IMMUNITY

Being laser tuned specifically to the infrared wave band the *HOTLens* diffuses visible light, providing inherent white light immunity.



INFRARED FOCUSING

A *HOTLens* diffracts only infrared light leading to a greater transmissivity than conventional lenses. This improves catch performance and allows circuit gain to be reduced thus improving false alarm immunity.

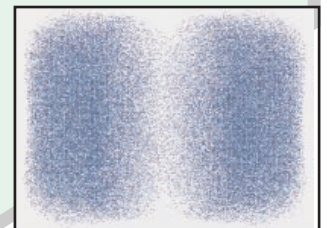


OPTIMUM ZONE EDGES

Conventional lenses focus more energy in the centre of zones than at the edges, a *HOTLens* has a uniform energy density, again improving catch performance and reducing false alarms.

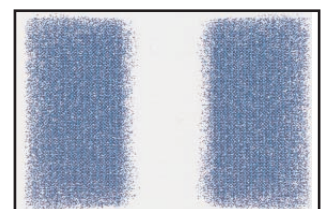
Standard Lenses

Power density varies gradually throughout zone areas, this defocuses the edges reducing signal strength.



Holographic Lens

Uniform power density throughout zones leads to far clearer signals for improved pickup and reduced false alarms.



C O N C L U S I O N

The revolutionary *HOTLens* from Texecom provides such dramatic improvements in both **false alarm immunity** and **catch performance** compared with those of standard lenses prove that it should be the only choice for professional security installers.