

Night Vision IR Camera Technology

Night vision technology has been around for approximately 50 years. The early night vision devices consisted of nothing more than an infrared spotlight and a photosensitive receiver to pick up its reflected beams; the vision quality was very poor. The next version enhanced the reception of passive IR emissions and followed with adding a micro channel plate, which multiplied the efficiency of the electron-photon conversion. The current version, which is utilized today by military and law enforcement agencies, has much better resolution and sensitivity.

Night vision cameras are very sensitive to thermal-infrared emissions and amplify them, converting a specific measurement of the invisible wavelength into an image on your monitor. Night vision cameras use technology known as image enhancement or image intensification.

Night vision cameras contain lenses that sense light at a higher frequency than thermal-infrared, any light from the more reflective infrared wavelengths to the barely visible red wavelengths. The light's photons are converted to electrons and amplified through a component called the photocathode. The electrons are then converted back into photons to produce a strong visible image on your camera's screen.



By saturating an area with reflective infrared light, WTI's night vision IR cameras (Ambervision I, II, LR and 940) create images with tremendously clear and crisp detail. Lighting up an area with both infrared and invisible infrared (AV-940) light greatly improves night vision in black and white.

To see WTI's Ambervision I in action in both daytime and nighttime – check out this short clip on YouTube: <http://www.youtube.com/watch?v=QXqaYJ1Adhw>.

Lux rating refers to the minimum illumination in which the camera can pick up an image. The closer the Lux rating is to zero, the better the camera's performance in nighttime or low-light situations. WTI's color day/night cameras with infrared LEDs can see at zero Lux, meaning the cameras can see in complete darkness. Other color day/night cameras WTI offers, like the Sidewinder (360 degree pan, 360 degree tilt, 35Xs Optical zoom cameras) and the C-MAX Ultra (fixed, 22Xs, 23Xs and 35Xs Optical zoom cameras), can see at 0.01 Lux.



SIDEWINDER



C-MAX ULTRA SERIES

To see WTI's Sidewinder in action in both daytime and nighttime – check out this short clip on YouTube: <http://www.youtube.com/watch?v=loH1z4WlBhA>.

Color day/night cameras will automatically switch to black and white at night for optimum performance in a low light situation and switch back to color once the light level is adequate.

A night vision camera's range is limited by the amount of reflected IR light it can detect. WTI's Ambervision I has a range of 100 meters, the AV-LR (Long Range) 200 meters, the AV-II 21 meters, and the AV-940 has a range of 80 meters. Weather conditions affect the range as well. By adding extra infrared illumination, you can increase your camera's range.



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WTI is an American (veteran) owned company that is ISO 9001:2000 certified and all of Wireless Technology, Inc.'s cameras are made right here in the USA. For more information or to see our complete line of CCTV and Wireless solutions, please visit us at <http://www.gotowti.com>.

~Lester Miyasaki, National Sales Manager

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and Transportation Markets!***

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