UVScanner™

The UVScanner™ is a near-UV viewer with dual LCD displays. It is ideal for field operation in scenes with bright ambient non-UV light. The UVScanner images in the 300-400nm band of the spectrum, enabling the visualization of many interesting surface phenomena.

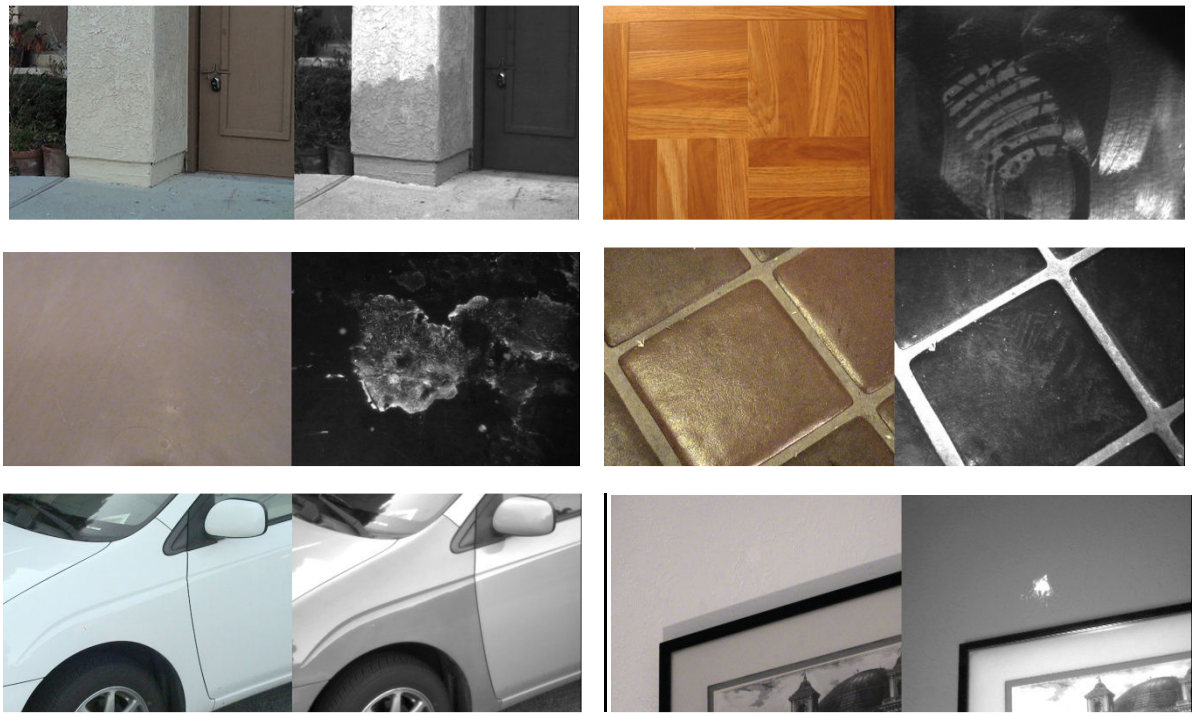
Benefits:

Runs on a high-energy lithium-ion battery for long operational times
Live UV image presented on dual displays for reduced eyestrain
Rubber eyecups shield the user's eyes and the display from ambient light
UV image unaffected by ambient visible or near-infrared light
C-mount lens system compatible with commercial video optics
Twin 396nm UV LED illuminators for night/indoor viewing

Specifications:

640x480 pixel UV video
23 degree horizontal FOV with 16mm lens
Dual 640x480 backlit LCD displays with eyecups
Weight: 1.5 lbs

Visible and UV image pairs, clockwise from top left: New and old paint contrast in UV, shoe impression in floor wax, shoe mark of epoxy residue on tile floor, hole patched with spackle on white-painted wall, Toyota Prius with repainted fender, toothpaste stain on countertop



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- *Features and specifications subject to change without notice*

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Forensic Applications of the UVScanner

The UVScanner is ideally suited for crime scene investigation using reflected-ultraviolet imaging methods. Reflected-UV imaging can reveal many interesting features in a crime scene, including features that are difficult or impossible to detect in any other practical way.

Reflected-UV imaging is a powerful forensic investigations tool for two reasons:

UV is absorbed more readily by many organic materials than either visible or near-IR light

UV light scatters more strongly off minute surface features than either visible or near-IR light

The UVScanner makes it possible to rapidly scan a scene for trace evidence and marks. Once located, these pieces of evidence can be further documented using high-resolution photographic methods.

Examples of forensic evidence documented using reflected-UV imaging include:

Shoe impressions, scuffs and scrapes, tool marks and drag marks which are faint or non-evident to the eye

Repainted or touched up surfaces

Bite marks on human skin

Trace materials and substances

Altered documents

Because UV is strongly absorbed by many organic materials, substrates like wood and vinyl flooring and plastic countertops will tend to darken when imaged with reflected UV. Inorganic materials like dusty footprints or scuff marks will generally reflect UV more readily than organics, greatly increasing the contrast of the resulting image.

Since UV light has a shorter wavelength than visible or near-IR light, it is much more readily scattered by surface features like scratches or scrape marks. This makes it possible to see where a piece of furniture has been repeatedly moved to access a hiding place, for example, or where a heavy object was dragged across a floor. It can also greatly improve the contrast of faint serial numbers on firearms that were altered and have subsequently been polished and etched to bring back the numerals.

Bite marks are often difficult to match to a dental impression on a suspect because the underlying skin bruises so much. UV imaging is highly absorbed by skin at the surface, which means that underlying bruises are much fainter and the surface detail is greatly enhanced.

Many substances will reflect UV quite differently from common substrates in crime scenes. The differences in reflectance are often more pronounced than in the visible band. For instance, many visibly-transparent materials become opaque in the UV band. This makes it possible to quickly find and photographically document many types of dried fluids, even ones that do not fluoresce.