

DCS5 APPLICATIONS

Reflected UltraViolet Imaging

Equipped with a custom modified camera and UV-Vis-IR sensitive lens, the DCS 5 fingerprint imaging workstation enables examiners to search for evidence beyond the limits of human vision, detecting and visualising latent fingerprints within the UV and IR wavebands.

While it is common practice for forensic examiners to use a UV light source to excite visible fluorescence for the detection and examination of evidence, including body fluids and chemically treated fingerprints, the use of reflected-UltraViolet remains limited.

Effective at visualising latent and cyanoacrylate fumed fingerprints on almost any smooth non-porous surface, reflected-UV imaging is particularly useful when examining prints on transparent surfaces.

Under UV light, surfaces including glass and clear plastics appear black, significantly improving the visibility of fingerprints of fingerprints which reflect UV.

By photographing the UV that reflects back from a fingerprint it is possible to obtain a high quality record of the mark before risking the application of powders and tape.

APPLICATION IMAGES

- | | |
|------------------------------|---|
| Reflected-UV Imaging | 1 |
| Latent prints on bottle | 2 |
| • <i>Distance - Visible</i> | |
| • <i>Close up- Visible</i> | |
| • <i>Close up - R-UV</i> | |
| Latent prints on light bulb | 3 |
| • <i>Visible</i> | |
| • <i>R-UV</i> | |
| Latent prints on perspex | 4 |
| • <i>Visible</i> | |
| • <i>R-UV</i> | |
| Latent prints on plastic cup | 5 |
| • <i>Visible</i> | |
| • <i>R-UV</i> | |

DCS 5 Required Hardware

In order to accommodate the differing requirements of fingerprint laboratories worldwide, DCS 5 is a modular system that can be expanded through the addition of application specific modules.

In order to perform Reflected-UV imaging applications, the DCS 5 core imaging system must be equipped with the additional **Ultraviolet Imaging Package**.

DCS 5 core imaging system

A turnkey system operated via a Windows PC, the DCS 5 Core Imaging System includes all components required to image and enhance fingerprints in the visible spectrum.

Image Capture

Nikon D810 DSLR camera
105mm Vis-IR Macro Lens
Visible Imaging Filter Set

Illumination

Multi-wavelength Ring Light
Halogen Light Source Package

System Essentials

Copy Stand & Accessories
Computer Hardware
DCS 5 Software Package

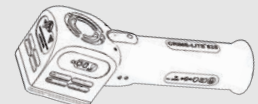


Ultraviolet Imaging Package

Additional camera lens, light source and filters essential for Reflected-UV imaging.

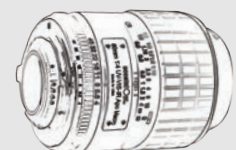
UV Light Source

Powerful directional 365nm UV light source.



60mm UV Transmitting Lens

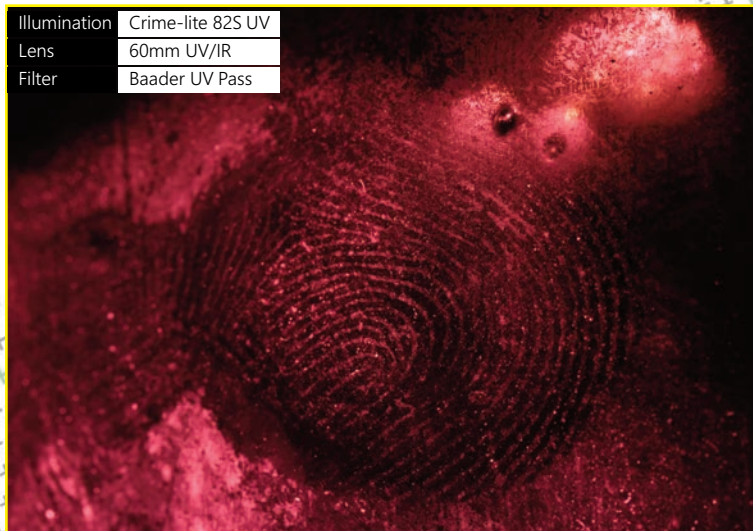
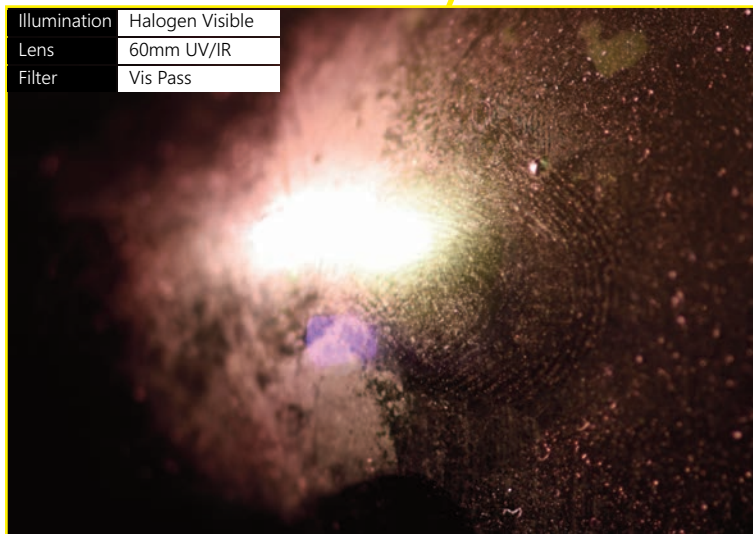
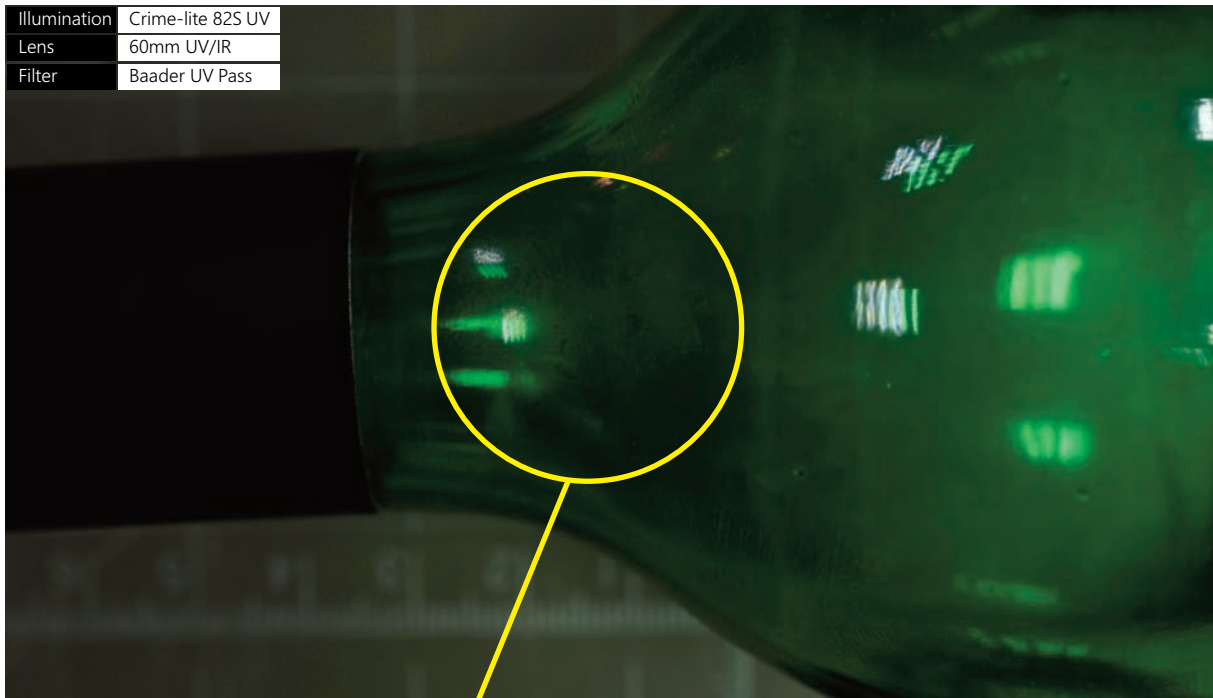
This quartz/fluorite lens, is essential for Reflected UV Imaging but also provides excellent results in the Vis and IR.



UV Imaging Filter Set

330-385nm bandpass filter





Fingerprints on Curved Glass

A notoriously difficult surface on which to photograph fingerprints, examiners wishing to obtain prints from curved glass surfaces will in most cases resort to using dusting powders and fingerprint lifting tape. While this technique is widespread it does risk permanent damage to the print.

Reflected-UV imaging eliminates the problem of glare and the reflection of visible light from the bottles surface leaving a clearly visible, high contrast fingerprint.

