FF:03/15

Improving the Quality of Forensic Evidence

foster + freeman

Crime-lite® UV/IR

Crime Scene Examination

Beyond the Visible

The new Crime-lite UV/IR crime scene search kit provides investigators with a powerful search tool for the detection of blood, fingerprints, body fluids and other forensic evidence on difficult backgrounds that may be difficult to see in the visible.

The Crime-lite UV/IR is a battery powered, portable system that uses reflected ultraviolet and near infrared light, imaged with a UV-IR sensitive camera, to detect evidence that cannot be seen in normal visible light.

Comprising:

- **Dual waveband Ultraviolet/Infrared light source**
- **5MP auto-focus camera module**
- **Ruggedized tablet PC and holding frame**
- **Waterproof carry case with essential accessories**

Crime Scene Examination
Beyond the Visible

Whilst a skilled investigator can learn much through the visual examination of a crime scene, a great deal of evidence may remain unseen, hidden or masked by the background.

Examining reflected ultraviolet and near-infrared images of the crime scene, made visible through a UV-IR sensitive camera with sensitivity greater than the human eye, it is possible to detect unseen evidence including:

- **Blood stains and gun shot residues on dark fabrics including clothing and upholstery**
- **Bite marks that may be hidden by bruising**
- **Re-sprayed vehicle panels and evidence hidden under recently painted walls**
- **Previously un-seen tool marks, shoe prints and scuffs**
- **Body fluids on a wide variety of surfaces**

A CRIME SCENE CONCEALS MORE THAN MEETS THE EYE

The combination of UV & IR light sources and UV-Vis-IR camera provides the investigator with 3 examination techniques that can be used to reveal previously unseen evidence.

UV Reflection/Absorption

Images of organic materials that absorb UV, present on UV reflective surfaces, are greatly enhanced and made visible with the highly sensitive Crime-lite Camera fitted with a UV pass filter.

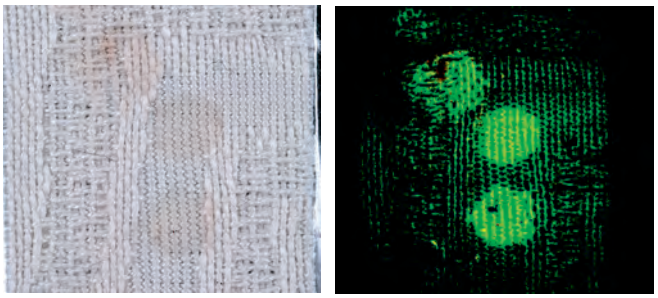
Infrared Examination

A similar effect is obtained with near infrared, differentiating evidence that absorbs IR on surfaces that reflect IR.

In the example on this page, dark fabric viewed under IR becomes white while blood stains absorb the IR light and are clearly visible as black marks.

UV Fluorescence

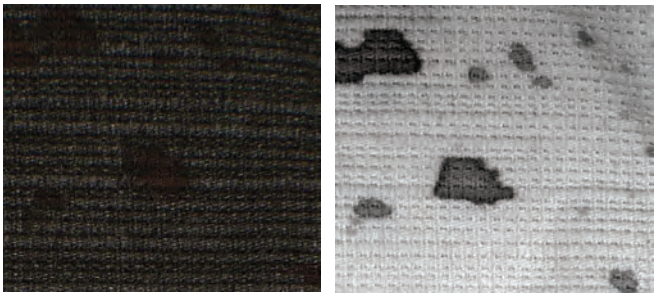
Investigators have long used UV illumination to search for and examine forensic evidence. UV light can be used to induce visible fluorescence in many organic substances including body fluids and the natural oils found in fingerprints. The high sensitivity of the Crime-lite camera, compared to the eye, improves the detection of weak deposits.



- UV Fluorescence: Semen fluoresces on fabric

- Infrared: Improved visualisation of tatoos on dark skin

Images courtesy of Matthew Brown Medical Examiners Office Washington D.C



- Infrared: Blood stains are revealed on dark fabric

Standard Kit QCL/42UVIR/K

The Standard Crime Scene Examination Kit for the detection of evidence Beyond the Visible allows the operator to conduct hands-free examinations for approximately 120 minutes with a fully charged light source.

The kit includes the following components:

Crime-lite® 42S UV/IR Light Source

8 x HIGH EFFICIENCY UV LEDs | **350-380nm** | **8 x HIGH EFFICIENCY IR LEDs** | **800-900nm**

FEATURES
- Dual UV/IR emission warning LED and key switch
- Forced air cooling with built in thermal protection

PHYSICAL DIMENSIONS
- Weight: 560g
- Handle dia 43mm, Head 53mm x 65mm, Overall length 210mm

POWER
- Run time in excess of 240 minutes on full charged battery when using a single wavelength (optional AC mains adaptor for continuous running)
- Discharged battery indicator LED

SAFETY
- Information sheet and wavelength output certificate
- Classified to European safety standard EN62471:2008

UV-VIS-IR CAMERA MODULE

CAMERA
- 5MP USB2.0 CMOS auto-focus camera
- 12mm f/2.8 lens

FEATURES
- Adjustable angle slide-on mount
- Wireless remote control

FILTERS
- Indexed filter wheel (4 positions)

(1) Clear window for viewing UV-VIS-IR
(2) UV viewing filter, blocks visible and IR light
(3) Visible viewing filter, blocks UV and IR light
(4) IR viewing filter, blocks UV and Visible light

TOUGHPAD COMPUTER & Holding Frame

PANASONIC TOUGHPAD FZ-G1
- High performance mobile processor
- Ruggedized casing
- Operating System: Windows 8 Pro
- Processor: Intel Core i5 (3rd Gen) 3437U / 1.9
- Battery: Up to 8 hours
- Dimensions (WxDxH): 27 cm x 18.8 cm x 1.9 cm
- Weight: 1.1 kg

HOLDING FRAME
- Bracket & screws attach Crime-lite to ToughPad
- Shoulder strap for scene of crime use

Additional Kit Components

1. UV safety glasses
2. UV camera filter
3. Filter pouch
4. Lanyard & belt clip x2
5. Waterproof case

6. 18V Li-Ion battery x2
7 Battery connector
8. Battery charger
9. Battery pouch
10. AC adaptor

Crime Scene Examination **Beyond the Visible**

Extended Kit QCL/8242UVIRB/K

Further extend the capabilities of the Standard Kit (QCL/42UVIR/K) with the addition of a Crime-lite 82S Blue.

Emitting high intesity illumination in the 420-470nm waveband, this powerful 16 LED light source is can be used for the fluorescence examination of a wide range of evidence types including: Body fluids, fragments of bone and tooth, human and animal hair, fibres, gun shot residues and accelerants, fingerprint treatments including BY40 and Ardrox.

Crime-lite® 82S Blue Light Source

16 x HIGH EFFICIENCY BLUE LEDs	420-470nm

FEATURES
- Homogenous light beam
- LED Radiometric Power Maintenance >70% at 50,000 Hours
- Forced air cooling with built in thermal protection

PHYSICAL DIMENSIONS
- Weight: 560g
- Handle dia 43mm, Head 53mm x 65mm, Overall length 210mm

GOGGLES & CAMERA FILTERS
Required for fluorescence examinations
- High performance 495nm anti-glare 62mm camera filter
- High performance 495nm anti-glare evidence viewing goggles

POWER
- Run time typically 80 minutes on full charged battery when using a single wavelength (optional AC mains adaptor for continuous running)
- Discharged battery indicator LED

SAFETY
- Information sheet and wavelength output certificate
- Classified to European safety standard EN62471:2008

Head Office, UK Sales Office
Vale Park | Evesham | WR11 1TD | United Kingdom
Tel: +44 (0)1386 768 050 | sales@fosterfreeman.com

USA Sales Office
46030 Manekin Plaza | Suite 170 | Sterling | VA 20166 | USA
Tel: 888 445 5048 | usoffice@fosterfreeman.com

foster + freeman
fosterfreeman.com