

Forensics Investigation Instruments - Horiba

- Forensics FOCUS LED



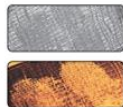
Applications

You can detect these and more:

Biological Fluids	Bruises
Trace Evidence	Treated Fingerprints
Hair - Fingernails	Bones - Teeth
Gunshot Residue	Drugs
Bite Marks	Footprints

Latent Fingerprint Detection

The primary application of a Forensic Light Source is for enhancing the detection of latent fingerprints. Forensic Light Source techniques have been successfully utilized for revealing latent prints on these and many other types of textured surfaces, backgrounds which mask ridge detail, fragile surfaces, and contaminated surfaces.

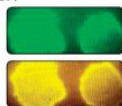


Gun Shot Residues/Explosive Residues



Body Fluids The more body fluid evidence you can reveal, the better.

Semen	Saliva
Vaginal	Urine
Sweat	Blood



Hair and Fibers



Human Bone Fragments, Tire Tracks, Shoe Prints, Drugs, etc.



Components and Specifications:

- Rugged portable LED units with one click activation
- Weatherproof carry case
- 4 pairs of goggles: 1 UV protection, 1 yellow, 1 orange, 1 red
- Viewing shields, 62mm camera filters
- Additional rechargeable backup batteries and chargers

System is manufactured under ISO 9001 standards.

Type of source: LED – Light Emitting Diode

Life Time: 20,000 hours

DC Electrical Specifications: Rechargeable Li-Ion battery and chargers

Warranty: One Year on Parts and Labor

FOCUS-6F

- Includes the following wavelengths:
UV390, 470, 495, 530, 620, WHITE

FOCUS-3F Also Available

- Universal Imaging System



Application

Detects Latent Prints

The two primary RUVIS applications are the detection and capture of untreated prints on most non-porous surfaces, and cyanoacrylate (CA) fumed prints. Print collection can be performed on surfaces such as plastic bags, sticky sides of tape, glossy magazines, photographs, linoleum tile, compact disks, credit cards, etc. Cyanoacrylate treatment will further enhance the detection by RUVIS.

Smooth, Non-Porous Surfaces

The SceneScope RUVIS UHD Camera allows the detection of latent prints, prior to treatment. This is possible on surfaces that reflect light very well and do not absorb prints. That is to say, surfaces that are smooth and non-porous. Untreated prints with residual moisture show as white reflective ridges on a black background. Untreated oily prints appear as strong, black ridges on a shiny background. As surfaces become more rough or more porous, "superglueing" the print may extend the range of surfaces on which RUVIS will work.

Captures High Resolution Images

SceneScope RUVIS UHD devices use 254nm UV light but they are not detecting fluorescence. Instead the device looks for the reflections and scatter of the 254nm light off of the fingerprint ridges. The 16MP Ultra High Definition Camera is capable of capturing high resolution images at 254nm that can be enlarged to visualize all levels of detail. The camera can capture a full palm image that contains all the information necessary to "zoom in" and see individual minutiae points.

Specifications

System includes:

Black and White High Resolution, High Speed, 16MP
Ultra High Definition RUVIS camera capable of 1000ppi
resolution over an area of 4.9" by 3.3", Full Frame, Full Spectrum
acquisition with ability to capture from 250-1100nm.

78mm UV Quartz Lens with Magnetic Filter Holder

254nm BandPass UV Filter with quick release magnetic mount

365nm BandPass UV Filter with quick release magnetic mount

Dual 254nm/365nm lamp and power supply

Software: SPEX Forensics Capture software, ImaQuest Digital
Enhancement Software.

Copy Stand with column and 18" x 20" base
with arm and clamp system

Included Software:

Capture software specifically designed for RUVIS UHD/UIS
camera provides quick, user friendly, user defined presets for:
Screening, Focusing, and Capturing high resolution images.

Camera Specifications

Resolution: 16 million pixels

Frame Rate: 3 User Selectable Operating Modes

Search: 10 fps

Fine Focus: 11 fps

Capture: 1.7 fps

Spectral Sensitivity: 250nm to 1100nm

Integration time: 1ms to 16 seconds

Aspect Ratio: 3:2

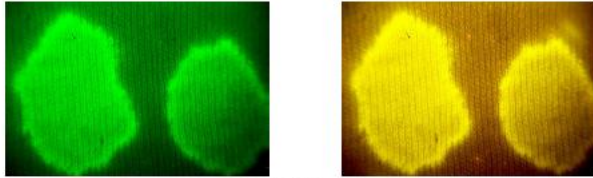
Data Transfer: Gigabit Ethernet

- **FOCUS LED**



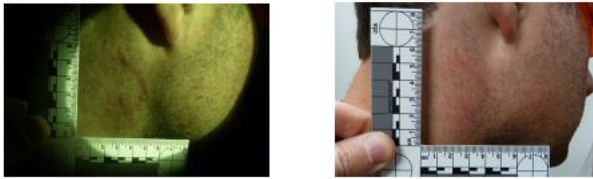
Applications

Body Fluids The more body fluid evidence you can reveal, the better; Semen, Saliva, Vaginal, Urine, Sweat, Blood.



Note 2 orange spots in center of the "Yellow" image, 495 nm and Orange filter; the 2 orange spots are missing in the "Green" image, 530 nm and Red filter.

Bruising



Fingernail scratches on neck, 395 nm and Yellow filter

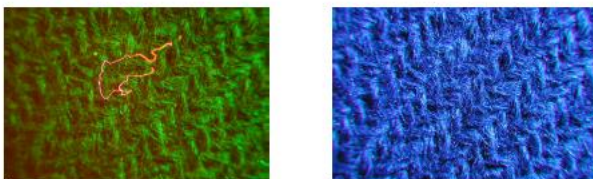


Belt marks on skin, 395 nm and Yellow filter



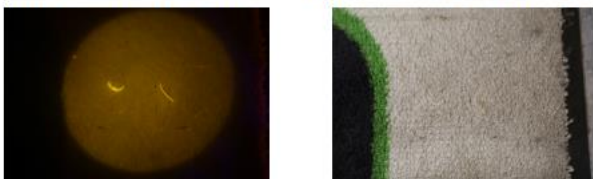
Needle puncture mark, 395 nm and Yellow filter

Hair and Fibers



Single fiber located on cloth, 470 nm and Orange filter

Fingernails, Human Bone Fragments, Drugs, Etc.



Fingernail pieces located on carpeting, 470 nm and Orange filter

Components and Specifications:

FOCUS-3F

- Includes the following wavelengths:
UV395, 470, WHITE
- Rugged portable LED units with one click activation
- Weatherproof carry case
- 4 pairs of goggles: 1 UV protection, 1 yellow, 2 orange (one for examiner, one for the victim)
- Viewing shields, 62mm camera filters
- Additional rechargeable backup batteries and chargers

System is manufactured under ISO 9001 standards.

Type of source: LED – Light Emitting Diode

Life Time: 20,000 hours

DC Electrical Specifications: Rechargeable Li-Ion battery and chargers

Warranty: One Year on Parts and Labor

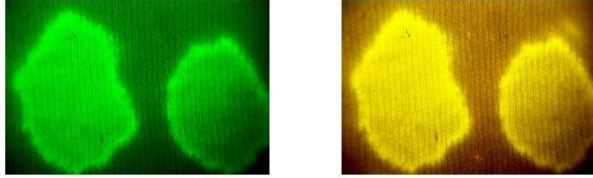
FOCUS-6F Six Wavelength Version Also Available

• FOCUS PRO



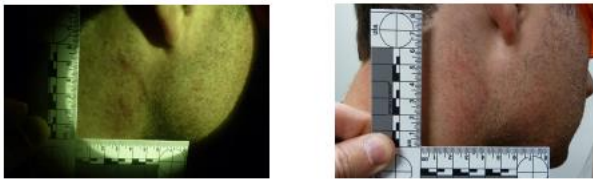
Applications

Body Fluids The more body fluid evidence you can reveal, the better; Semen, Saliva, Vaginal, Urine, Sweat, Blood.



Note 2 orange spots in center of the "Yellow" image, 495 nm and Orange filter; the 2 orange spots are missing in the "Green" image, 530 nm and Red filter.

Bruising



Fingernail scratches on neck, 395 nm and Yellow filter

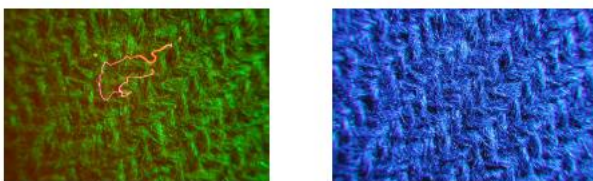


Belt marks on skin, 395 nm and Yellow filter



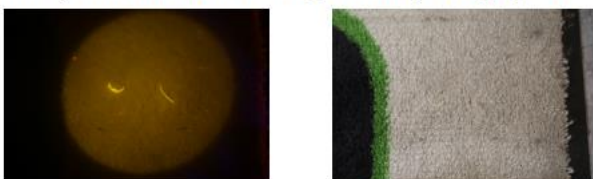
Needle puncture mark, 395 nm and Yellow filter

Hair and Fibers



Single fiber located on cloth, 470 nm and Orange filter

Fingernails, Human Bone Fragments, Drugs, Etc.



Fingernail pieces located on carpeting, 470 nm and Orange filter

Components and Specifications:

- Rugged, Portable, Waterproof IPX7 LED with one click activation
- Weatherproof IP67 carry case
- 4 pairs of goggles: 1 UV protection, 1 Yellow, 1 Orange, 1 Red
- 62mm camera filters and viewing shields
- Batteries and chargers

System is manufactured under ISO 9001-2015 standards.

- Type of source: LED – Light Emitting Diode
- Life Time: 20,000 hours
- DC Electrical Specifications: Rechargeable Li-ion Batteries and Chargers
- Warranty: One Year on Parts and Labor

FOCUS-PRO-7F

Includes the following wavelengths:

UV365 nm, UV395nm, 470 nm, 530 nm, 625 nm, IR850 nm, White

FOCUS-PRO-3F

Also available (user choice of wavelengths)

- HANDSCOPE® LASER

One-Hand Operation

3 Intensity Levels

4 Wavelengths



Application

HANDSCOPE LASER

HS-LASER-4F

The new HandScope® LASER is the latest Forensic Light Source by SPEX Forensics. The unique design allows one hand operation. The same hand holding the light source can cycle through the four different wavelengths and three power settings using the LCD touch panel. No other laser offers the same versatility.

For scene processing, the removable and rechargeable lithium ion battery provides up to 3 hours run time depending on the power setting. Displayed clearly on the LCD touch pad is the remaining battery life. The HandScope LASER battery can be used with or without the internal battery. If the battery is inside the unit, it will charge the HandScope Laser while plugged in, regardless of whether the unit is turned on and being used, or sitting idle.

Hands-free operation in the lab is easy when using the integrated tripod mount with the Micro USB and optional software driving the HandScope LASER through all functions. Pair the HandScope LASER with the Universal Imaging System – UIS – for the ultimate evidence capture system.

Specifications and Components

- 4 wavelengths: 465nm, 525nm, CSS, UV 365 (LED)
- Li-Ion battery
- Power supply and charger
- Laser goggles
- Camera filters
- Viewing shields
- Software (optional)
- Waterproof Mil-Spec case



- **HandScope LED**



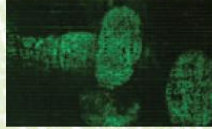
Applications

Latent Fingerprint Detection – Liquid Dyes

Basic Yellow

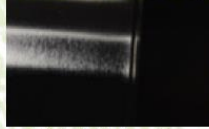


White Light on Duct Tape

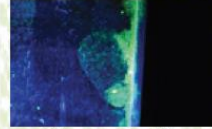


440 nm – Yellow Filter

Ardrox



White Light on Can



365 nm – No Filter

Latent Fingerprint Detection – Fluorescent Powder

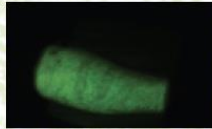


460 nm – Orange Filter

Bruising



White Light



440 nm – Yellow Filter

Body Fluids - Serology

Saliva



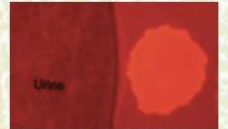
520 nm – Red Filter

Semen



460 nm – Orange Filter

Urine



460 nm – Orange Filter

Bone/Teeth/Fingernails

Bone



White Light

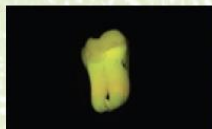


460 nm – Orange Filter

Teeth

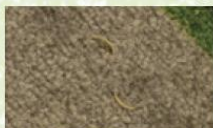


White Light



440 nm – Yellow Filter

Fingernails

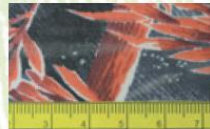


White Light

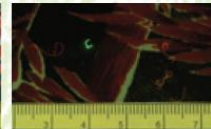


365 nm – No Filter

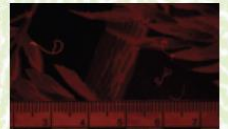
Trace Evidence – Hair and Fibers



White Light on Fabric



440 nm – Yellow Filter



520 nm – Red Filter

Shoe Impressions



White Light on Floor Tile



CSS Oblique Lighting – No Filter

Questioned Documents



White Light



365 nm – No Filter

Specifications

HandScope LED Multi-Wavelength Forensic Light Source Part #: HS-LED-5F

Each HandScope LED includes the following complete set of accessories:

- 25,000 Hour Rated LED Engine
- One Hand Operation
- Electronic control of wavelength and intensity selection.
- 5 wavelengths: UV (365), 440, 460, CSS (Crime Scene Search), 520
- 110-220 VAC power supply for main unit and external charger
- 1 Lithium Ion Battery
- External charger for battery
- 4 pairs of goggles (Clear, Yellow, Orange, Red),
- 3 - 62 mm dia. camera filters (Yellow, Orange, Red)
- Manual
- Rugged Carrying Case



Technical Specifications

Illuminator Type: High Efficiency Light Emitting Diodes
Lifetime: 25,000 Hours
Operating Temperature Range: 0° C to 35° C
Weight: <3 lbs. / <1.36 kg including battery

Main Unit

Input Voltage: 10-24 VDC
Total Power Consumption: 90 W

Power Supply

Input Voltage: 90 - 264 VAC
Input Frequency: 47-63 Hz
Total Power Output: 100 W

Wavelength Specifications

The HandScope LED is the most versatile LED-based forensic light source, incorporating 5 wavelengths in a single, self-contained, battery powered unit.

The HS-LED-5F contains:
365nm (UV), 440nm, 460nm, CSS (Crime Scene Search), 520nm



- **Image Enhancement Software**

You have to identify this...



Your AFIS wants this...



Let ImaQuest give you what your AFIS wants!

As seen in the example above, three overlapping latent images can pose problems for AFIS. By first selecting an area with overlapping ridges, then applying Fast Fourier Transform (FFT) the ridges of one print can be removed leaving the selected print visible. Next apply Brightness and Contrast, a Sharpen filter, and then rotate. Through a few simple and repeatable steps in ImaQuest, anyone can get AFIS quality results.

- Mini Crime Scope



Applications

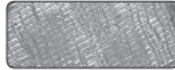
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Trace Evidence	Treated Fingerprints
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Gunshot Residue	Drugs
Bite Marks	Footprints

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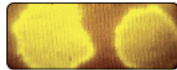


Gun Shot Residues/Explosive Residues

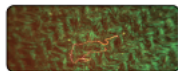
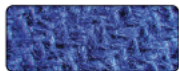


Body Fluids The more body fluid evidence you can reveal, the better.

Semen	Saliva
Vaginal	Urine
Sweat	Blood



Hair and Fibers



Questioned Documents



Human Bone Fragments, Tire Tracks, Shoe Prints, Drugs, etc.



Components and Specifications:

- Rugged portable main unit with fold down handle
- Front control panel with intensity adjustment knob
- 10mm active diameter Liquid Light Guide (6 feet long) with dual armor plate
- 4 pairs of goggles: 1 UV protection, 1 yellow, 1 orange, 1 red
- Carry Case

System is manufactured under ISO 9001 standards.

Type of lamp: Hybrid Gas Discharge Lamp

Life Time: 2000 hours

AC Electrical Specifications: 110-220 V, 50/60 Hz, 7 AMP

Warranty: One Year on Parts and Labor

MCS-ADV-15F

- 1 remote interchangeable thumbwheel (patented) with built in collimator. Includes the following wavelengths in a protective housing: UV, 390, 415, 445, 455, 475, 495, CSS, 515, 535, 555, SP575, 575, 600, WHITE

MCS-ADV-8F Also Available

- **AFIS- APIS System**

|RESULTS....the only thing that matters.

The most important feature of an AFIS system is the ability to match prints.

This is what PrintQuest® does best.

PrintQuest® is a proven low cost AFIS-APIS solution capable of importing and processing fingerprint and palmprint images from live scan devices, digital cameras, and scanners along with remote networked workstations. PrintQuest® is offered as a complete system allowing an agency to construct and manage a local database of known fingerprints and palm prints and use this database for automated searching of latent fingerprints and latent palm prints.

*When we say "Identifications Confirmed" we don't just mean "Hits".
We mean those matches made by PrintQuest® and Confirmed by the Expert.*

All PrintQuest® systems arrive as a complete package including Dell computer hardware, a flat bed scanner for 500/1000 DPI, laser printer, CDRW/DVD combo drives, APC-UPS, LCD monitor, keyboard, and mouse. Installation and training is included. Pre-loading of your cards is also available.

During a search, PrintQuest® compares prints with 3 parameters; The minutiae points themselves, whether the point in question is a bifurcation or an end point; The relationship of each individual point to its neighbors in space (both direction and distance); And most importantly, the skeleton or ridge flow of the print. This is what provides exceptional results.

A User does not "initiate a search". In PrintQuest®, the user enters information into the database. Once entered all of the applicable searches are carried out. The user need only view the results by accessing the candidate lists that are generated. Searches are automatic events.

Most systems search and compare the minutiae points of prints however; PrintQuest® includes the skeleton "in the search". There are other systems that allow you to view the skeleton but, this is only to aid in the human placement of minutiae points.

In PrintQuest®, it is not necessary to place minutiae points, on any ten print image. PrintQuest® features High Accuracy Auto-Extraction of centers, deltas, patterns, as well as minutiae points for unsurpassed user time savings on entry of prints. Auto-extraction allows PrintQuest® to be useful by both the novice and expert alike.

PrintQuest® has a unique database structure. The database is dynamic, in such that every time a user adds information, that information immediately becomes part of the database and is involved in all future searches, automatically.

Working with palms in PrintQuest® is easy, fast, effective and highly accurate. PrintQuest® requires LESS work for the user, and saves time. A PrintQuest® user does not have to guess or analyze from what region of the palm a latent came from; the entire palm is searched every time, quickly and efficiently. PrintQuest® AFIS does not require any special palm training or comprehensive experience to enter, process, and successfully search palms. PrintQuest® does the hard work for you.

PrintQuest® AFIS is an expandable AFIS solution. The system is modular; as an agency grows; the system grows with it, keeping up with the needs of the agency. PrintQuest® can be configured on a single Personal Computer with a database as small as 3,000 Ten Print Cards and be configured on a dedicated, rack mounted server with a database that numbers in the Millions of Ten Print and Palm Cards. Systems start at \$15,000.

