

**foster +  
freeman**

# DVM

## Digital Video Microscope

Digital microscope with white and UV LED illumination for the examination of security documents & microtaggants

Microscopic, traceable, and virtually indestructible; 'taggants' are possibly the most versatile and powerful covert anti-counterfeit technology currently available and are fast becoming an integral part of the high security document printing process.

Using the Foster + Freeman DVM it is possible to detect and examine the latest generation of micro-taggants incorporated into inks and coatings on passports, ID cards, cheques, bank giro, travel tickets and other security documents.

Comprising a high specification microscope, 14 Bit CCD colour Firewire camera, two high intensity LED light sources (White and UV), darkfield ringlight and a transmitted white light XY stage, the DVM microscope can be used as a PC driven standalone instrument complete with dedicated software package featuring full image processing functions and camera control, with image measurement and annotation, or integrated with a Foster+Freeman VSC system to create a complete document examination workstation.

With an increasing number of applications in document examination and brand protection, the Foster + Freeman DVM and its ability to locate and examine taggants is becoming an essential tool for all document examiners.



- 35x to 7000x magnification
- 2.1MP CCD colour camera
- 3 modes of high intensity white light & UV illumination
- Integrates with VSC Suite software

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- **Locate & Visualise Taggants**  
in security documents and commonly counterfeited items
- **Examine in microscopic detail**  
view taggants smaller than 20 microns
- **Integrate with VSC Suite**  
combine with the VSC6000/HS to access powerful examination facilities
- **x35 to x7000 magnification**  
dependent upon choice of objective
- **Three modes of illumination**  
Co-axial, darkfield ringlight, and rotating directional side light.



### Taggants in High Security Documents

Taggants are being increasingly used on security documents such as passports, visas, identity cards and driving licences. The ability to identify and examine these microscopic markers of authenticity is fast becoming an essential requirement for all document examination systems.

#### VSC Integration

While the DVM microscope can be used as a standalone instrument for the examination of taggants and other microscopic details on documents, it can also be integrated with the VSC6000/HS to create a complete document examination solution.

Using the DVM as an external camera, images are displayed within the VSC system allowing the examiner to apply the full range of VSC functions including image comparison, measurement and annotation, area of interest (AOI) processing, colour measurement, as part of a complete casework management system.

### Brand Protection & Anticounterfeiting

As well as being used in documents, taggants are commonly used by governments and manufacturers to authenticate commonly counterfeited items such as bank notes, tax stamps, pharmaceuticals, cigarettes and alcohol packaging, as well as many fast moving consumer goods.



## SPECIFICATIONS

#### Microscope

V6/DVM/3  
10:1 zoom, C-mount and coaxial illumination port.  
Transmitted light XY stage

#### Objective Lens

A choice of...  
**35x to 350x**  
V6/DVM/350X/3  
**350x to 3500x**  
V6/DVM/3500X/3  
**700x to 7000x**  
V6/DVM/7000X/3

#### Camera

V6/CAMFW/2MP  
2.1 MP digital colour  
CCD camera with  
FirewireB output,  
up to 14 fps at full  
resolution.

#### Illumination

**Dark field ring light**  
Attaches to microscope  
objective

#### High Intensity White LED

Single LED, 400-700nm  
bandwidth (nominal)

**RISK GROUP 1: DO NOT  
STARE INTO BEAM**

#### High intensity UV LED

Single LED, 350-380nm 10%  
bandwidth (nominal)

**RISK GROUP 1  
CAUTION: EMITS UV MINIMISE  
EXPOSURE TO SKIN AND EYE**

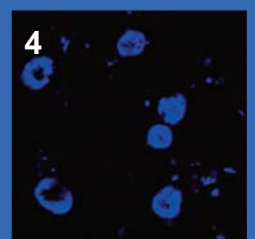
#### Optional PC & 24" monitor

V6/DVM/PC  
Contact sales office for latest  
specifications.

LEDs classified to IEC 62471:2006



Using the DVM to  
examine a selection  
of taggants



1. OVDot Square      2. OVDot hexagon  
3. OVDOT octagon    4. OVDot UV  
all images captured at x350 magnification