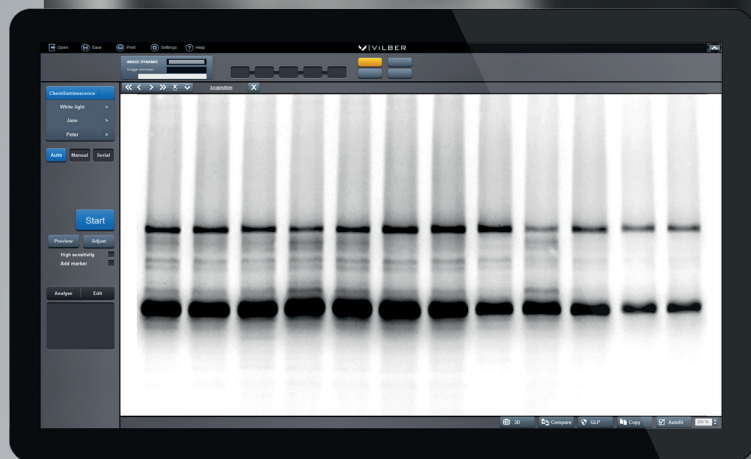


FUSION SOLO X

CHEMILUMINESCENCE &
OPTIONAL FLUORESCENCE IMAGING



WESTERN BLOT IMAGING

VILBER
Smart Imaging

ULTRA SENSITIVE IMAGING

The Fusion Solo is a high-end ultra-sensitive scientific optical system, designed to extract the lowest level of detection from your protein. The Fusion systems' cameras use the latest generation of sensors and semi-conductors. Combined with our unique build-in High Sensitivity Reading

(HSR) technology and our unrivalled V.070 lens, the Fusion is the most sensitive system and the best for publication, quantification and documentation grade imaging.

Fusion's High Sensitivity Reading technology delivers ultra-low noise and high sensitivity without altering the raw image data. Thanks to a camera modular design, a dual amplifier architecture and a complete control of the electronic components, the camera noise is reduced to a fraction. The HSR technology is a camera "on-head" built-in technology. During the light exposure, the non-necessary camera components are shut down. Once the exposure time is over, the camera components are automatically turned back.

The process during the image exposition reduced the camera noise, resulting in a better chip capacity to collect the signal.

Thanks to our HSR technology, the Fusion reduces the various sources of noise to the lowest floor level and the signal can stand out from the surrounding background. The figures 1 and 2 are a comparison of weak light signal images showing the sensitivity benefit of the Fusion HSR technology face to competitive systems. The HSR maximizes the signal and minimizes the noise to achieve the best signal to noise ratio for the lowest limit of detection. For Western blot imaging, the time to get the image is dramatically reduced and precious antibody can be saved.



The V.070 lens combines ultra-low dispersion aspheric elements to deliver unrivalled sensitivity and consistently sharp images. The 20mm minimum focusing distance is optimum for very faint light conditions.

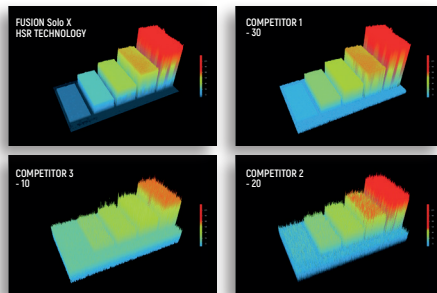


Figure1. Comparative low light images taken with Fusion versus competitive systems with comparable imaging settings. The images are displayed with same relative intensity scaling.



Figure2. The HSR technology provides a better sensitivity by reducing the noise ground level. By keeping the background to its lowest floor level, the very faint signal can easily be detected and quantified.

ONE CLICK TO THE IMAGE

The FUSION Solo X has been designed for maximum ease of use. From its simple installation to its intuitive user interface, this system is plug-and-play. The Solo X software is the easiest software to take an image. Place your blot on the tray, select your application, click on Start

and automatically the system auto-exposes your blot image, your marker image and combines the two together.

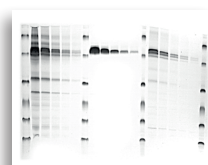
The FUSION Solo X includes our unique Apps Studio approach to imaging. The Apps Studio is a library which contains 40 different protocols for your blot, gel and other bioluminescence samples. The Studio gathers the excitation and the emission spectral of the main fluorophores and suggests the best possible system configuration.

The Apps Studio ensures reproducibility and one click acquisition for the best ease of use.

The modularity design of the FUSION Solo X makes the system fully upgradeable. You can simply start with a dedicated chemiluminescence system and upgrade your system as your number of applications grows. You could easily add UV or blue fluorescence for gels or EPI blue, green, NIR et IR excitation sources for fluorescence on blots. The build-in darkroom PadBox could accommodate several optional Application Pad light source. The Application Pad are then automatically recognized by the system and the imaging and software options are adjusted accordingly.



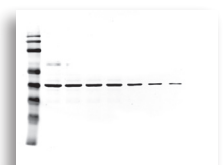
The Apps Studio contains more than 40 different imaging protocols for your Western, Northern or Southern blot.



Several blots detection at once.



Housekeeping/Protein of interest normalization.



Merged signal & marker images.

FUSION SOLO X

New Edge Generation



Super Sensitivity

Ultimate linearity for precise quantification.



Auto Exposure

Ultra-low noise imaging thanks to a dual camera amplifier.



Custom Made Super Sharp Lens

Fusion custom made lens for enhanced sensitivity & sharpness.



Adaptable Fluorescence Detection

Up to 7 excitations channels in the IR, NIR & visible RGB.



Apps Studio

A complete library of imaging applications to ensure reproducibility.



PadBox Concept

Interchangeable light-Pad for UV, blue and white fluorescence.

FUSION SOLO X

Upgradable

- Dedicated chemiluminescence system with extendable fluorescence capabilities
- Optional epi or transillumination options for blot or gel
- Adaptable to Spectra Capsules for Epi UV, blue, green, red, NIR, IR fluorescence options on blots

Long Lasting High Quality

- Stainless steel, aluminium and steel darkroom for the best robustness
- Proven camera robustness
- White light LED for thousands of hours of use
- Interchangeable Pad
- Chemiluminescence detection : femtogram level



Ideal For Quantification

- Reproducible and comparable quantification data
- ImageMaster™ technology to obtain the optimum image for quantification
- Scientific TIFF file or proprietary file format
- Clarity™ technology for razor sharp band revelation without affecting data integrity

Unrivalled Performance

- Better sensitivity than a film
- Unique custom made V.070 lens performance for super-fast image acquisition
- Reproducible and comparable quantification data
- Best signal to noise ratio of the industry for the lowest limit of detection

FUSION Solo X Pad-Box Concept

The PadBox concept meets the need for accommodating several interchangeable light sources into one device. The PadBox can easily integrate one of the several available Application Pads such as our UV, blue, white light or your own hardware such as heater, cooler, electrophoresis tank, special light source etc. The Application Pad is automatically recognized by the system and the imaging and software options are adjusted accordingly.



Camera & Optics

FUSION Solo 6X with the eVo-6 camera – resolution oriented camera, ideal for publication

eVo-6 camera:

- Unrivalled custom made lens f/0.70
- Scientific grade CCD camera
- Grade 0, zero defect
- Image resolution: 20 megapixels
- Native resolution: 2838x2224
- -55° C maximum cooling differential from ambient
-30°C absolute and regulated cooling via three stages Peltier thermoelectric cooler
- High Sensitivity reading (HSR) technology
- USB-3 connection

Ease Of Use

One-Click-to-the-Image™
Auto-exposure
Auto-lighting
Auto-focus

Hardware

- Smart Darkroom technology:
- 5 sample tray positions
 - Software control of the lighting
 - Automatic visible lighting adjustment

Steel and stainless steel darkroom for long lasting robustness. Wide access door.

Software

Free software for image acquisition with full GLP compliance. Molecular weight calculation, band quantification, colony counting, distance calculation, text annotation and image enhancement included.

CFR21 Part 11 ready

Options Series

FUSION Solo X Basic Series

- Manual or motorized lens

FUSION Solo X Pro Series

- 4 positions filter wheel
- Manual or motorized lens
- Optional Transilluminator
- Optional Spectra Capsules

Applications

Chemiluminescence Western, Northern or Southern blot

Optional applications:

DNA and RNA gels and fluorescence stain imaging with UV-Pad or Blue-Pad

Colorimetric stained protein gels, X-Ray film, autorads, SSCP gels, colony dish and flask imaging with White-Light-Pad or UV-Pad + conversion screen

Fluorescence Western blot with Spectra Capsules:

365nm - 440nm - 480nm - 530nm

640nm - 680nm - 740nm - 780nm

Technologies & Innovation

Apps Studio
3D Dynamics Scan
SuperResolution
High Sensitivity Reading (HSR) technology
ImageMaster™ assistant
Clarity™



HEADQUARTER

Vilber Lourmat
ZAC de Lamirault
Collegien
F-77601 Marne-la-Vallee cedex 3
France
Phone 3 (0) 1 60 06 07 71
info@vilber.com

GERMANY

Vilber Lourmat
Deutschland GmbH
Wielandstrasse 2
D-88436 Eberhardzell
Deutschland
Phone : + 49 (0) 7355 931 380
info@vilber.de

CHINA

Vilber China
Room 127 Building A
N° 111 Yuquangying
Fengtai District – Beijing
China
Phone : + 86 1361 1131 545
info@vilber.cn