Improved Sensitivity and Resolution

New Super CCD Area Type Imaging Chip - This system is especially suitable for Western blot analysis. High sensitive chemiluminescent detection was designed to compete with the X-ray films. Image acquire and digitize can capture both chemiluminescence and digitized marker image by one click.

New Super CCD Area Type Imaging Chip - The higher sensitivity of Fujifilm's new CCD provides improved faint-light image capture with outstanding image clarity. The new chip contains 3.2M pixels of which 3.15M contribute to actual imaging. The increased pixel size results from the use of octagonal-shaped photodiodes, which capture a great deal of light. The superior image sensing capability of the new chip results in ultra-high resolution image files of up to 6.3M pixels (3,072 x 2,048 pixels).

Super CCD - By rotating pixels 45 degrees to form an interwoven layout, the Super CCD's pixel pitch in the horizontal and vertical directions is narrower than in the diagonal direction, achieving higher horizontal and vertical resolution.

Conventional CCD - With conventional interline CCDs, pixel pitch in the diagonal direction is narrower than in the horizontal and vertical directions, resulting in higher diagonal resolution.

New Binning Mode - The LAS-3000 features a new binning mode, which allows users to effectively increase the pixel size and, therefore, the imaging sensitivity of the system. Additionally, the process significantly enhances the signal-to-noise ratio. The system allows four binning settings: 1x2 (standard), 2x4 (high), 4x8 (super) and 8x16 (ultra). Images obtained in the binning mode are further enhanced by software-based pixel supplement to compensate for any loss in resolution.
The binning mode of the LAS-3000 allows researchers to select from four binning settings to enhance both imaging sensitivity and image resolution. With the Image Reader Pro software, high resolution, high binning, super binning and ultra binning images can be obtained in addition to the standard high super and ultra images.

**Exposure Options** - The extremely fast, electronically cooled, high-resolution camera component allows long exposure times in any laboratory setting. Exposures can be set from 1/100th of a second to 30 hours to meet a wide range of imaging conditions. The 30-hours exposure function allows over-night exposures on very dark images.

**Improved Versatility**

**New Filter Options** - A 5-position filter turret is mounted in front of the lens, which allows convenient, electrically controlled filter selection in less than ten seconds. With Image Reader Lite software, the user has control over three standard filters (605DF40 for EtBr, Y515 for SYBR® Green and 510DF10 for GFP), a fourth filter position for chemiluminescence and a fifth user-specified filter for fluorescence. With Image Reader Pro software, the user has full control over five filter types and positions. Other than the above, 575 DF20 filter was prepared for green LED and R670 filler was prepared for red LED.

**Additional Light Sources** - The number of light sources on the LAS-3000 system has been increased to six, including UV transilluminator, white transilluminator, blue epi-illuminator and white epi-illuminator, green epi-illuminator and red epi-illuminator. With Image Reader Lite software, the user has control over four light sources (UV trans-illuminator, white trans-illuminator, blue epi-illuminator, and white epi-illuminator). With Image Reader Pro software, the user has control over all the six light sources (see above, plus green epi-illuminator and red epi-illuminator).

**Sampling Convenience** - The LAS-3000 accommodates samples up to 25 x 25cm in size with an optional wide view lens. Various types of trays are prepared such as an EPI Tray III for chemiluminescence and epi-illuminator, a DIA Tray III for UV trans-illuminator, a white-DIA Tray for white trans-illuminator such as CBB stained gel, and a non-parallax (NP) Tray for up to two titer plates. The NP tray includes a Fresnel lens located between the titer plate and the lens, which eliminates parallax in each of the 96 titer plate wells. NP Tray is designed for the detection of chemiluminescence.

**Improved User Interface**

**Simplified User Interface** - The system functions of the LAS-3000 are controlled remotely through either a Mac™ or Windows® software application via a standard USB interface. Image capture and analysis software is provided. The newly simplified user interface allows researchers to spend more time in research and less time in system integration and maintenance.

**Light-tight Operation** - The light-tight dark box affords highly sensitive imaging from a variety of light sources in an ordinary lab. After placing the sample tray in the dark box and closing the light-tight door, all imaging functions are controlled remotely from the PC. With the keyboard and monitor, the researcher conveniently adjusts focus, selects the appropriate filter and sets the exposure to capture the image.

**Improved Design**
Lens:
Newly designed F0.85 Fujinon lens
Remote focus and remote iris
controlled by PC is included.

Filter:
Five filter positions available.
Controlled from PC

Epi-illuminator:
white light incident light / blue LED,
green LED or red LED units are inter
changeable.

Tray:
For chemiluminescence and
fluorescence detection by epi-illumination,
black Teflon coated tray is used.
Other than this, UV-DIA tray, white-DIA
Tray and NP-Tray can be used.

Trans-illuminator:
White trans-illuminator or
UV trans-illuminator (312nm)
can be used.