Wide Field of View Confocal Scanner

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Yokogawa CSU-X1 confocal scanner series based on microlens enhanced dual Nipkow disk scanning technology has been widely used for live cell imaging due to its high speed, good resolution and least laser damages on live cells, which are key requirements for long-term time laps imaging in biology research. However, following rapid expansion in life science, especially in the tissue engineering related areas such as iPS or ES cell research, requests for confocal clear-cut imaging to cover wide field of view for high throughput, and also imaging of thick specimen have been increasing. We have developed a new confocal scanner, named CSU-W1 series, to meet such requirements of life science researchers.

Major features in the CSU-W1 series are;

(1) Newly designed large diameter spinning disks to give 4-times wider field of view which is compatible with wide-view sCMOS cameras, and enables high throughput imaging of wide area.
(2) Designed a new pinhole pattern for significantly reducing the background by cross talk, and achieved high S/N and clearer images. In addition to the conventional 50µm pinhole disk, 25µm pinhole disk can be selectable for the optimal resolution with low magnification lens.
(3) Developed near IR excitation light path (up to 785nm) for confocal imaging of thick specimen.