

## **All-IN-ONE CONFOCAL SCANNER BOX**

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**KEY WORDS:** Dual Nipkow disc, High Speed Confocal, Long-Term Live Cell Imaging, Multi-Dimensional Imaging, Multi-Point Time-Lapse Imaging, Stage Incubator

The Dual Nipkow Disk confocal unit, named CSU<sup>®</sup>, is widely used for Live Cell Imaging now. In addition to ultra fast scanning, significantly low photo bleaching and photo toxicity are coming up as a big advantage over the point scan confocal.

Based on the Dual Nipkow Disk confocal technology, we integrated microscope and all peripherals in one desk-top box. This All-in-one Confocal Scanner Box, named CellVoyager<sup>™</sup>CV1000 is composed of laser light sources, EMCCD camera, X-Y auto stage, auto focus mechanism and stage incubator. Highly sensitive EMCCD cameras enable reliable imaging of low-light specimen without the need of high laser power, thus combination of Dual Nipkow Disk confocal and EMCCD camera reduce photo toxicity dramatically. Built-in stage incubator with high-precision temperature/CO<sub>2</sub> control allows the cells live longer and develop healthy without the needs of complicated system set-up. High-precision X-Y auto stage and our proprietary auto focus mechanism offer speedy sample searching and precision multipoint time-lapse imaging without the need of dark room operation.

For the first time in the CSU product lines, 25 micron pinhole disk in addition to the traditional 50 micron pinhole disk is selectable to match the objective lens.

This integrated and automated imaging system enabled long-term observation of most delicate life processes, such as the generation of iPS/ES cells or embryogenesis quite easily.