Leica TCS SL Detailed Description

The Leica TCS SL is equipped with three 12 bit confocal fluorescence detection channels and one 12 bit non-confocal transmitted light detection channel. Images can be acquired with scan resolutions of up to 2048 x 2048 pixels. Spectral detectors permit independent real-time adjustment of the detection bandwidths in the range 460 to 750nm for each of the confocal fluorescence detector channels, eliminating the need for emission filters. Images can be acquired in simultaneous or sequential scan modes. The three lasers, Argon, Red HeNe, Green HeNe, provide the following laser lines: 458nm, 476nm, 488nm, 514nm, 543nm and 633 nm. The intensity of each laser line is independently adjustable from 0-100% power using the acousto-optical-tunable filter (AOTF). The AOTF also permits rapid photobleaching or photoactivation of single or multiple user-defined regions of interest. A Z-galvo stage permits rapid and precise acquisition of Z-stacks. Specialized applications such as time-lapse, FRAP and FRET applications are supported. The Leica DM IRE2 inverted microscope stand is fully motorized and permits imaging of a wide range of fixed and live specimens. The microscope is equipped with 10x and 40x Plan Fluotar dry objectives for locating specimens, a 20x multi-immersion Plan Apo objective, and 40x, 63x and 100x Plan Apo oil immersion objectives for high resolution imaging. A 63x long-working distance water immersion objective is available for high resolution imaging of embryos and tissue slices. A Bioptechs heated chamber and objective heater are available for long term imaging of live cells.