

TOFRA, Inc. (Tools for Research Automation)

microscope automation ♦ filter changers ♦ focus drives ♦ scanning stages ♦ LED light sources

PRODUCT NEWS RELEASE

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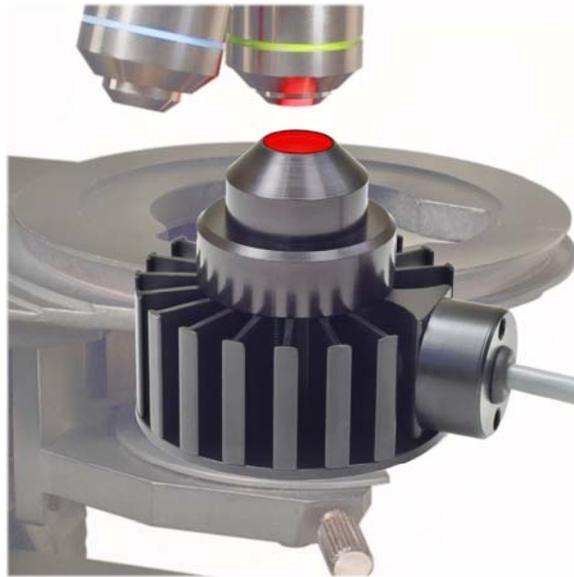
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TOFRA, Inc. Introduces RGB LED Light Source for Microscopy with Computer-controlled Intensity

Palo Alto, CA (May 2008) – TOFRA, Inc. has released a new model of its RGB LED Light Source for microscopy, which has computer control of intensity.

The RGB LED Light Source provides bright and uniform microscope illumination. Independent and accurate control of red, green and blue LEDs creates any desired color and intensity. Color images can be produced from monochrome cameras giving full non-interpolated color at every pixel. The light source head mounts instead of condenser on upright microscopes. The light source controller connects to the computer serial port, or to the USB port through USB-to-RS232 converter.

Wavelengths are 619 nm for red, 515 nm for green, and 465 nm for blue. Switching time is less than 1 ms. At maximal light intensity required exposure time in each color for typical CCD cameras is between 0.5 and 5 ms. (with a 10X objective). The standard head has illuminated area of 12.5 mm in diameter. For low-magnification objectives a special head with 25 mm in diameter can be provided. Software for interactive control and for automation from other applications is provided, as well as examples of direct control through serial port. The unit does not create any vibration or noise. It has low heat emission, low thermal drift, and low temperature gradient; it can be always on.

Each color is controlled with 10 bit accuracy providing any desired hue, saturation and intensity including white light for visual observation. Sequential acquisition of colors makes possible the adjustment of focus position for each color. Monochromatic illumination reduces the effect of chromatic aberrations present in microscope objectives. No extra components are introduced in the imaging path of the microscope, which ensures that there is no deterioration of image quality.

Since the introduction of the original version in 2006 the RGB LED Light Source proved especially advantageous in scanning applications due to fast wavelength switching. The RGB LED Light Source reduces system cost by eliminating the need for traditional white light source, filter changer and condenser; it increases reliability and reduces cost of ownership by using components with long life and by having no moving or serviceable parts.

For more information check the company web site www.tofrainc.com or contact Ilya Ravkin at iravkin@tofrainc.com, by phone 650-494-7772, or write to TOFRA, Inc., 945 Colorado Ave., Palo Alto, CA 94303.

TOFRA, Inc. provides microscope automation hardware and software to end users and system integrators since 1993.